Construction & Environmental Management Plan

2 Figtree Drive, Sydney Olympic Park

Revision		Date
A	For DA Submission	28/07/2015

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ISSUE REGISTER

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1 INTRODUCTION

This Construction & Environmental Management Plan (CEMP) has been developed by Mirvac Constructions Pty Ltd (Mirvac) to address the construction items related to the future development at **2 Figtree Drive, Sydney Olympic Park**. The CEMP outlines the actions and staging of construction deemed necessary to address the concerns of neighbouring properties and authorities, whilst maintaining a safe and productive construction site.

Implementation of a CEMP is central to the successful completion of a project. The CEMP is a positive commitment by Mirvac to ensure that the statutory obligations are fulfilled and that the project is delivered to the highest Mirvac quality, safety and environmental standards. The responsibility for the management of this document and the actions contained therein lies with the Mirvac Senior Management Team for the project. The CEMP will be monitored throughout the project construction phase, amended from time to time to suit project requirements.

All construction activities will be undertaken in accordance with the relevant sections from the Building Code of Australia, the Australian Standards, Sydney Olympic Park Authority (SOPA) Approvals, Workplace Health and Safety Act and Work Health and Safety Regulations.

1.1 PROJECT OVERVIEW

A summary of the proposed development is detailed as follows:

- Construction of four residential buildings (between 5 to 15 levels in height) consisting of a total of 422 tenancies and retail space;
- Provision of a common basement car park providing residential vehicle and retail parking facilities;
- Construction of a new road way to the eastern side of the site for basement access and a turning head function.
- Construction of a new kiosk substation within the site.
- Extension and augmentation of all required infrastructure and utilities required

Figure 1: Aerial view of the site (approximate site boundary outlined)

1.2 HOURS OF WORK

The proposed hours for construction works are as follows:

- Between 7:00 am and 6:00 pm, Mondays to Fridays inclusive.
- Between 7:00 am and 3:00 pm, Saturdays.
- No work will be carried out on Sundays and Public Holidays
- Works also carried out in accordance with the SOPA shutdown periods

Works outside these times are subject to agreement and approval by Council or the relevant approving authority.

1.3 CONTACT DETAILS

The Project Manager for the project is Geoff Pollock. Contact details are listed below:

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2 CONSTRUCTION MANAGEMENT PLAN

2.1 INTRODUCTION

The following Construction Management Plan has been developed to outline the proposed phases of the construction work on site, outline the order of works, and assess Mirvac impact and interaction with the surrounding community.

2.2 CONSTRUCTION WORK PHASES

The works pertaining to this DA can be broadly divided into the following phases:

a. Site Establishment / Enabling Works
b. Demolition
c. Excavation
d. Structure
e. Facade
f. Services & Finishes
g. Landscaping and Public Domain Works

2.3 PROGRAM OF WORKS

The project commencement date is to be confirmed following SOPA approvals. The current project is estimated to have a duration of approximately 25 months, including 2 months to complete the demolition works.

2.4 CONSTRUCTION STAGING (INDICATIVE ONLY)

All construction work contracts will be awarded based on Mirvac's assessment and suitability of the contractor to manage and maintain the works. Where required, dilapidation surveys, hazardous materials registers and infrastructure surveys will be undertaken prior to commencement.

It is proposed that construction process will be staged in the following manner:

Enabling Works

- Decommissioning of existing substation and installation of new kiosk substation
- Realignment of existing sewer and stormwater lines

Demolition

- Installation of hoardings and scaffold around existing structure where required
- Demolition of existing structures
- Relocation of existing fig tree

Excavation and Basement construction

- Excavation of the basement
- Basement perimeter shoring walls and internal column piling
- Erection of crane
- Install in-ground services
- Form and pour reinforced concrete to basement slabs
- Erection of basement structural walls

Building structure works

- Form and pour the podium slab

- Progressive erection of building perimeter scaffold
- Form and pour the structure of the building
- Each level of the structure will follow a typical concrete pour cycle

Façade works

- Erection of the façade structure
- Installation of windows
- Erect balustrades to balconies
- Prepare, waterproof and tile balconies
- Preparation and painting of the façade
- Erect louvers where applicable
- Remove scaffold from the perimeter of the

Internal finishing works

- Installation of services via core risers and high level rough-in
- Installation of partition walls
- Installation of joinery and doors
- Waterproof membranes to wet areas
- Floor and wall tiling
- Install floor finishes timber/carpet
- Internal painting
- Commission services

Road, Infrastructure and Landscaping works

- Construction of new entry roadway
- External ground levels benched to correct heights
- Installation of hard landscaping
- Installation of soft landscaping

2.5 DEMOLITION WORKS

Demolition of existing structures will be carried out using mechanical aid, based off surrounding ground level. All elevated elements will be lowered using suitable mechanical plant by means of grab attachments, chains and machine bucket operations. Scaffold will be installed where required.

All demolition works will be undertaken by a fully compliant licensed and registered contractor. Demolition will be carried out in accordance with council and regulatory codes, *Australian Standards – AS2601 (1991 Demolition of Structures), the Occupational Health and Safety Act 2000, the Waste Minimisation and Management Act 1995,* and all other relevant acts.

2.6 BUILDING STRUCTURE WORKS

The safe erection of the buildings on site will controlled by the use of perimeter scaffolding as required. The scaffold will provide safe working platforms for the erection of the buildings. The perimeter scaffolding will also be used as a catch deck for the workers internally until the erection of the façade is complete. Fixed cranes, mobile cranes (where required) and loading platforms will be used to facilitate the vertical and horizontal transport of materials. Men and material hoists will also be utilised until internal lifts can be fitted out as builder's lifts.

2.7 STAGING AREAS

Staging areas will be utilised within Mirvac's active 2 Figtree Drive, Sydney Olympic Park site. The staging areas are proposed within the boundaries of the project and are indicated in Appendix C – Site Plans. Material handling areas have been located as close as possible to the work fronts to minimise the extent of double handling works. As a result, there is a reduction in vehicle movements and additional noise across the site.

The proposed staging areas include:

- The podium area of the between the new southern and western buildings
- Proposed building footprint of the northern building
- A loading zone will be established from the existing parking along the Figtree Drive frontage of the site; feeding the two tower cranes which will be located on the site.

2.8 CONSTRUCTION WASTE

The waste that will be generated as a by-product of the construction process will be managed by the method outlined below.

Construction waste will be removed from within the boundary utilising small waste bins. Waste will be collected into large general waste bins and then carted off site. Upon arrival at the waste depot the general bins will be sorted into their various materials for recycling. Truck movements will be reduced by carting waste off site in general waste bins and then separating and recycling the material off site. Separating and sorting waste on site into various waste containers is not desirable as it would increase the number of trucks entering and leaving the site. Waste targets for this project are >80% diversion of waste from landfill by recycling, reuse, design or other methods.

Please refer to Section 7 – Construction Waste Management Plan for a detailed set out of the measures to be adopted.

2.9 STORMWATER MANAGEMENT

During construction it may be necessary in periods of high rain to dewater basement excavations that cannot naturally drain. In required, excavations will be dewatered by use of pumps.

The water quality will be assessed prior to allowing its discharge into the surrounding storm water system. Water quality will be assessed using the Mirvac Group Water Quality Discharge Procedure (found in Appendix G – Mirvac Group Policies and Procedures).

2.10 INTERACTION WITH SURROUNDING COMMUNITY

The following actions, which focus on minimising the impacts of construction activity to the community surrounding the project, will be implemented:

- Installation of hoardings, fencing and scaffold to site boundaries to delineate the construction site from public areas. Protective devices will be in accordance with WHS laws, regulations or authority requirements;
- Installation of work zones and the monitoring and maintenance of such;
- Monitor compliance of the Traffic Management Plan and Noise, Dust and Vibration Management Plan;
- Clear display of contact details on the fence for community information and contact in case of emergency;
- Make arrangements for the notification to surrounding properties of activities which may affect their amenity, including the provision of a 24-hour contact point;

- Weekly site meetings to discuss the progress of works and to address any concerns raised by the surrounding community.

2.11 FIRE PROTECTION MEASURES DURING CONSTRUCTION

Mirvac will comply with the all requirements of the BCA and Australian standards during construction related to fire protection measures. Additionally, during construction, Mirvac shall pursue communication and consultation with the local fire brigade will be pursue in accordance with the varying stages throughout the project.

2.12 SITE SPECIFIC ISSUES

2.12.1 Impact and interaction with Figtree Drive and Australia Avenue

The interface between the public and construction works along Figtree Drive and Australia Avenue will be managed by the installation of Class A and B Hoardings (refer to Appendix C – Site Plan). The establishment of overhead protection where required adjacent to the nominate Figtree Drive work zone will provide safe public access during the demolition and construction process.

All vehicles and pedestrians shall access the site in accordance with the routes identified within the CTMP.

2.12.2 Relocation of an existing Moreton Bay Fig

As part of the future development of the site, SOPA requires the relocation of a mature 10m high Moreton Bay Fig currently located on the western boundary of the site.

It is currently proposed that the new location of this tree is proposed to be in the southern corner of the site. Transplanting works will be undertaken by an experience tree transplanting contractor who will be required to prepare a detailed ‘Transplant Method Statement’ and an ‘Establishment/Maintenance Programme’.

3 TRAFFIC MANAGEMENT PLAN

3.1 INTRODUCTION

GTA Consultants have been engaged to prepare a Construction Traffic Management Plan (CTMP) for the demolition, excavation and construction of this project. The Traffic Management Plan addresses the site in context with its surrounding environment, location and road network as well as traffic flows in line with the overall principles of traffic management and the proposed working hours.

In addition the plan shall deal with the specific issues of construction traffic, applicable to the SOPA's requirements for construction traffic management. Australian Standards, Roads and Maritime Services and Traffic Control at Worksite Guidelines, and their effect on the surrounding environment.

The conclusion of the assessment made by GTA consultants is as follows:

- Construction vehicle movements to and from the site can be satisfactorily accommodated by the surrounding road network
- The proposed works zone would not result in any road safety issues or traffic capacity reductions
- The proposed measures in the Traffic Management Plan will adequately address potential traffic related implications associated with the construction of the process.

Refer to Appendix B for the full GTA Traffic Consultants Pty Ltd's Construction Traffic Management Plan.

3.2 TRUCK AND VEHICLE ROUTES:

The routes for all construction vehicles proceeding to and exiting from the project have been identified in the CTMP prepared by the Traffic Management Consultant. The routes have been determined by assessing turning paths at the intersections.

The inbound route for construction vehicles will depend on the size of the vehicle. Articulated trucks will be restricted to approach the site from the southbound lanes of Australia Avenue and making a right turn into Figtree Drive. Other vehicles do not share the same restriction and will be able to approach from any direction along Australia Avenue.

GTA Consultants then propose for trucks and vehicles to egress the site by a left turn out of the site and continuing westbound along Figtree Drive. Vehicles can then turn left into Olympic Boulevard and then left into Sarah Durack Avenue in order to get back onto Australia Avenue.

Site entry signage will be installed to direct all deliveries to the correct areas. All vehicles upon entry to the site for the first time must complete a truck driver's declaration or complete a site induction to ensure compliance with the site rules.

3.3 INGRESS AND EGRESS TO SITE

3.3.1 Construction Vehicles

Construction traffic will enter and exit the site as follows:

- For the duration of the project, access to the site is via the Figtree Drive frontage of the site. The proposed gates along the frontage will serve as the construction vehicle access and egress for all material handling purposes.
- The entry gates will be manned by qualified traffic controllers during working hours. Mirvac shall ensure that clear access is maintained to facilitate any emergency access/evacuation.

- All entering and exiting of vehicles to work zones shall be in accordance of approved Pedestrian & Traffic Management Plan and supplementary Traffic Control Plans (TCPs). Flow to all lanes of traffic shall remain open as often as possible in accordance with Council and DA requirements and vehicles will not be permitted to cross lanes or travels paths
- Relevant statutory signage shall be erected defining the vehicle entry and exit points at all stages of construction
- Relevant signage will be displayed setting appropriate speed limits on site during the road construction
- Notice will be provided to all surrounding landowners and occupiers, throughout the construction process as to any circumstances that may arise.

3.3.2 Pedestrians

All site workers and visitors shall enter and exit the site via a pedestrian designated access points around the site.

Sections of the footpath on Figtree Drive and Australia Avenue shall be protected by an engineered Class A or B hoarding structure. This will allow pedestrians to continue to safely use the public footpath for the duration of the project.

3.4 LOADING AND UNLOADING OF MATERIALS

Subject to SOPA approval, there is a proposed work zone is to be installed to the existing parking bays on the Figtree Drive frontage deliveries and the loading / unloading of materials to site. The work zone will be installed such as to allow uninterrupted traffic to flow along Figtree Drive and allow pedestrians to continue to safely use the public footpath. There will additional staging areas within the site as nominated in Appendix C – Site Plan and outlined in the GTA Traffic Management Plan.

As stated in Section 3.3.2, the footpath shall be protected from overhead materials handling into the site from the construction work zones by an engineered Class B hoarding structure. Refer to Appendix C for the site plan depicting the proposed work zone.

Other measures to be incorporated include:

- Statutory and directional signage to be installed and maintained throughout construction;
- All loading and unloading operations are to comply with Work Cover and relevant authorities requirements;
- No materials will be stored on public footpaths, roads or shared access ways;
- Should any lane closures be required, a relevant traffic management plan will be issued along with any required permits and if deemed required, a local resident warning.

3.5 DISRUPTION TO TRAFFIC FLOWS

The proposed work zones will be utilised for construction deliveries which will be managed by authorised traffic control personnel at all times. Trucks and vehicles will not be permitted to stop or wait in any street prior to entering site. As such, it is not proposed to be any interruption to traffic flow of surrounding areas.

Truck movements will be for the delivery of construction product with all non-critical deliveries will be scheduled outside restricted and or peak traffic periods. The number of trucks will vary depending on the stage of the construction process, however, the estimated number of truck movements are as follows:

Stages of construction	Longest Vehicle Type	Peak no. of Trucks per day
Demolition Stage	Truck and Dog Trailer (19.0m)	20 vehicles

Earthworks Stage	Truck and Dog Trailer (19.0m)	25 vehicles
Construction Work	Truck and Dog Trailer (19.0m)	20 vehicles

From the CTMP prepared by GTA Consultants, it was determined that within the context of the boarder road network in Sydney Olympic Park, the estimated construction traffic, which will be spread throughout each day, will not cause notable impact on the capacity or operation of the road network.

3.6 PEDESTRIAN AND TRAFFIC MANAGEMENT

Statutory and directional signage will be established at all site entry and exit points to alert pedestrians and other drivers to the movement of construction traffic. Authorised Traffic Control personnel will control the movement of all vehicles to and from the site and work zones.

All visitors to the site will be required to be escorted at all times by Mirvac site staff and will be provided with a defined entry path from the point of entry. All locations, traffic flow and entry points will be outlined in GTA Consultants Traffic Management Plan.

3.7 SITE SAFETY PLAN

A Site Specific Workplace Risk Management Plan (WRMP), will be developed prior to the commencement of construction and be updated from time to time to reflect the current stage of site works.

All works throughout the construction process will be required to comply with the Traffic Management Plan, Statutory Requirements, and the Mirvac WRMP.

4 NOISE AND VIBRATION MANAGEMENT PLAN

4.1 INTRODUCTION

Noise and Vibration consultants will be engaged to prepare a Demolition and Construction Noise and Vibration Management Assessment Plan (NVMP) for the project. This management plan will provide guidelines to reduce potential noise and vibration impacts to nearby affected tenants, residents and asset owners during demolition and construction works. The NVMP will primarily deal with the potential issues of vibration and noise generating activities associated with the project.

The NVMP shall be in accordance with the targets and guidelines provided by Sydney Olympic Park Authority and through consultation with neighbouring land owners.

In addition, the Noise and Vibration Monitoring Plan will detail specific criteria for noise and vibration targets and monitoring methodology relative to the neighbouring properties, assets and infrastructure.

Mirvac will comply with the obligations provided in the Noise and Vibration Monitoring Plan and also commits to the Noise and Vibration Control Measures detailed within this section of the CEMP.

4.2 PLAN OBJECTIVE

The principal objectives of the Noise and Vibration Management Plan:

- Identification of the noise and vibration standards which will be applicable to this project.
- Formulation of a strategy for construction to comply with the standards identified in the above point.
- Development of a monitoring programme to measure and regulate noise and vibration associated with the project
- Liaise with Principle Certifying Authority (PCA) and neighbouring property owners when required.

4.3 NOISE CRITERIA

The criteria for noise from construction activities on this project will ensure acceptable levels are maintained within the site and limit impact on surrounding properties. The noise criteria will be outlined in the Construction Noise and Vibration Management Plan.

Further to this, specific criteria relating to noise control limits, extent of works and monitoring shall be developed in consultation between Mirvac and the Noise and Vibration Consultant, and will be included within the Noise and Vibration Monitoring Plan.

4.4 VIBRATION CRITERIA

The criteria for vibration from construction activities on this project will ensure acceptable levels are maintained within the site and limit impact on surrounding properties. The vibration criteria will be outlined in the Construction Noise and Vibration Management Plan.

Further to this, specific criteria relating to vibration control limits, extent of works and monitoring shall be developed in consultation between Mirvac and the Noise and Vibration Consultant, and will be included within the Noise and Vibration Monitoring Plan.

4.5 CONTROL OF CONSTRUCTION NOISE AND VIBRATION

As part of the NVMP, a review will be undertaken of each of the proposed activities which will occur as a part of the construction works on this project. The execution of this work will confirm the effectiveness of ongoing noise control strategies for this project. In addition, the site working hours will be strictly enforced and all works carried out in accordance with approved DA consent conditions, Council and Regulatory codes, and Mirvac Noise Control Policy (refer to Appendix G – Mirvac Group Policies).

4.6 NOISE AND VIBRATION CONTROL METHODS

The determination of appropriate noise control measures are dependant on the particular activities and construction appliances. This section provides an outline of the proposed methods:

4.6.1 Substitution by Alternative Process

Where a particular activity and/or construction appliance exceeds noise criteria, it may be possible to select an alternative process.

4.6.2 Engine Silencing

Where construction appliances exceed noise criteria, the use of silencing devices may be possible. These may take the form of engine shrouding, or residential class mufflers fitted to exhausts.

4.6.3 Emission Restrictions

During the constuction process noise emission will be checked for specified plant and equipment. The implementation of random noise monitoring will ensure equipment remains within the specified limits.

4.6.4 Equipment Locations

The location of equipment will be considererd during construction to ensure plant and equipment is located in suitable positions from noise sensitative areas, optimising attenuation effects from topography, natural and purpose built barriers and material stockpiles.

4.6.5 Equipment Maintenance

To determine the requirement for silencing devices on machinery it is proposed to undertake regular noise checks. Noise levels of all machines on site will be monitored for each equipment type. Items such as mufflers and engine shrouds will be mainatained to ensure they are in good working order.

4.7 ESTABLISHMENT OF DIRECT COMMUNICATION WITH AFFECTED PARTIES

Continual communication is required between all parties that may be affected, the builder and the regulatory authority. This establishes a dynamic response process which allows for the adjustment of control methods and criteria for the benefit of all parties.

Informing local residents is typically a critical aspect in reducing complaints regarding construction noise. The objective in undertaking a consultation process is to:

- Inform and educate the groups about the project and the noise controls being implemented.
- Increase understanding of all acoustic issues related to the project and options available.
- Identify group concerns generated by the project, so that they can be addressed.
- Provide advice about the time and duration of potential noisy activities.
- Ensure that concerned individuals or groups are aware if and have access to the site complaints register which will be used to address any construction noise related problems, should they arise.

4.8 NOISE COMPLAINT PROCEDURE

Mirvac has in place a specific procedure in relation to the handling of noise related issues. When a noise related complaint is brought forward, the specific details will be recorded on the Mirvac community contact register form. The details will then be reviewed by the site manager. The site manager then makes an assessment of the complaint against our construction guidelines in relation to approved working hours, development consent conditions, noise levels and any other relevant items relating to the matter. Mirvac will close out accordingly within 48 hours.

If a breach of the guidelines and restrictions is found then further action will be taken to resolve the issue. If a suitable outcome cannot be achieved then a suitable acoustic and vibration engineer will be consulted to review and respond to the noise complaint. Further notification will then be provided to the complainant of the course of action to be taken to resolve the matter. A copy of Mirvac's noise control policy can be found below. Refer to Appendix G – Mirvac Group Policies for the Community Contact Register form.

5 CONSTRUCTION WASTE MANAGEMENT PLAN

5.1 INTRODUCTION

Mirvac Constructions Pty Ltd is aiming to reduce the amount of waste to land fill by adopting the waste management hierarchy of *avoid* > *reuse* > *recycle* > *dispose* in the civil and infrastructure phases. The following document outlines waste management procedures to be carried out to assist in reducing waste.

Waste generated at the workplace shall be avoided or recycled wherever practical. Waste targets for this Business Unit are **>80%** diversion of waste from landfill by recycling, reuse, design or other methods. Mirvac have implemented a Waste Management Plan and is described as follows:

- material is reused wherever practicable, in particular top soil;
- the establishment of a workplace waste management area(s) for sorting and segregating waste where available space allows;
- participation in waste minimisation training for all workplace personnel;
- recyclable materials are reprocessed wherever practicable, e.g. plasterboard off cuts, steel reinforcement and concrete;
- contractors identify areas where they can reduce waste and reuse materials in their respective trades (waste avoidance initiatives to be provided by each Service Provider in the JSEA);
- prescribed waste, e.g. hazardous or contaminated material, asbestos, aqueous waste (paint washout residue/sludge), shall be removed by a licensed contractor and dockets retained at the workplace for audit verification purposes;
- pollution and damage to the environment is prevented; and
- The safety and health of employees, Service Providers and the public is protected.

The figure below details the general principles for prevention of waste.

Figure 2: Waste prevention principles

5.2 SPECIFIC WASTE MANAGEMENT PLANS

A Waste Management Plan has been developed by a fully licensed Waste Contractor (Dial a Dump Industries) prior to commencement of Construction Works on site. In compliance with the environmental regulations and standards, the waste management plan will be reviewed periodically. Refer to Appendix D for the developed Waste Management Plan.

Some Waste types likely to be generated on the site include the following:

- General Waste
- Putrescible waste (lunch room waste from site personnel)
- Cardboard & White Paper (amended plans & drawings)
- Bottles, Cans & Plastics
- Concrete, Bricks, Tiles, Timber and Gyprock

The waste subcontractor will supply builder's waste bins for the onsite collection and storage of general waste material. It is required that the waste facility will recycle a minimum of 80% of the material bought to their recycling depot.

Upon arrival at the facility the waste is sorted into various categories. Once the product has been sorted into its various categories, the facility then processes the individual recyclable waste streams into reusable products available for re-sale to the public as described below:

- Concrete is crushed, pulverized and sold as recycled aggregate
- Bricks are also crushed, pulverized and sold as recycled road base
- Timber is chipped and sold as mulch for garden beds and ground cover
- Steel is sent to either Metalcorp or Simsmetal for recycling
- Plasterboard is broken down to a gypsum product and sold to farmers as a soil additive
- Cardboard & White Paper Recycling to Amcor for recycling

  Bottles, Cans & Plastics Recycling to Visy for recycling

6 EROSION & SEDIMENT CONTROL

6.1 INTRODUCTION

An Erosion and Sediment Control Plan will be further developed and implemented on the project to provide site controls during the demolition, excavation and construction phases. The Erosion and Sediment Control Plan will be designed with a holistic approach in establishing, implementing and maintaining controls to minimise and trap sediment on the site. Construction works will be undertaken in a manner so as to avoid erosion and sedimentation of the site onto the surrounding land or waterways. The plans will ensure the controls are established early during the project and maintained throughout the life of the project.

6.2 GENERAL PRINCIPLES

It is important to design and install measures that reduce the erosion hazard of any particular construction activity. Once this is achieved, run off water which carries the sediment must be controlled, in such a way as to reduce the amount of sediment leaving the site. Site water and sediment management will be in accordance with EPA and Sydney Water Guidelines. Mirvac maintains a policy for the management of water prior to disposal offsite (refer to Appendix G – Mirvac Group Policies and Procedures).

The following general items **may** be incorporated into the construction management of the site:

- Temporary holding area for excavated material within a temporary sediment fence to ensure erosion and sediment particles do not enter surrounding waterways. Excavated material held in this area will be appropriately covered to ensure colluvium erosion and sedimentation will not occur.
- Ingress of water due to periods of heavy rain will be managed through on-site detention. Excess surface water will be pumped into one of two sediment holding tanks. These tanks will be cleaned, and the water will be pumped to stormwater following cleaning and treatment in accordance with Mirvac Group water quality discharge procedure, EPA and Sydney Water requirements.
- Appropriate stabilised site access and/or shaker grids will be installed at site access points;
- During the Earthworks period, a wheel wash system will be implemented to ensure contaminated material does not migrate off site.
- Vehicles leaving the site will secure and cover their loads. All trucks will be inspected prior to leaving the site (where applicable);
- All roads and pedestrian footways surrounding the site will be swept to remove any debris associated with the works on the site;
- Silt fences are designed to filter run-off (if any) leaving the site, trapping sediment and allowing filtered water to pass;
- Discharge of site generated catchment water shall be managed in accordance with the Mirvac Water Quality Discharge Procedure (refer to Appendix G – Mirvac Group Policies and Procedures) and EPA Guidelines.

Additional measures, along these will be further detailed for the development of a site specific Erosion and Sediment Control Plan.

7 AIR QUALITY

Visual monitoring is to be undertaken throughout the demolition and construction phases of the project. The implementation of the below dust mitigation measures shall be incorporated to reduce the likelihood of potential issues occurring. Any complaints that may eventuate from neighbouring properties will be actioned in accordance with the Community Contact register requirements (refer to attached in Appendix G – Mirvac Group Policies and Procedures).

7.1 DUST

Dust created by demolition and construction related activities, typically become more prominent during windy conditions, and will be dealt with by way of water suppression and permeable fabric screening. Other measures for dust suppression include:

- Water carts will be used throughout the excavation phases to maintain a damp surface to areas likely to create dust;
- In windy conditions, the frequency of water suppression will be increased;
- The construction site will be maintained and kept clean. Where suitable, the use of mechanical sweepers and covered waste bins will be utilised;
- Completed surfaces will be kept clean;
- Controlled site access will be maintained with vehicle wash down / clean down facilities to be established to maintain access roads;
- All materials transported from site in trucks will be appropriately covered.
- The perimeter site fence will be covered in shade cloth or A class hoardings to minimise the egress of dust at the boundary of the site

7.2 ODOUR

Odours may be controlled such that they are minimised as far as practical / feasible at the boundary of the site during the earthworks. Odours shall be defected solely on the sense of smell. The following dust control procedures can be undertaken if required.

- Use of appropriate covering techniques to cover excavation faces or stockpiles
- Use of fine mist sprays
- Use of hydrocarbon mitigating agent used on the impacted areas/materials
- Adequate maintenance of equipment and machinery to minimise exhaust emissions

8 HAZARDOUS MATERIALS

8.1 GOODS STORED ON SITE DURING CONSTRUCTION

During construction, Mirvac will implement a hazardous materials register as part of the Work Risk Management Plans and audit procedures. The hazardous materials register will include the following materials / procedures:

- Fuels required for running of plant and equipment, these fuels will include: unleaded petrol, diesel and gas. All fuel will be contained and bounded as required under EPA guidelines, Department of Environment Climate Change and Work Cover requirements;
- Re-fuelling procedures and designated re-fuelling areas will be implemented and allocated to eliminate risks associated with spills and will also identify procedures to contain spills;
- Spill kits and adequate training will be provided to relevant construction staff and at locations identified as storage and refuelling zones.

Dangerous goods to be stored on site may also include; oxyacetylene, bonding agents etc. and as per the fuels listed above, these will also be stored as required under relevant Australian Standards, EPA guidelines, the Department of Environment Climate Change and Water, Work Cover requirements and Industry codes of practice.

Hazardous substances and dangerous goods will be stored in secure well ventilated areas. At all times, Mirvac will have regard to the storage and hazardous materials and their proximity of neighbouring properties.

Mixed class gas cylinders, e.g. oxy and acetylene, will be separated from other hazardous substances or flammable goods by a minimum distance of 3 metres as detailed in AS4332 Storage and Handling of Gases in Cylinders. The exception to this requirement is minor storage situations (a total capacity of all cylinders in the store of less than 2,000 litres) where both oxygen and acetylene can be stored together.

Storage of dangerous goods that ‘exceed’ the amounts outlined in the Mirvac Group Dangerous Goods Storage Guidelines require the premises (workplace) to be licensed under dangerous goods legislation and associated regulations. To minimise workplace risk and eliminate the need for licensing, except in exceptional circumstances, it is a Mirvac Group requirement that maximum volumes of Dangerous Goods do not exceed those quantities outlined in the abovementioned guidelines.

The storage area for hazardous substances and dangerous goods shall be constructed with an impervious floor and bunded with a minimum capacity of 110% of the largest container in the store, e.g. a store consisting three 20 litre substance containers requires a bunding capacity of 22 litres.

Mirvac will maintain a dangerous goods register and material safety data sheets for each product listed as well as having a procedure to deal with potential spills.

All relevant firefighting equipment, first aid facilities and relevant authorities contact details i.e. Fire, EPA will be displayed at prominent locations and included at site inductions.

9 SUSTAINABILITY

9.1 INTRODUCTION

The Principal Contractor's target is to achieve consistent level of environmental and social outcomes throughout the project by committing to establishing new initiatives where possible. Exploring alternative sustainable options outside of the legislative requirements and implementing them will make a significant contribution to the physical environment and the local community.

By exercising the sustainability values depicted in Figure 2 and recognising the benefits of social, environmental and economic sustainability, 2 Figtree Drive, Sydney Olympic Park will promote a balanced lifestyle for its future occupants and wider community which will be reflected in the development and throughout the demolition phase.

Figure 2 – Mirvac's Sustainability Values

9.2 STRATEGY

Adherent with Mirvac's commitment to sustainability, an integrated approach "This Changes Everything" is focused on the responsibility Mirvac has to the environment, wider community and to its investors. With the engagement from relevant stakeholders Mirvac seeks to deliver a culture that fosters sustainability and having a lasting impact. The four aspects of this strategy include:

- **Reimagining resources**: Mirvac aims to generate more water and energy than we consume and to find ways to capture and reduce waste beyond that we create. Through efficient use of resources, the principal contractor will reduce consumption of natural resources and operate in manner which will achieve a minimum 95% recycling. In management practices, the principal contractor will invest in opportunities such as renewable energy onsite and assess suppliers in their involvement to sustainability.
- **Shaping the Future of Place**: To create a place where we live, work, shop and play utilising feedback from the community on past projects. Ongoing community engagement is necessary to predict future challenges while accepting information and boundaries will change over time. Implementation of utilities and infrastructures will be made in the design and construction to promote a sense of place.
- **Enriching Communities**: To improve the health and wellbeing within a community as well as strengthen social inclusion. Mirvac recognises "beyond boundaries" are what supports society as a

whole and improves the places we create. Active participation from external stakeholders on sustainability issues will result in refining business operations and investing in the community.

- **Smarter Thinking**: Investing in assets designed to improve its own performance and ease of operation over its cycle. Financing in smart technology to become more efficient and effective in the delivery of the project while educating and informing the importance of sustainability.

9.3 STRATEGY

The following criteria will be monitored during construction to measure overall performance in addressing sustainability targets:

9.3.1 Environmental Management System

Implement a Workplace Risk Management Plan that is certified to AS/NZS ISO 14001, which establishes clear environmental objectives & targets for the site works.

9.3.2 Community / Schools

Provide opportunities for students and the local community to learn about the projects and the impact on the wider community. As well as this, hold information sessions on the health and safety programs to engage and build a rapport with the relevant agencies. Have email updates on the progress and any other media coverages.

9.3.3 Energy

Examine opportunities to reduce electricity and water consumption and the use of alternative systems implemented for site amenities.

9.3.4 Sustainability Induction

Construction staff will be educated on the sustainability initiatives planned for the project and encouraged to innovate and find sustainable solutions through site induction and tool box talk's process.

9.3.5 Innovation

Review project planning and development to explore innovative options to promote sustainability on the project.

10 WORKPLACE RISK MANAGEMENT

10.1 INTRODUCTION

Mirvac is fully committed to providing a safe working environment.

Each Work Place Risk Management Plan (WRMP) requires that equipment, workplaces and practices comply with relevant regulations and standards. Regular and ongoing reviews of these standards will be conducted and where higher standards are practical and desirable, they will be adopted. In addition the company will:

a) Provide adequate resources to satisfy this policy;

b) Identify, control and reduce work-related hazards and risks that may produce injury, illness or asset damage;

c) Identify, quantify and control to safe levels, those chemicals and physical agents in the workplace capable of causing ill health;

d) Promote the Environmental, Health, Safety and Welfare of employees and subcontractors while respecting the privacy of individuals;

e) Provide information, instruction and training for employees to increase their personal understanding of workplace hazards, promote safe working practices and ensure contractors are aware of and satisfy the Groups HSE expectations (refer to Appendix G – Mirvac Group Policies and Procedures);

f) Consult employees and contractors in environmental, health and safety to reduce workplace hazards and risks;

g) Consult with clients, industry bodies and others in the development of appropriate standards, control strategies and monitoring techniques, which comply, with the requirements of statutory authorities;

h) Set short and long term goals in work health and safety management, and review performance against these goals.

Mirvac Management is responsible for highlighting the responsibilities of all workers and workplace safety whilst achieving a safe and healthy work environment. Work life balance is also important to Mirvac and hopes to accomplish policy which fosters a culture that encourages health and safety awareness, and promoting active participation in the Health Safety & Environment (HSE) program.

10.2 SAFETY PLANS AND SAFE WORK METHOD STATEMENTS

The preparation, implementation and continued improvement of both Mirvac's Workplace Risk Management Plan and Job Safety Environmental Analysis is the key success in the management of the Project's Safety.

This plan will include:

- A description of the work to be undertaken;
- An identification of the hazards associated with the works; and
- A description of the hazard control measures to be used.

A detailed Site Specific Workplace Risk Management Plan shall be implemented by Mirvac prior to commencement of works and updated as required.

10.3 ACCOUNTABILITY OF KEY PERSONNEL

All Mirvac personnel have a role and are responsible for the environmental management of the project.

The key personnel accountable for the environmental management are as follows:

10.3.1 Workplace Manager:

- Manage all reported hazards and environmental impacts in an appropriate and timely manner.
- Provide suitable supervision, instruction and facilitate training, to provide employees or service providers with the knowledge and skills required to undertake their work duties safely and in a manner which minimises risk to the environment.
- Establish the development of a Workplace Risk Management Plan in accordance with the Mirvac Group Health Safety Environment Management System and the objectives of the Health Safety Environment Policy.
- Facilitate the development of a workplace specific Induction and workplace rules in accordance with the Mirvac Group Health Safety Environment Management System.
- Verify that health safety and environment conditions stipulated in the contract are formally evaluated in the award of tendered or high risk contracts.
- Facilitate the review of Service Provider health safety and environment plans or procedures for specific work contracts including HSE Management Plan and Job Safety Environment Analysis or equivalent documentation using Mirvac Group form Service Provider Permit for Works to Proceed prior to the contractor commencing work at the workplace.
- Establish control methods and procedures for the reduction of noisy plant and equipment as outlined in the Mirvac Group Noise Management Procedure.
- Facilitate regular workplace inspections by the foreman or other area supervisors using the Mirvac Group Workplace Health Safety Environment Inspection and implement corrective action where deficiencies are identified.
- Secure areas such as flora or fauna habitats identified for environment protection.
- Record community contact by stakeholders affected by the project on Mirvac Group Community Contact Register and instigate action within 48 hours including a response to the initiator of the contact.
- Facilitate the resolution of any disputes which may arise over workplace health safety environment issues.

10.3.2 HSE Officer's:

- Undertake HSE duties as directed by the Workplace Manager consistent with the requirements of the Health Safety Environment Management System
- Identify work activities which have the potential for significant (material harm) impact on the environment and ensure they are planned and executed to minimise risk to the environment.
- Ensure a Community Contact Register is maintained and that any contact is recorded and corrective action implemented with a response to the community member within 48 hrs.
- Facilitate the dissemination of health safety environment information to all relevant personnel.
- Assist the Workplace Manager in developing a written corrective action plan to eliminate any deficiencies identified from any workplace audit by an internal or external third party. The time frame for rectification of issues raised in any inspection, audit or other appraisal shall be determined by the Division/Regional HSE Manager but shall not exceed 30 days.

10.3.3 HSE Representative:

- Report on health safety environment performance.
- Assist in the development of a workplace specific Induction and workplace rules in accordance with the Mirvac Group
- Health Safety Environment Management System.

10.3.4 Site Supervisor:

- Develop appropriate and timely remedial action for reported hazards & environmental impacts.
- Provide suitable supervision, instruction and facilitate training, to provide employees or service providers with the knowledge and skills required to undertake their work duties safely and in a manner which minimises risk to the environment.

10.4 EMERGENCY RESPONSE AND EVACUATION

The Workplace Manager, or a nominated representative, in conjunction with other appointed Mirvac personnel will develop emergency procedures for the workplace including an emergency contact list to be displayed on the workplace notice board and at other prominent locations. The Emergency Response Contact Information Table is completed by the Workplace Manager or a nominated representative.

Each workplace has a stand-alone documented Emergency Response Plan (ERP) prepared in accordance with the Mirvac

Group Emergency Response Procedure and tested regularly. Where an Ambulance is called to attend a workplace injury, a Standby Person will be nominated and positioned at the main entry to the workplace to assist Ambulance Officers to locate and attend the injured person as required by the Mirvac Group Emergency Response Procedure. A completed Mirvac Group Emergency Call procedure will be displayed in the workplace which provides a summary of information required when making an emergency call.

11 COMMUNITY CONSULTATION

11.1 INTRODUCTION

Consultation will be made with the local community and relevant agencies at an appropriate time and setting by a Mirvac representative. The objectives of the consultation is to outline all major activities, operations and environmental performance of the project which may affect their amenity.

Through the use of sound management practices, positive engagement with stakeholders, authorities or customers can be achieved. Members of the community who are involved in Mirvac business can expect opportunities for discussion and feedback. Mirvac upholds high regards and is sensitive to social amenity and the lifestyle impacts of its business undertakings and mirrors it in response.

The community relations program comprises:

- Community Information Sessions
- A dedicated Community Liaison Officer
- Weekly works meetings to highlight activities with potential impacts on neighbours
- A project newsletter
- Advance notification of higher impact works
- A project email
- Regular doorknocks of neighbouring properties
- Individual stakeholder meetings on request
- Consultation Manger database
- Fortnightly reporting
- Calling cards and site signage
- A construction specific website to be established

12 DISPUTE RESOLUTION

Mirvac acknowledges the potential for disruption as a result of the development, and proposes that a complaint procedure / complaint register to be developed. Should a complaint or infringement occur, the following procedures are to be adopted in accordance with the Mirvac group wide standard systems:

- All complaints and infringements are to be brought to the attention of the Mirvac Site Manager immediately upon receipt;
- The Mirvac Site Manager shall investigate the complaint and ensure appropriate action is taken to address the complaint or infringement within the time frame HSE Objectives and Targets for Community Contact Issues detailed within the Mirvac Construction HSE Management Systems Manual;
- A Community Contact Notification form shall also be completed for all complaints and enquiries (refer to Appendix G – Mirvac Group Policies and Procedures);
- A copy of this documentation is to be filed within the site office.

The contact details of the Site Manager will be permanently shown on the site noticeboard to be displayed in a prominent location at the site entry as an emergency 24 hour contact.

13 APPENDICES

APPENDIX A – VEHICLE ACCESS AND EGRESS PLAN

Project:
SYDNEY OLYMPIC PARK
2 Figtree Drive

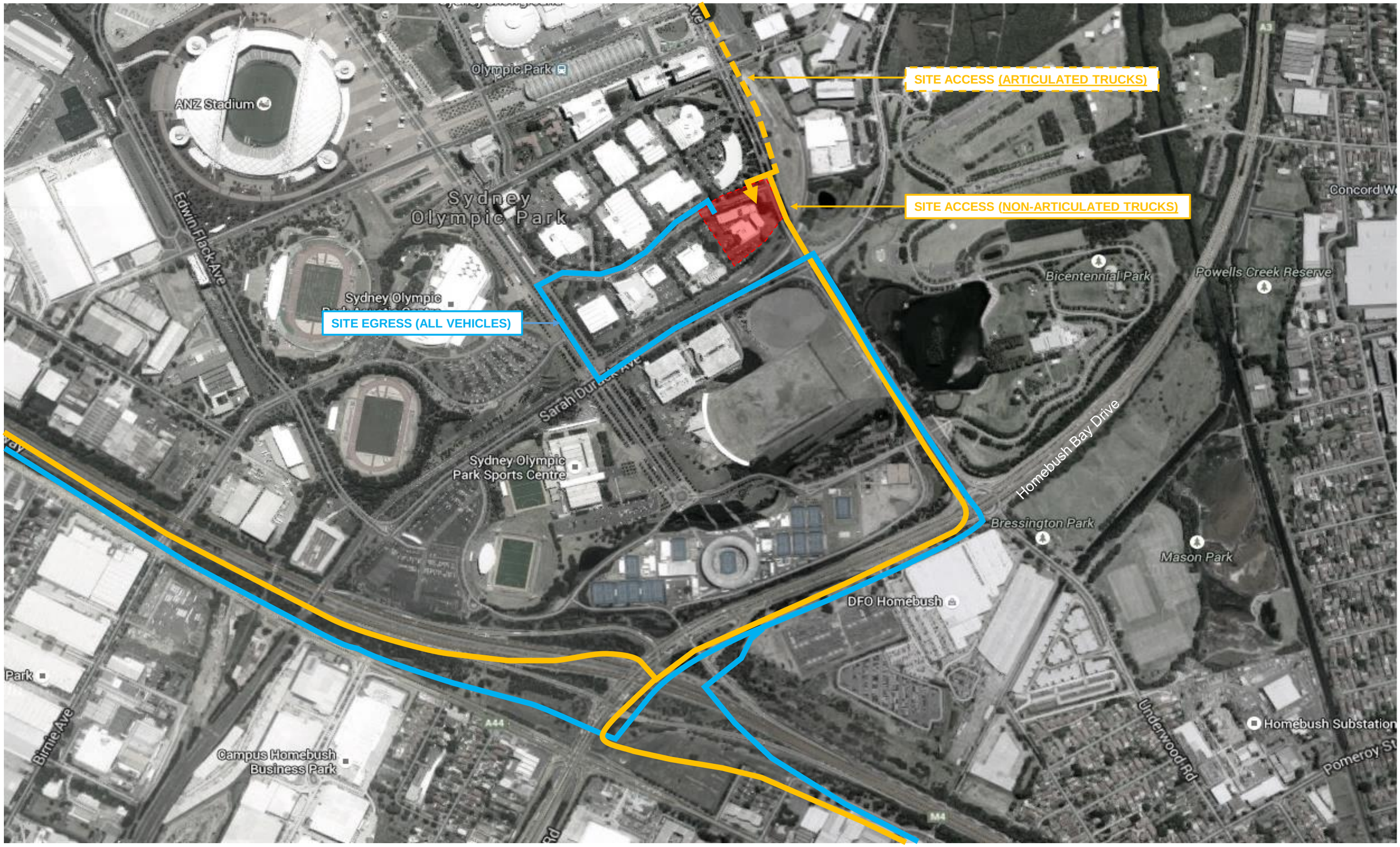
Title:
APPENDIX A:
VEHICLE ACCESS AND EGRESS PLANS

SUBJECT SITE

Site access route (non Articulated Trucks):
- Homebush Bay Drive exit from the M4 Southern Motorway
- Head north on Homebush Bay Drive
- Turn left at the Australia Avenue exit / roundabout
- Turn left into Figtree Drive and access site

Articulated trucks to take Hill Road exit from M4 Southern Motorway. Trucks to turn right off Australia Avenue into Figtree Drive

Possible site egress routes:
- Continue westbound along Figtree Drive
- Turn left into Olympic Boulevard
- Turn left into Sarah Durack Avenue
- Turn right into Australia Avenue
- Turn right at the Homebush Bay Drive roundabout
- Take the M4 Southern Motorway exist (east or westbound)



APPENDIX B – GTA CONSULTANTS' CONSTRUCTION TRAFFIC MANAGEMENT PLAN

Site 53, 2 Figtree Drive
Sydney Olympic Park
Construction Traffic Management Plan

Client //	Mirvac
Office //	NSW
Reference //	15S1505100
Date //	23/07/15

Site 53, 2 Figtree Drive
Sydney Olympic Park

Construction Traffic Management Plan

Issue: A 23/07/15

Client: Mirvac
Reference: 15S1505100
GTA Consultants Office: NSW

Quality Record

Issue	Date	Description	Prepared By	Checked By	Approved By	Signed
A	23/07/15	Final	Andrew Farran	Wayne Johnson	Ken Hollyoak	

GTAconsultants

Melbourne | Sydney | Brisbane
Canberra | Adelaide | Perth
Gold Coast | Townsville

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Tables

1. Introduction

1.1 Background and Proposal

GTA Consultants was commissioned by Mirvac to prepare a Construction Traffic Management Plan (CTMP) for a proposed mixed use development at 2 Figtree Drive, Sydney Olympic Park.

The proposed development would accommodate approximately 418 residential apartments plus approximately 1,516m^2 of retail uses. The proposed development would include four buildings ranging in height from five to 14 storeys.

This report has been prepared by GTA Consultants on behalf of Mirvac Projects Pty Ltd to accompany the SSD application.

1.2 Purpose of this Report

The objectives of this report are:

- to provide a detailed description of the project and construction activities
- to examine and consider the proposal's likely impact on traffic
- provide mitigating measures to address any traffic and transport impacts.

The report has been prepared and checked by engineers who hold the RMS Select/ Modify Traffic Control Plans (Red Card) and Design and Inspect Traffic Control Plans (Orange Card) certification.

1.3 References

In preparing this report, reference has been made to the following:

- an inspection of the site and its surrounds
- other documents and data as referenced in this report.

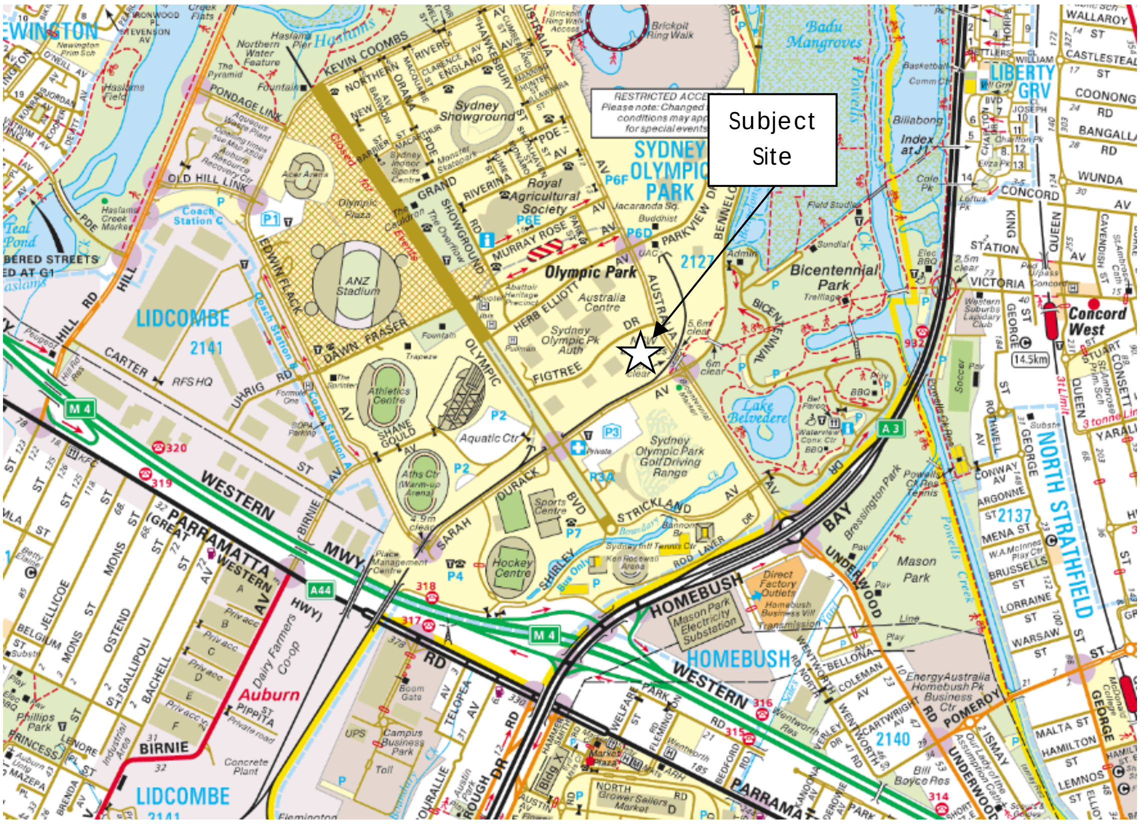
2. Existing Conditions

2.1 Site Location

The proposed mixed use development at 2 Figtree Drive is located to the southwest of the heart of the Sydney Olympic Park town centre precinct. This site is bound by Figtree Drive to the north, Australia Avenue to the east, the Sydney Olympic Park train line (and separated dedicated cycleway) to the south and the Fujitsu Australia building to the west.

The location of the subject site and its surrounding environs is shown in Figure 2.1 and Figure 2.2.

Figure 2.1: Subject Site and Its Environs



(Reproduced with permission from Sydway Publishing Pty Ltd)

Figure 2.2: Aerial Photo of Subject Site

2.2 Road Network

The subject site is generally surrounded by local streets including Figtree Drive, Australia Avenue, Olympic Boulevard and Sarah Durack Avenue.

Figtree Drive is a local road, connecting Australia Avenue and Olympic Drive, configured with a single traffic lane in each direction with a sign-posted speed limit of 40km/hr. Indented restricted on-street 2P parking is provided on Figtree Drive.

It is noted that motorists are permitted to turn right from Australia Avenue onto Figtree Drive. Likewise, the turn right from Figtree Drive onto Australia Avenue is unrestricted. At the intersection of Figtree Drive with Olympic Boulevard vehicular movements are restricted to the left-in/ left-out.

Australia Avenue is a local road with a north-south alignment that runs along the eastern boundary of the site. Australia Avenue is a median-separated two-way road with a sign-posted speed limit of 60km/hr. The number of traffic lanes varies between two and three lanes in each direction due to right-turn lanes on approach to signalised intersections. On-street parking is not provided along Australia Avenue; an on-road cycleway currently occupies the narrow shoulder.

Within the vicinity of the subject site, Olympic Boulevard is a local road and is configured as a two lane, two-way road with a 40km/hr speed limit. Towards its northern end, Olympic Boulevard has a single lane in each direction. Restricted on-street 2P parking is provided in the road shoulder on the west side while bus bays are located along the east.

Figtree Drive and Australia Avenue are shown in Figure 2.3 and Figure 2.4 (sourced from GoogleMaps).

Figure 2.3: Figtree Drive – Looing West

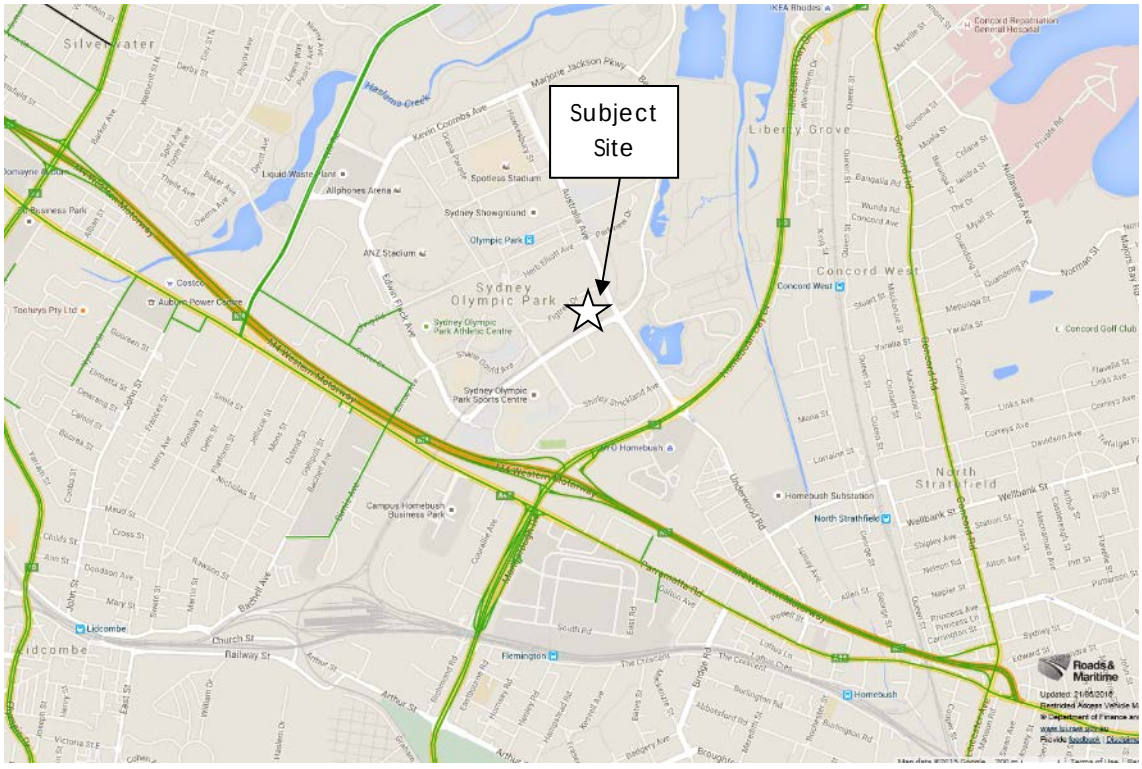
Figure 2.4: Australia Avenue – Looking North

2.3 Restricted Access Vehicle Routes

In the vicinity of the subject site, the NSW Roads and Maritime Services (RMS) identifies Homebush Bay Drive, Parramatta Road and the M4 Western Motorway as approved B-Double routes. No internal roads of the Sydney Olympic Park precinct are identified as RMS approved heavy vehicle routes.

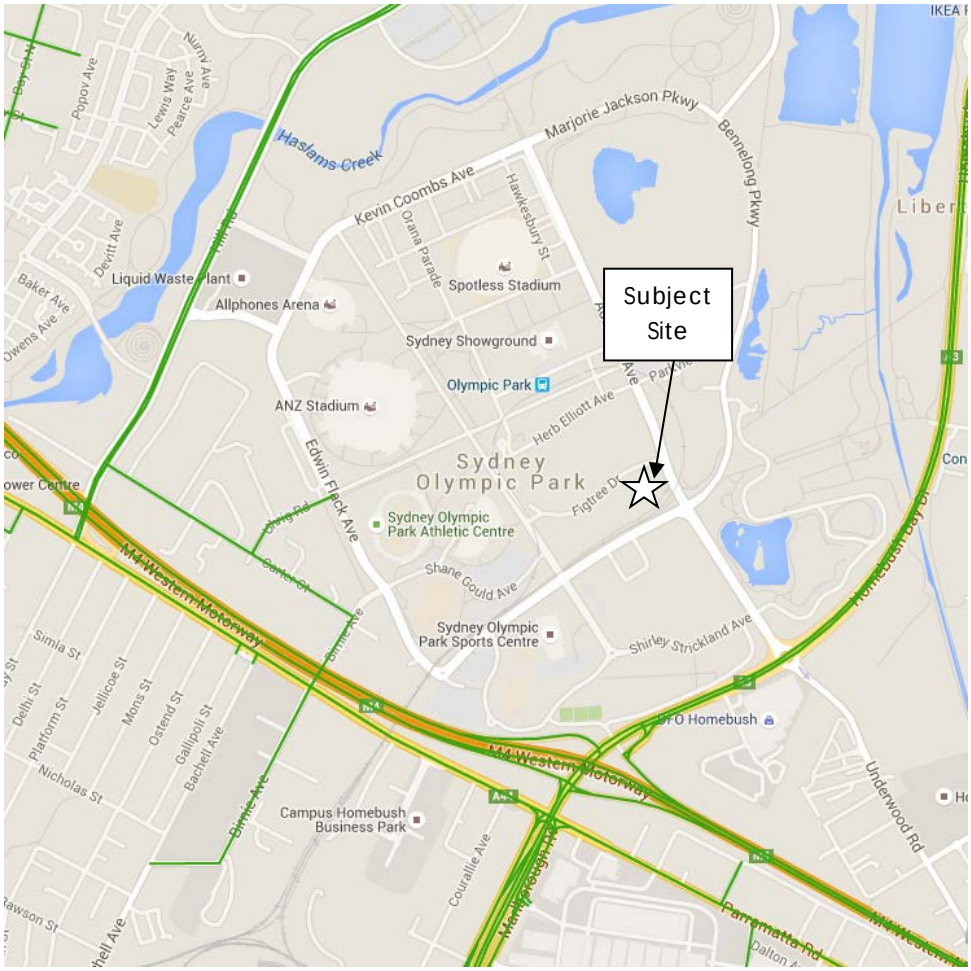
The Restricted Access Vehicle map for approved B-Double vehicles in the vicinity of the subject site is shown in Figure 2.5 and Figure 2.6.

Figure 2.5: Approved B-Double (25/26m) Routes



(Reproduced from RMS – Restricted Access Vehicles Map online)

Figure 2.6: Approved B-Double (19m) Routes



2.4 Public Transport

Olympic Park Railway Station is located 700m northwest of the site and is within a 10 minute walk. The station is serviced by the T7 Olympic Park Line, which acts as a shuttle-service between Lidcombe and Olympic Park stations.

In the vicinity of the site, bus stops are located on Australia Avenue and Olympic Boulevard. A review of the public transport available in the vicinity of the site is summarised in Table 2.1

Table 2.1: Public Transport Provision

Service	Route #	Route Description	Typical Services		
			AM Peak Period (6:30am-9:30am)	PM Peak Period (4:00pm-7:00pm)	Saturday (11am-2pm)
Train	T1	Lidcombe to Olympic Park	Every 10 mins	Every 10 mins	Every 10 mins
Bus	450	Burwood to Hurstville via Strathfield, Belfield, Lakemba, Roselands & Beverly Hills	Every 15 mins	Every 15 mins	-
	525	Burwood to Parramatta	Every 10-15 mins	Every 10-15 mins	Every 30 mins
	526	Burwood to Sydney Olympic Park Wharf	Every 30 mins	Every 30 mins	Every 60 mins
	533	Chatswood /North Ryde to Olympic Park	Every 15 mins	Every 15 mins	-
	X25	Strathfield Station - Olympic Park Station	Every 15 mins	Every 10 mins	-
	401	Lidcombe to Sydney Olympic Park	Every 20 mins	Every 20 mins	Every 40 mins

Source: www.transportnsw.info

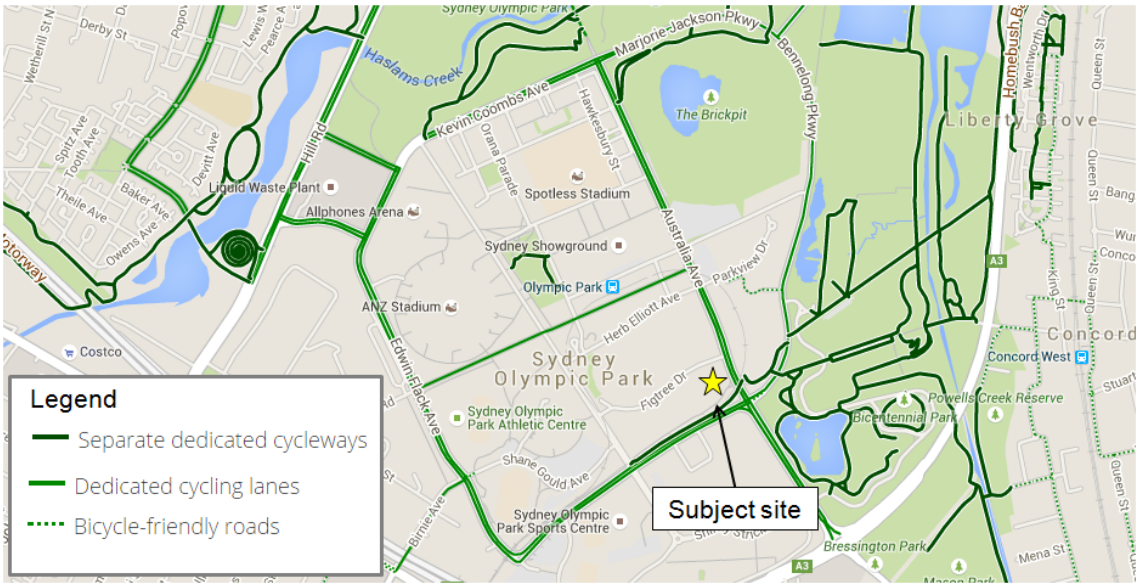
2.5 Pedestrian and Cyclist Network

Pedestrian footpaths are located on both sides along all streets surrounding the site. Footpaths along Figtree Drive, Australia Avenue and Olympic Boulevard vary in width; they are1.2m, 4m and 7.5m respectively. Street lighting is provided along all of the mentioned routes. Footpaths in the area provide continuous access between the subject site and Olympic Park Station. Observations indicate that existing pedestrian demands along the Figtree Drive site frontage are low.

Sydney Olympic Park has over 35 kilometres of cycleways which form part of various scenic bike circuits. These tracks are utilised by recreational riders as well as experienced cyclists. In addition to these routes, on-road cycleways are located along Australia Avenue, Sarah Durack Avenue and Dawn Fraser Avenue.

The bicycle network in the locality of the site is shown in Figure 2.7.

Figure 2.7: Sydney Olympic Park Bicycle Network



Source: www.sydneycycleways.net

3. Overview of Construction Activities

3.1 Description and Duration of Works

The 2 Figtree Drive mixed use development will include the demolition of the existing building and car parking areas and the construction of a multi-storey building with associated basement parking.

The staging, description and estimated duration of construction activities is summarised in Table 3.1.

Table 3.1: Construction Staging, Description and Duration

Stage	Description	Duration
1. Site Establishment	Set up of hoardings and site amenities for sewer relocation and Fig tree movement.	1 month
2. Demolition	Demolition of existing building and car parking areas.	2 months
3A & 3B. Earthworks	Concrete piling and the battered excavation along the perimeter of the building. Concrete piling of footings. Excavation of basement areas.	5 months
4A & 4B. Construction	Construction of the multi-storey building.	17 months

As shown in Table 3.1, the construction works associated with the mixed use development at 2 Figtree Drive is anticipated to take approximately 25 months to complete.

3.2 Construction Details

3.2.1 Plant and Equipment

Construction vehicles which are likely to be generated by the proposed construction activities include:

- An articulated flatbed truck would be used to deliver site sheds and hoarding materials.
- An articulated float and/or articulated low loader would be used to transport earth moving machinery (i.e. excavators, piling rig and tower crane).
- Truck and dogs for the exportation of demolished material and excavated soil from the site.
- Medium rigid vehicles, small rigid vehicles, vans and couriers to deliver smaller materials.

3.2.2 Work Hours

Construction activities would generally be undertaken between 7:00am - 6:00pm Monday to Fridays and 7:00am to 3:00pm on Saturdays with no work on Sundays or public holidays in accordance with SOPA consent conditions.

3.2.3 Staff Parking

There may be an opportunity to provide some staff car parking on-site (dependent on the staging of construction). The site is located within 700m walking distance of Olympic Park Station which provides high frequency public trains to Lidcombe. Staff would be encouraged to catch public transport to and from the construction site.

There are a number of off-street car parking stations provided at Sydney Olympic Park which are available for all day parking, if required.

4. Construction Traffic Assessment and Implications

4.1 Site Establishment

The first stage of works will include the removal of a Fig tree along the western boundary line and upgrading the sewer infrastructure.

The site establishment work will involve the set-up of hoardings and site amenities.

Class B Hoarding will be installed along the sites frontage to Figtree Drive (adjacent to the Works Zone), Class A Hoarding will be installed along the perimeter of the site.

During this phase of work it is expected that construction traffic and their impacts will be minimal, with up to ten trucks per day. During this early stage of works the existing site access will be used.

4.2 Demolition

The demolition phase will involve demolition of the existing building and car parking areas.

During this phase of work it is expected that construction traffic and their impacts will be moderate, with an average of 10 trucks per day and a peak estimate of 20 trucks per day. The existing site access will be maintained for this period of works.

4.3 Earthworks

This phase of works will involve piling along the perimeter of the site and/ or battered excavation and pouring of concrete footings and the excavation of the basement car park.

Earthmoving machinery will require transport at the start and at the completion of their use. A flatbed truck would be used to transport larger machinery to and from the site. The delivery of large machinery would occur at times that would cause the least impact/ disruption to traffic and pedestrians.

During this phase of work it is expected that construction traffic and their impacts will be higher, with an average of 15 trucks per day and a peak estimate of 25 trucks per day. Alternate access into the site will be through a new access point to the eastern end of the construction zone.

4.4 Construction

The construction phase will involve the construction of a multi-storey building.

Two tower cranes erected during the detailed excavation phase will be used for the construction works. The construction works will include building construction as well as interior fit out such as new services, fittings and fixtures, joinery and floor finishes and the like. This stage of work is expected to occur over a 17 month period.

Similar sites suggest that the average daily number of trucks is 10 trucks per day with a maximum of 20 trucks per day during the busiest concrete pour days. Access into the site during this phase

of works will be via the ramp access operated in the earthworks stage and an additional cross over/entry to the western end of Figtree Drive.

4.5 Truck Movements Summary Table

The estimated truck movements associated with each stage of construction of the development at 2 Figtree Drive is summarised in Table 4.1.

Table 4.1: Summary of Construction Traffic Generation

Stage	Description	Peak Daily Truck Generation (truck deliveries/ day)*	Average Daily Truck Generation / Day (truck deliveries /day)*	Peak Estimate Truck Movements / Day
1. Site Establishment	Set up of hoardings and site amenities for sewer relocation and Fig tree movement.	10	Up to 10	20
2. Demolition	Demolition of existing building and car parking areas.	20	10	40
3A & 3B. Earthworks	Concrete piling and the battered excavation along the perimeter of the building. Concrete piling of footings. Excavation of basement areas.	25	15	50
4A & 4B. Construction	Construction of the multi-storey building.	20	10	40

*1 truck delivery = 2 movements (1 movement in + 1 movement out)

Given the existing traffic volumes in the vicinity of the site, the addition of up to 50 truck movements per day associated with the construction of the development at 2 Figtree Drive would not adversely impact the operation of the surrounding road network.

Assuming a 10 hour work day this equates to 1 truck movement every 12 minutes during the peak estimate construction period.

4.6 Vehicle Access

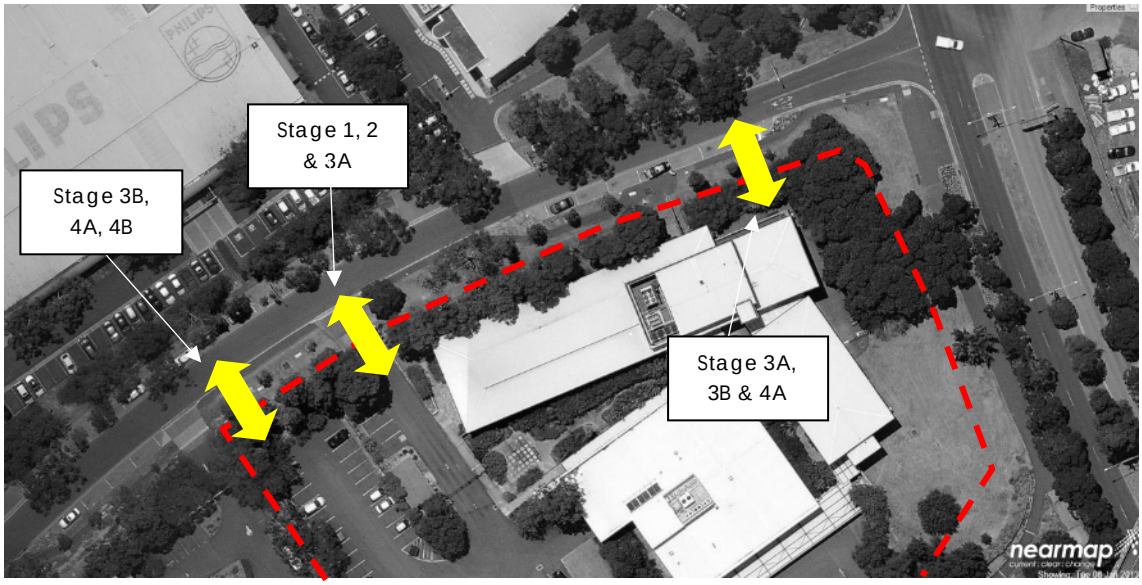
Vehicle access to the site will vary depending on the stage of construction. Initially vehicle access to the site will be provided via the existing driveway to the site (Stage 1 and 2). A temporary driveway will be provided to Figtree Drive at the eastern end of the sites frontage to facilitate excavation and part of the site construction (Stage 3A, 3B & 4). Finally vehicle access to the site will be provided from Figtree Drive at the western end of the sites frontage (Stage 4), this will form the ultimate vehicle access location for the proposed development.

A summary of the proposed vehicle access arrangements throughout the construction stage are provided in Table 4.2 and Figure 4.1.

Table 4.2: Summary of Vehicle Access Arrangements

Stage	Description	Vehicle Access
1. Site Establishment	Set up of hoardings and site amenities for sewer relocation and Fig tree movement.	Existing vehicle access
2. Demolition	Demolition of existing building and car parking areas.	Existing vehicle access
3A. Earthworks	Concrete piling and the battered excavation along the perimeter of the building. Concrete piling of footings. Excavation of basement areas.	Existing vehicle access and temporary eastern driveway
3B. Earthworks		Temporary western and eastern driveway
4A. Construction	Construction of the multi-storey building.	Temporary western and eastern driveway
4B. Construction		Temporary western driveway

Figure 4.1: Construction Vehicle Access Provisions



4.7 Swept Path Assessment

As detailed above vehicle access to the site is provided from three different locations depending on the phase of construction, swept path assessments of each of the vehicle access locations have been undertaken using AutoTURN.

A summary of the swept path findings are provided in Table 4.3 with the swept paths provided in Appendix A.

Table 4.3: Summary of Swept Path Assessments

Stage	Vehicle Size	Drawing No. (Appendix A)
1. Site Establishment	19.0m Truck and Dog, 19.0m Semi-Trailer	15S1505100-AT01-01P3, 15S1505100-AT01-02P4, 15S1505100-AT01-014P4, 15S1505100-AT01-015P4.
2. Demolition	19.0m Truck and Dog, 19.0m Semi-Trailer	15S1505100-AT01-01P3, 15S1505100-AT01-02P4, 15S1505100-AT01-014P4, 15S1505100-AT01-015P4,
3A. Earthworks	19.0m Truck and Dog, Concrete Truck	15S1505100-AT01-03P4, 15S1505100-AT01-04P4, 15S1505100-AT01-05P4, 15S1505100-AT01-16P4, 15S1505100-AT01-17P4, 15S1505100-AT01-18P4, 15S1505100-AT01-19P4.
3B. Earthworks	19.0m Truck and Dog,	15S1505100-AT01-06P4, 15S1505100-AT01-07P4, 15S1505100-AT01-08P4.
4A. Construction	19.0m Truck and Dog, Concrete Truck	15S1505100-AT01-09P4, 15S1505100-AT01-010P4, 15S1505100-AT01-011P4, 15S1505100-AT01-16P4, 15S1505100-AT01-17P4, 15S1505100-AT01-18P4, 15S1505100-AT01-19P4.
4B. Construction	19.0m Truck and Dog, Concrete Truck	15S1505100-AT01-12P4, 15S1505100-AT01-13P4, 15S1505100-AT01-16P4, 15S1505100-AT01-17P4, 15S1505100-AT01-18P4, 15S1505100-AT01-19P4.
Figtree Drive Works Zone – (Demolition, Earthworks, Construction Stages)	19.0m Truck and Dog, 19.0m Semi-Trailer	15S1505100-AT01-20P4.

4.8 Works Zone and Traffic Control Measures

Once the development is approved, Mirvac will apply to the relevant authorities for a works zone on Figtree Drive. It is proposed that a 40m long (approx.) works zone be located on the south side of Figtree Drive abutting the site. The loading and unloading of trucks will be undertaken from on-site and within the designated works zone.

The provision of the temporary works zone would result in the temporary displacement of seven 2P parallel parking spaces. The provision of the works zone on Figtree Drive would not result in any road safety issues or traffic capacity reductions.

In order to assist traffic movements into the works zone, and to ensure that other drivers are aware that such movements are taking place, five traffic control plans (TCP) are proposed and are shown in Appendix B. TCP's have been prepared for each stage of works.

Temporary traffic control would be implemented whilst the western and eastern temporary construction access points are being constructed. The traffic management would be in accordance with TCP No. 61 of the '*RMS Traffic Control at Work Sites'* manual, as shown in Appendix B.

Whilst most construction related vehicles visiting the site would be utes and small rigid vehicles who could easily enter the site, a traffic controller would be required to assist the very low anticipated number of heavy rigid vehicles, semi-trailers and truck and dog vehicles entering and exiting the work site. The swept paths (Appendix A) indicate that these large vehicles would cross the centreline of Figtree Drive to enter and exit the site. In light of this, traffic controllers would control eastbound Figtree Drive vehicular movements. We highlight that the traffic controller would not stop traffic on Figtree Drive to allow large vehicles to enter or leave the site. The traffic controller must wait until a suitable gap in traffic allows them to assist trucks to enter and exit the site.

Also, heavy vehicle warning signs will be installed to warn motorists that heavy vehicles are accessing the works zone on Figtree Drive, as shown in Appendix B.

A traffic controller will be stationed at the works zone and the temporary site access locations to assist with pedestrians, cyclists and general traffic, if required. The traffic controllers would be particularly mindful when trucks are loading and unloading.

4.9 Construction Traffic Routes

General construction traffic will have origins / destinations throughout the metropolitan suburbs. To this end, the proposed construction traffic routes shown in Figure 4.2 aim to take the shortest distances to / from the arterial road network.

All building contractors shall be notified of the truck routes and are required to adhere to the nominated routes when accessing the site.

4.9.1 Truck Routes

The designated truck routes for construction vehicles travelling to and from the site and the Figtree Drive works zone are as follows:

Inbound Route

- Take the Homebush Bay Drive exit from the M4 Southern Motorway
- Head north on Homebush Bay Drive
- Turn left at the Australia Avenue exit / roundabout
- Turn left into Figtree Drive and access site

Inbound Route for Articulated Trucks

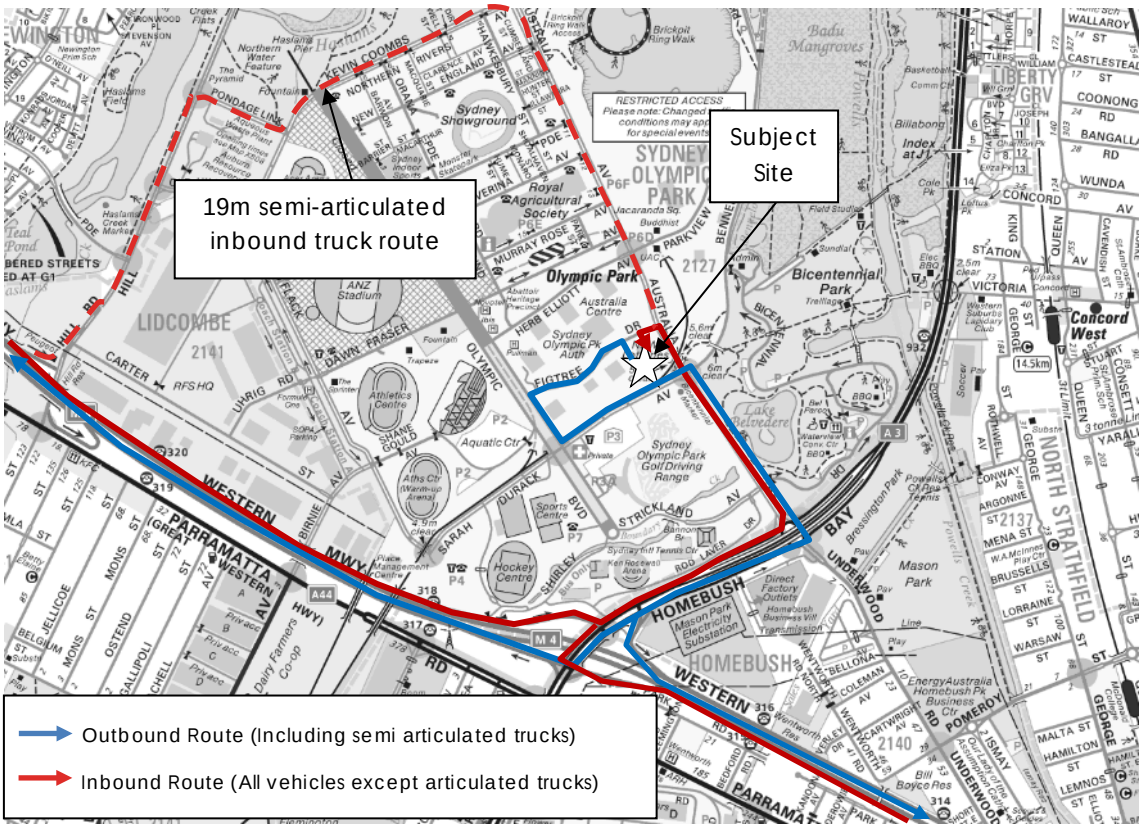
- Exit M4 motorway
- Turn left onto Hill Road
- Turn right into Pondage Link
- Turn left into Kevin Coombs Avenue
- Turn right into Australia Avenue
- Turn right into Figtree Drive

Outbound Route (All Vehicles)

- Continue westbound along Figtree Drive
- Turn left into Olympic Boulevard
- Turn left into Sarah Durack Avenue
- Turn right into Australia Avenue
- Turn right at the Homebush Bay Drive roundabout
- Take the M4 Southern Motorway exit (east or westbound)

Advisory road signage would be installed in accordance with AS 1742.3 Manual of uniform traffic control devices - Traffic control devices for works on roads and the RTA's Traffic Control at Worksites. Signs will be installed and maintained throughout the construction period.

Figure 4.2: Heavy Vehicle Access Routes



(Source: Google Maps)

4.10 Construction Staff Parking

There would be an opportunity to provide some on-site car parking during each of the construction phases. Furthermore, there are a number of car parking stations located within walking distance of the site. Notwithstanding, it is expected the majority of workers will utilise the existing public transport network servicing the site.

Subsequently, the traffic impact of construction staff is considered to be low given the sites close proximity to Olympic Park Station. The traffic generation from any construction staff parking is anticipated to be less than that of the current site use and the proposed mixed use development.

4.11 Pedestrian and Cyclist Activity

A footpath exists on both sides of Figtree Drive. Class B Hoarding is proposed along the sites frontage to the works zone on Figtree Drive. The hoarding would allow pedestrian movements to continue whilst trucks are being loaded/ unloaded.

A traffic controller would be stationed at the works zone to ensure the safety of pedestrians and cyclists whilst trucks are being unloaded/ loaded.

Pedestrians and cyclists would be stopped when trucks access the site (not the works zone) from Figtree Drive.

4.12 Public Transport Services

There will be no re-direction of public transport services during construction works. Therefore no adverse impacts to the existing public transport services or facilities would occur.

4.13 Emergency Vehicle Access

Access to the subject site and neighbouring sites by emergency vehicles would not be affected by the works as their road and footpath frontage would be unaffected. Emergency protocols on the site would include a requirement for the traffic controller to assist with emergency access from the street.

Consequently, any potential impacts on emergency access would be effectively managed throughout the works.

Liaison would be maintained with the police and emergency services agencies throughout the construction period and a 24-hour contact would be made available for 'out-of-hours' emergencies and access.

Emergency protocols on site would include a requirement for the Principal Contractor to assist with emergency access along Figtree Drive.

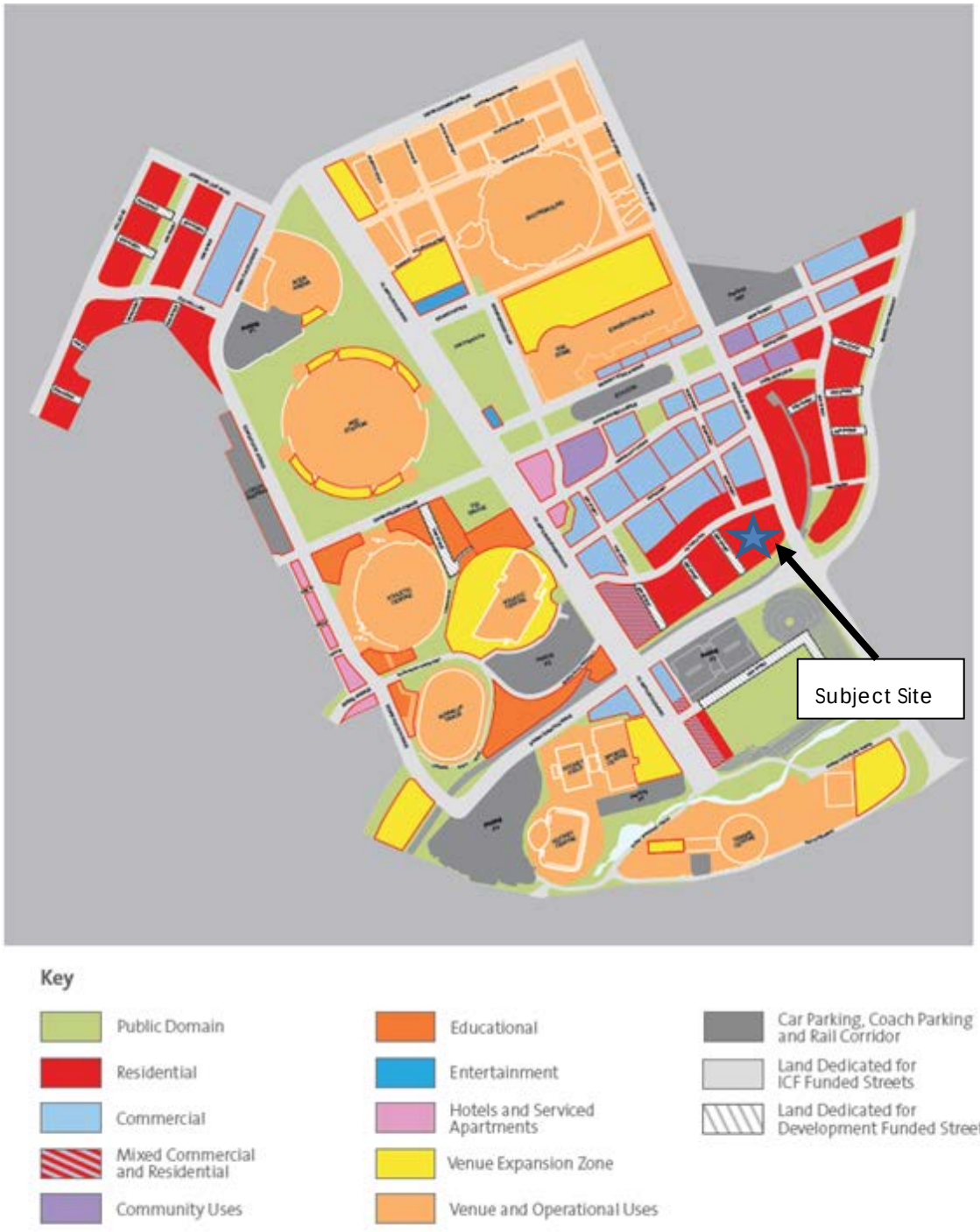
Thus there will be no adverse impacts on the provision of existing emergency vehicle access to other neighbouring properties as a result of the proposed construction activities.

4.14 Special Event Operation

The Sydney Olympic Park Precinct is an event centre and frequently hosts conference, exhibition, sporting, and music events whilst supporting the needs of the daily town resident and worker population.

The Sydney Olympic Park Master Plan has been developed so as to locate residential land use away from the venue and operation land uses. The Land Use Plan presented in the Master plan is reproduced in Figure 4.3.

Figure 4.3: Land Uses Plan



The Master plan also includes an 'Event Access Plan' which identifies the facilities required to host events and road closures which are enforced when such events take place. The Event Access Plan is reproduced in Figure 4.4.

Figure 4.4: Sydney Olympic Park Event Access Plan

The Event Access Plan indicates that the subject site is located some distance from the venues required for major events.

Different event transport initiatives, such as additional public transport services and road closures, are implemented dependent on the size of the event. Visitors to these events are typically encouraged to use public transport to access the precinct.

During larger events, typically at ANZ Stadium and All Phones arena, congestion and delays are experienced in the surrounding road network. These larger events are however typically held on weekends or weekday evenings and would occur outside the permitted work hours for the site. A

list of upcoming events at Sydney Olympic Park can be viewed on the Sydney Olympic Park website: http://www.sydneyolympicpark.com.au/whats_on/events

It is noted that Olympic Boulevard is closed when major events are held at the stadium and when the Royal Easter Show takes place.

Whilst Olympic Boulevard is closed during major events, construction vehicles would turn right from the site onto Figtree Drive, then right onto Australia Avenue and travel towards Homebush Bay Drive.

As such, vehicle access to the site will be maintained during special events, however, traffic intensive construction activities will be scheduled not to coincide with major events when the network will experience increased delays.

5. Construction and Traffic Management Mitigation Measures

5.1 Traffic Management Measures

The following construction traffic management mitigation measures would be applied to the construction of the mixed use development at 2 Figtree Drive, Sydney Olympic Park.

5.1.1 Traffic Signs and Devices

- Advisory road signage would be installed along Figtree Drive and Australia Avenue on approach to the site in accordance with the RMS 'Traffic control at Work Sites' (version 4.0 June 2010) guidelines.

5.1.2 Hours of Operation

- Work is to be undertaken during approved construction hours.
- Any work outside of the approved hours shall only be undertaken if work cannot be achieved during approved hours and will require separate approval.

5.1.3 Vehicle Access

- Construction vehicles are to radio the site office on approach to the site to ensure access to the site and/or works zone is available. All loading and unloading will be undertaken on site or within the Figtree Drive works zone.
- General vehicle access along Figtree Drive and Australia Avenue will be maintained at all times.
- Use of the works zone on Figtree Drive must occur within the terms of the pending RMS works zone approval.
- If there are any materials spilt onto the road, qualified site personnel would use appropriate equipment to rectify the issue, subject to appropriate OH&S provision.

5.1.4 Truck Routes

- The site induction would include procedures for accessing the site from Figtree Drive.
- Drivers must adhere to the nominated truck routes, as shown in Figure 4.2.
- Drivers must be aware of pedestrians and cyclists in the vicinity of the site.
- Drivers should be aware that Figtree Drive is signposted and linemarked as 50km/h.

5.2 Site Inspections and Record Keeping

A daily inspection before the start of construction activity should take place to ensure that conditions accord with those stipulated in the plan and there are no potential hazards. Any possible adverse impacts would be recorded and dealt with if they arise.

5.3 Site Induction

All staff employed on the site by the Principal Contractor would be required to undergo a site induction.

The induction should include permitted access routes to and from the construction site for site staff and delivery vehicles as well as standard environmental, OH&S, driver protocols and emergency procedures.

6. Conclusion

This report has been prepared to document the proposed construction activities and associated construction traffic management measures necessary to facilitate the proposed construction of a mixed use development at Site 53, 2 Figtree Drive, Sydney Olympic Park.

Based on the findings of the report presented above, it is concluded that:

- Construction vehicle movements to and from the site can be satisfactorily accommodated by the surrounding road network.
- Once the development is approved, Mirvac will apply to the relevant authorities for a works zone on Figtree Drive. The provision of this works zone would involve the removal of seven car parking spaces along Figtree Drive abutting the site. The works zone would not result in any road safety issues or traffic capacity reductions.
- Traffic control plans have been provided which will not only assist vehicles entering the works zone but would also alert other drivers that construction traffic movements are taking place.
- Most vehicles associated with the construction of the mixed use development at 2 Figtree Drive would access the site via Homebush Bay Drive and Australia Avenue.
- A number of driver protocols would be established as part of the site induction procedure for drivers to ensure the safety of motorists, pedestrians and cyclists.
- Sydney Olympic Park is an event centre and frequently hosts conference, exhibition, sporting and music events. These larger events are however typically held on weekends or weekday evenings and would occur outside the permitted work hours for the site.
- The site is located in close proximity to Olympic Park Station which is served by high frequency public trains between the site and Lidcombe. Some car parking could be provided on-site, whilst parking stations are provided in the vicinity of the site. Subsequently, the traffic impact of construction staff would be low (i.e. anticipated to be less than the current site and the proposed use).

In summary, it is concluded that the proposed measures will adequately address potential traffic related implications associated with the proposed construction of a mixed use development at 2 Figtree Drive.

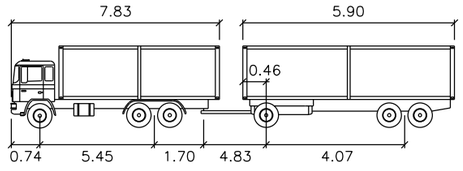
Appendix A

Swept Path Assessments

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



Truck & Dog 18.1 meters

First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 36.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

GTAconsultants
www.gta.com.au

SWEPT PATH ASSESSMENT
18.1m TRUCK & DOG ENTRY MOVEMENT
2 FIGTREE DRIVE, SYDNEY OLYMPIC PARK
(STAGE 1 - SITE ESTABLISHMENT & STAGE 2 - DEMOLITION)

DATE: 22 JULY '15	SCALE: 1:500 @ A3	
DESIGNER: T. NAPIORKOWSKI	DRAWING NO.: 15S1505100-AT01-01P4	

PLOTTED BY : barryli ON 23/07/2015 AT 11:39:13 AM

THE GPT GROUP

TATTS GROUP

EXISTING KERB LINE

DRIVE

AUSTRALIA

AVENUE

SUBJECT SITE

EXISTING ACCESS TO BE UTILISED
DURING STAGE 1 AND 2

FIGTREE

TRUCK & DOG TRL

TRUCK & DOG TRL

FUJITSU AUSTRALIA

N

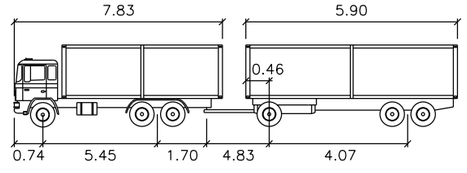
PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



Truck & Dog 18.1 meters

First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 36.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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SWEPT PATH ASSESSMENT
18.1m TRUCK & DOG EXIT MOVEMENT
2 FIGTREE DRIVE, SYDNEY OLYMPIC PARK
(STAGE 1 - SITE ESTABLISHMENT & STAGE 2 - DEMOLITION)

DATE: 22 JULY '15	SCALE: 1:500 @ A3	
DESIGNER: T. NAPIORKOWSKI	DRAWING NO.: 15S1505100-AT01-02P4	

PLOTTED BY : barryli ON 23/07/2015 AT 11:39:15 AM

THE GPT GROUP

TATTS GROUP

AUSTRALIA

AVENUE

DRIVE

FIGTREE

SUBJECT SITE

FUJITSU AUSTRALIA

EXISTING KERB LINE

STAGE 3A
WORKS ZONE

INDICATIVE NEW 8m WIDE ACCESS WITH
2m X 2m CORNER SPLAYS AS SHOWN

EXISTING ACCESS TO BE
USED IN STAGE 3A

INDICATIVE NEW 8m WIDE ACCESS WITH
2m X 2m CORNER SPLAYS AS SHOWN.
ACCESS CREATED IN STAGE 3A FOR USE
IN STAGE 3B AND STAGE 4.

N

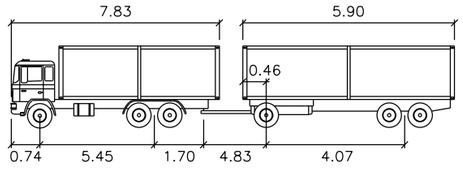
PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



Truck & Dog 18.1 meters

First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 36.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

GTA consultants
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SWEPT PATH ASSESSMENT
18.1m TRUCK & DOG ENTRY MOVEMENT

2 FIGTREE DRIVE, SYDNEY OLYMPIC PARK
(STAGE 3A - EARTHWORKS)

DATE	SCALE	
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DESIGNER	DRAWING NO.	
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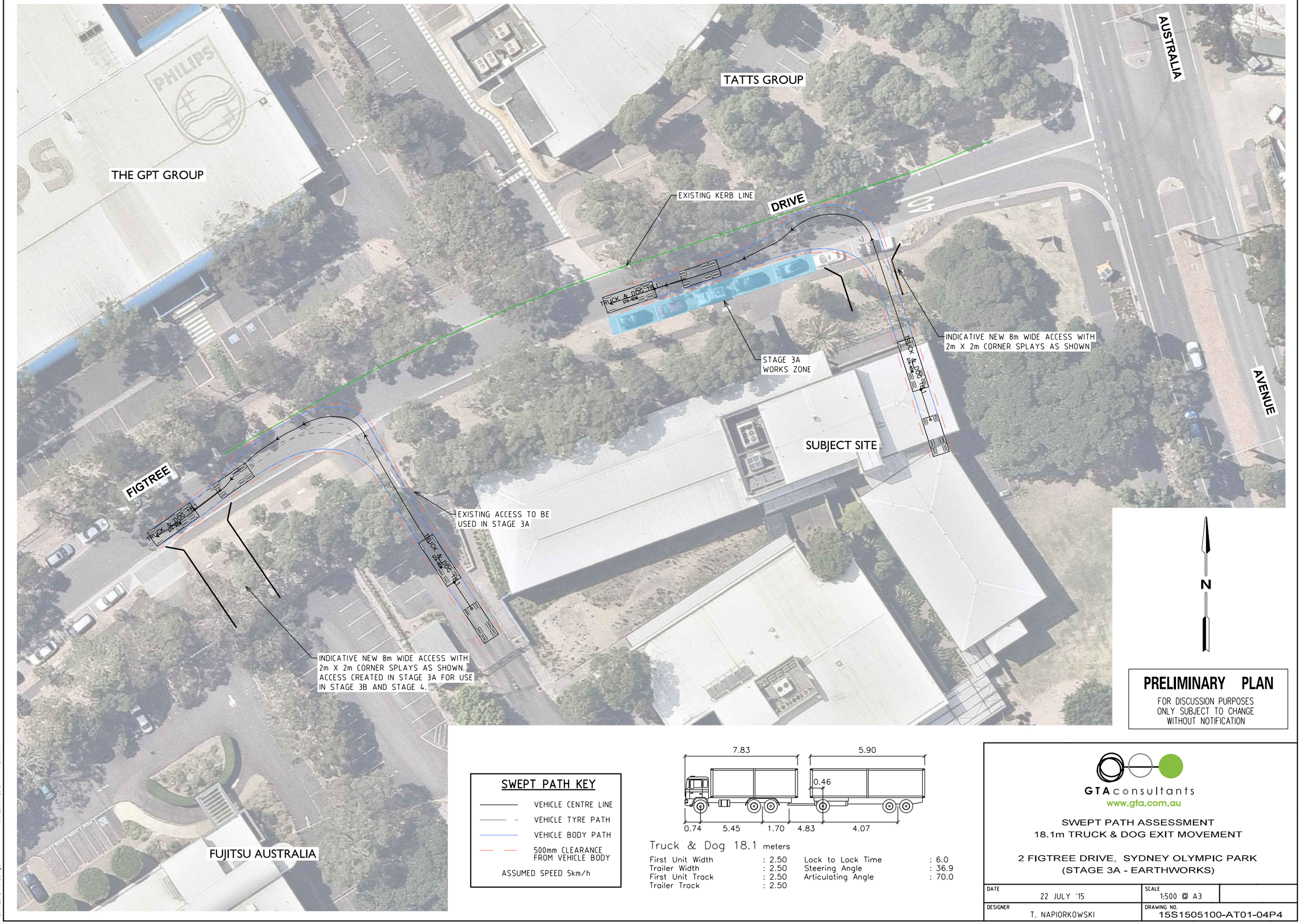
PLOTTED BY : barry.li ON 23/07/2015 AT 11:39:16 AM



PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h

Truck & Dog 18.1 meters

First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 36.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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SWEPT PATH ASSESSMENT
18.1m TRUCK & DOG EXIT MOVEMENT

2 FIGTREE DRIVE, SYDNEY OLYMPIC PARK
(STAGE 3A - EARTHWORKS)

DATE	SCALE	
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DESIGNER	DRAWING NO.	
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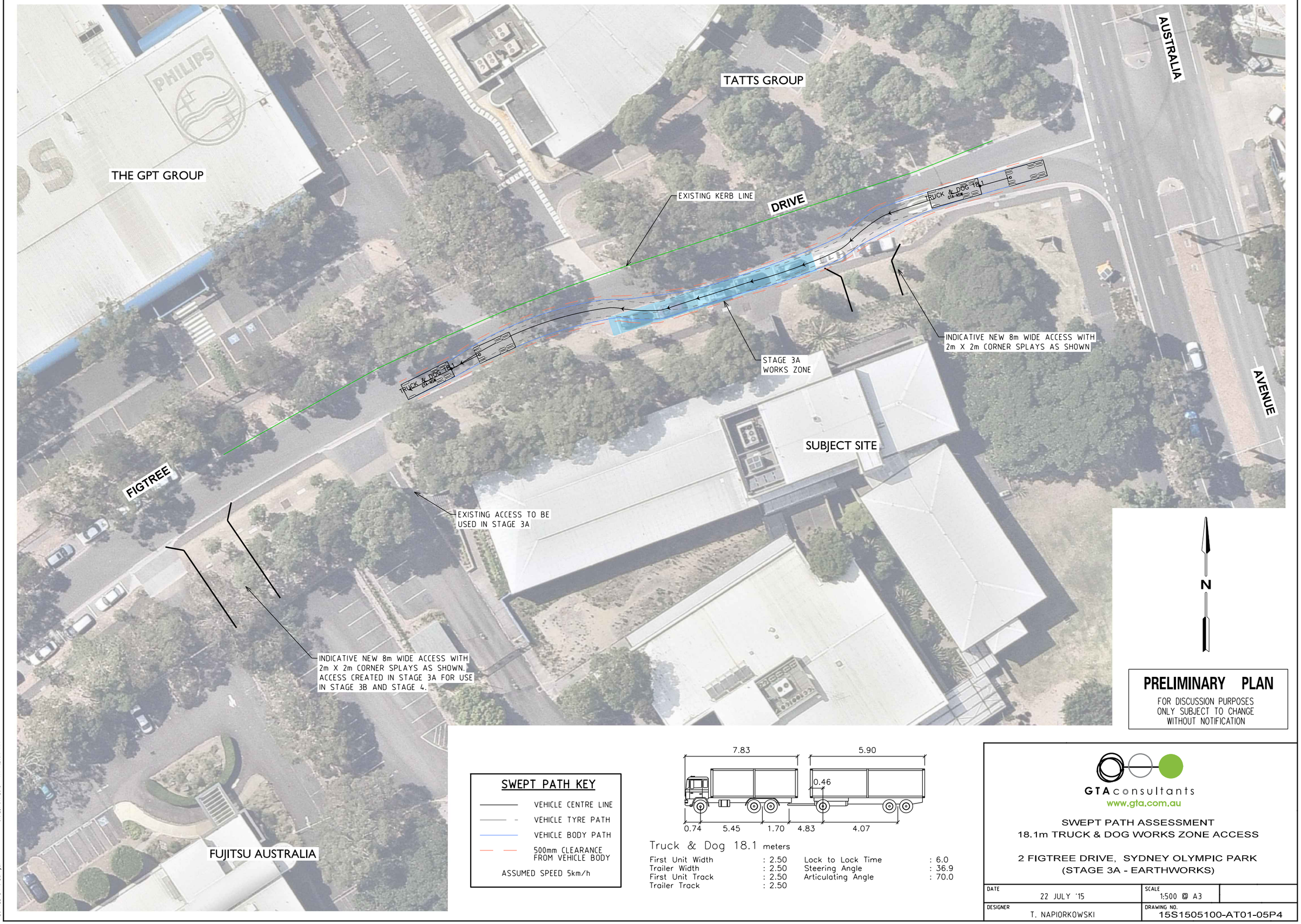
PLOTTED BY : barry.li ON 23/07/2015 AT 11:39:18 AM



PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h

Truck & Dog 18.1 meters

First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 36.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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SWEPT PATH ASSESSMENT
18.1m TRUCK & DOG WORKS ZONE ACCESS

2 FIGTREE DRIVE, SYDNEY OLYMPIC PARK
(STAGE 3A - EARTHWORKS)

DATE	SCALE	
22 JULY '15	1:500 @ A3	
DESIGNER	DRAWING NO.	
T. NAPIORKOWSKI	15S1505100-AT01-05P4	

PLOTTED BY : barry.li ON 23/07/2015 AT 11:39:19 AM

THE GPT GROUP

TATTS GROUP

AUSTRALIA AVENUE

DRIVE

FIGTREE

SUBJECT SITE

FUJITSU AUSTRALIA

EXISTING KERB LINE

STAGE 3B
WORKS ZONE

INDICATIVE NEW 8m WIDE ACCESS WITH
2m X 2m CORNER SPLAYS AS SHOWN

EXISTING ACCESS TO BE
CLOSED IN STAGE 3B

INDICATIVE NEW 8m WIDE ACCESS WITH
2m X 2m CORNER SPLAYS AS SHOWN.

TRUCK & DOG TA1

N

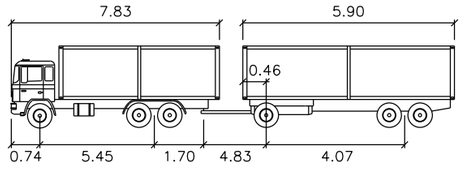
PRELIMINARY PLAN

FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

SWEPT PATH KEY

- VEHICLE CENTRE LINE
- VEHICLE TYRE PATH
- VEHICLE BODY PATH
- 500mm CLEARANCE FROM VEHICLE BODY

ASSUMED SPEED 5km/h



Truck & Dog 18.1 meters

First Unit Width	: 2.50	Lock to Lock Time	: 6.0
Trailer Width	: 2.50	Steering Angle	: 36.9
First Unit Track	: 2.50	Articulating Angle	: 70.0
Trailer Track	: 2.50		

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SWEPT PATH ASSESSMENT
18.1m TRUCK & DOG ENTRY MOVEMENT

2 FIGTREE DRIVE, SYDNEY OLYMPIC PARK
(STAGE 3B - EARTHWORKS)

DATE	SCALE	
22 JULY '15	1:500 @ A3	
DESIGNER	DRAWING NO.	
T. NAPIORKOWSKI	15S1505100-AT01-06P4	

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