SSD 7033:
Response to Submissions

Site 53, 2 Figtree Drive, Sydney Olympic Park

May 2016

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1 Introduction

1.1 OVERVIEW

This Response to Submissions Report has been prepared on behalf of *Mirvac Projects Pty Ltd*, the proponent for State Significant Development Application referred to as SSD 7033. The application was lodged in September 2015 and seeks approval for the construction of a mixed-use development at Site 53, 2 Figtree Drive, Sydney Olympic Park, comprising:

- Four residential flat buildings, ranging in height from five to fifteen storeys, comprising 422 one, two and three bedroom apartments;
- A landscaped ground plane, comprising private communal open space, deep soil landscaping, an interpretive children's play area, and a 20 metre wide view corridor to the Bicentennial Marker;
- A small retail / commercial area of approximately 1,500m² gross floor area, potentially suitable for a small supermarket or convenience store, to be retained by Sydney Olympic Park Authority on completion;
- Three levels of basement parking, comprising 44 visitor / retail car parking spaces and 456 residential car parking spaces; and
- Construction of a new access road located on the western boundary of the site, as identified within the *Sydney Olympic Park Master Plan 2030*.

The application was placed on public exhibition in October 2015 and following its conclusion, the NSW Department of Planning and Environment (DPE) issued correspondence dated 15 December 2015 requesting that the applicant respond to the issues raised in the submissions received during the public exhibition period.

This report provides a comprehensive response to each of the issues raised both by DPE and in the submissions received during the public exhibition, with the provision of additional justification and technical information where relevant.

The Architectural Drawings and Design Report have been revised to address the comments raised by DPE, SOPA and other agencies. These are provided at **Appendix A** and **Appendix B** respectively.

1.2 EXHIBITION OF SUBMISSIONS

The correspondence from DPE, confirms that the public exhibition of the application concluded on 16 November 2015 with submissions made publically available on the DPE website.

A total of five submissions were received from various government agencies, roads and utility providers, and other stakeholders. One public submission was received in support of the proposal.

The stakeholder submissions were provided to the proponent for review following the conclusion of the public exhibition period. The issues raised in the submissions have been assessed with a response provided in Section 3 of this report.

1.3 STRUCTURE OF THIS REPORT

This Response to Submissions Report is structured as follows:

- **Section 2 - The Proposal:** Provides a description of the proposed development and the changes made to the proposal as a result of the submissions received.
- **Section 3 - Matters Requiring Further Consideration:** Provides a response to the key issues raised following the Preliminary Assessment undertaken by DPE, as outlined in the correspondence dated 15 December 2015.
- **Section 4 - Response to Submissions:** Provides a summary of issues raised in the submissions and a response to each of these, including provision of additional or amended technical information as appropriate.
- **Section 5: Conclusion.**

1.4 REFERENCE DRAWINGS AND SUPPORTING DOCUMENTATION

This report is supported by the following technical studies provided in the appendices of this report. This information is intended to supersede and/or supplement those originally lodged in September 2015. All other consultant reports remain unchanged from the original Environmental Impact Statement lodgement and can be found on the DPE website.

TABLE 1 – SUPPORTING DOCUMENTATION

REPORT	PREPARED BY	REFERENCE
Architectural Drawings	*BVN*	**Appendix A**
Design Report	*BVN*	**Appendix B**
Thermal Comfort and BASIX Assessment	*Efficient Living*	**Appendix C**
Stormwater Management Strategy	*BG&E*	**Appendix D**
Civil Drawings	*BG&E*	**Appendix E**
Water Cycle Management Plan	*JHA*	**Appendix F**
Landscape Response	*360*	**Appendix G**
Traffic and Transport Assessment	*GTA*	**Appendix H**
Odour Assessment	*Pacific Environment Limited*	**Appendix I**
Contamination / Ground-water Advice	*JBS&G*	**Appendix J**
Site Suitability Letter	*JBS&G*	**Appendix K**

2 The Proposal

2.1 SUMMARY OF PROPOSED DEVELOPMENT

The SSD application seeks approval for the construction of a mixed-use development at Site 53, 2 Fig Tree Drive, Sydney Olympic Park, comprising:

- Four residential flat buildings, ranging in height from five to fifteen storeys, comprising 422 one, two and three bedroom apartments;
- A landscaped ground plane, comprising private communal open space, deep soil landscaping, an interpretive children's play area, and a 20 metre wide view corridor to the Bicentennial Marker;
- A small retail / commercial area of approximately 1,500m² gross floor area, potentially suitable for a small supermarket or convenience store, to be retained by Sydney Olympic Park Authority on completion;
- Three levels of basement parking, comprising 44 visitor / retail car parking spaces and 456 residential car parking spaces; and
- Construction of a new access road located on the western boundary of the site, as identified within the *Sydney Olympic Park Master Plan 2030*.

FIGURE 1 – PERSPECTIVE VIEW FROM FIGTREE DRIVE

2.2 SUMMARY OF PROPOSED CHANGES

In order to respond to the issues raised by DPE and the various government agencies, roads and utility providers, and other stakeholders, the following amendments to the submitted documentation and technical studies were required:

- **Architectural Plans:** Minor amendments to the Architectural Plans were required including refinements to apartment planning and layouts, façade treatment and materiality, and the inclusion of an additional 20 bicycle parking spaces within the public domain.

- **Design Report:** A Chapter has been added to the Design Report which addresses the comments made by DPE and SOPA during the public exhibition period.

- **Thermal Comfort and BASIX Assessment:** The BASIX Assessment has been updated to reflect the amended Architectural Drawings.

- **Stormwater Management Strategy:** The Stormwater Management Strategy has been revised following consultation with SOPA.

- **Civil Drawings:** The Civil Drawings, including site works plan, typical road section, OSD plan, and erosion and sediment control plan, have been amended following consultation with SOPA.

- **Water Cycle Management Plan:** The Water Cycle Management Plan has been revised following consultation with SOPA.

3 Matters Requiring Further Consideration

Correspondence received from DPE dated 15 December 2015 requires that the applicant further consider and respond to matters raised during the Preliminary Assessment. A review of these matters has been undertaken and a detailed response to the issues is provided in the following sections. For ease of reference the matters identified by DPE are repeated in Italics under each section.

3.1 ACTIVATION

Consideration should be given to maximising opportunities to activate the building frontages to the surrounding streets and linear park, including:

- *indicating on the architectural plans the location of the street level entrances to individual apartments fronting onto Figtree Drive and new street;*

Street level entrances have been provided to ground floor apartments wherever possible (refer Figure 2). Specifically, street level entrances are provided for all ground floor apartments fronting Figtree Drive and two of the three ground floor apartments fronting New Street. Due to significant level differences along New Street, of up to 3m between the footpath and ground floor units, it is impracticable to provide steps to every apartment.

FIGURE 2 – STREET LEVEL ENTRANCES

- *presenting options to provide further activation of the frontage onto Australia Avenue and the linear park;*

A large number of apartments have their primary or secondary outlook onto the linear park, ensuring passive surveillance at the upper levels. The retail windows along Australia Avenue wrap around the corner, along the linear park for the full extent of the retail lot.

Two entrances address the linear park, one via stairs and one via an accessible ramp and lift, providing direct connection between the private communal garden and the linear park. Additional access to the linear park is provided for pedestrians on New Street encouraging further activation.

- *presenting options for enhanced public access to the retail unit from the decked area on Australia Avenue; and*

360 Degrees have reviewed the design of the retail forecourt and have advised that there are extensive Tree Protection Zones associated with the protection and retention of the two existing Fig Trees, as documented in the Arboricultural Impact Assessment, which greatly limit the extent of excavation, hardstand and paths permitted in this area. Any increase of the forecourt area, paths or addition of deck treatment within the Tree Protection Zone will significant compromise the survival of the trees and is not supported by the Arborist.

- *presenting options for the relocation of the electrical substation on Figtree Drive.*

The Proponent has investigated alternative locations for the electrical substation on Figtree Drive, however due to the strict requirements of the services provider, the slope of the subject site, and the residential floor to floor heights, it is not possible to incorporate the electrical substation into the overall building envelope without compromising activation of New Street or Australia Avenue.

The substations have been carefully integrated into the Figtree Drive landscape setback to ensure their visual presence is minimised, whilst also ensuring the pragmatic requirements of access and serviceability are provided. Surveillance of the area around the substation is maximised through the position of the substation adjacent to residential entries on Figtree Drive. The selection of plants in this area also ensures there are no areas of potential entrapment (refer to Landscape Drawings).

The electrical substations have been positioned discretely within the substantial (6.5m) Figtree Drive landscape setback and have been located to minimise their visual presence, respond to the residential entry typology and recede into the wider landscape zone.

The substation positioning and surrounding treatment has been carefully considered to respond to the pragmatic requirements of access and serviceability while also ensuring the best visual aesthetic by integrating the form and structure with that of the adjacent private residential entries.

3.2 DESIGN EXCELLENCE

Further justification should be provided demonstrating that the proposal retains the design excellence qualities established through the design competition process. In particular, a response and consideration should be given to the Sydney Olympic Park Authority's (SOPA) comments in relation to the parapet feature to the top of the tallest building (East Building) and the extent of face brick work on the south east facing frontage of this building.

As is expected with a project of this scale the proposed design has undergone extensive development in consultation with the Proponent and SOPA. Notwithstanding, the key design excellence qualities established through the Design Competition process have been retained.

Specifically, the Competition Jury awarded BVN the Design Competition as the ‘alternative scheme’ presented resulted in a significant improvement to the internal amenity of the residential apartments, in particular outlook and solar access, as well as the amenity and usability of the communal open space. In addition, the redistribution of floor space created a diversity of architecture not seen in any of the other schemes presented. All of these key design excellence qualities have been retained.

A detailed response to SOPA’s comments in relation to the parapet feature to the top of the tallest building (East Building) and the extent of face brick work on the south east facing frontage of this building is provided at Section 3.7.1 of this Report.

3.3 OTHER

3.3.1 ODOUR ASSESSMENT

The Odour Assessment should be updated to provide further justification of how the adopted odour criteria was selected and the potential impacts of the 1 OU odour criteria on the site.

An addendum to the Odour Assessment has been prepared by Pacific Environment Limited and is included at **Appendix I**. Clarification is provided as to how the adopted odour criteria were selected and the potential impacts associated. In summary:

- The criteria for the assessment of odorous air pollutants adopted by the *Environmental Protection Agency* (EPA) ranges from 2 to 7 Odour Units (OU).
- An odour impact assessment criterion of 7 OU would be acceptable to the average person, but as the number of exposed people increases, the probability of a more sensitive individual being exposed increases.
- The most stringent criterion of 2 OU is considered to be acceptable for the whole population. An odour criterion of 2 OU has been historically adopted for the Homebush Bay Liquid Waste Treatment Plant (LWTP).
- Maximum odour unit concentrations at the proposed development, in a worst-worst case, are anticipated to meet (but not exceed) the range of 2 OU. Therefore, it is not anticipated that odour from the operations of the LWTP are likely to be detected by future residents.
- The likelihood that upset odour conditions would combine with poor dispersion meteorology (i.e. the 'worst-worst case' referred to above) is such that this scenario is extremely unlikely to occur in reality.
- On this basis, it is considered that the risk of odour impacts from the LWTP under normal, and even upset, conditions is extremely low.

3.3.2 ACOUSTIC ATTENUATION

Further information should be provided on the attenuation measures proposed to the adjacent data centre to ensure a satisfactory level of amenity at occupation of the development, such as who is responsible for delivering the measures and when these are likely to be concluded.

There exists a deed between the sub-lessee (Fujitsu) and the landowner (SOPA) of the adjoining land parcel (4 Figtree Drive), which requires the sub-lessee to, prior to completion of any residential development of the adjoining sites (i.e. Site 53 SOP), undertake physical noise mitigation measures to their chillers, standby generators and other equipment to meet the relevant noise standards.

This deed is between the sub-lessee, the head lessee and SOPA. The Proponent (Mirvac) is not a party to the deed but is aware of the obligations of the sub-lessee. Consequently, the proponent has no control over these works but has been advised by the sub-lessee that their noise attenuation works will be complete by the completion of the proponent's residential development.

The Proponent continues to update the sub-lessee, head lessee and SOPA from time to time on the progress of its development program so that the sub-lessee has visibility of the development timelines and is able to program in the capital expenditure related to their design and construction of the noise attenuation works.

3.3.3 TRAFFIC AND TRANSPORT ASSESSMENT

The Traffic and Transport Impact Assessment should be updated to provide further analysis of the available road and transport capacity to accommodate the likely increase in vehicle and transport demand. This assessment should also include further information on vehicle flows and potential congestion within the basement carpark resulting from the proposed access ramp between split levels on each level.

An addendum to the Traffic and Transport Impact Assessment has been prepared by GTA Consultants and is included at **Appendix H**. The addendum notes that the proposed development has been conservatively estimated to generate a total of 111 vehicles per hour during the busiest peak period. The existing use is expected to generate at least 74 vehicles per hour. Therefore the net additional traffic is 37 vehicles per hour.

As *NSW Roads and Maritime Services* note in their submission, the additional traffic generated by the proposed development of 37 vehicles per hour is relatively moderate. Furthermore, the future upgrades to intersections (to be undertaken by others) identified in the Sydney Olympic Park Master Plan 2030 are expected to mitigate any potential impacts on daily traffic flow.

With regard to potential congestion within the basement car park, the assessment confirms the relevant Australian Standards outline that lane capacities at exit/entry ramps are in the order of 600 vehicles per lane when in free flow and 300 vehicles per lane per hour at a boom gate. The proposed development will have a total of 111 vehicles per hour during the busiest peak period. Accordingly, the proposed levels of traffic are not expected to cause congestion in the basement car park.

3.3.4 BICYCLE PARKING

Clarification should be provided on the bicycle parking provision, specifically the number and location of staff and visitor bicycle storage spaces for the retail use and the location of the end of trip cycling facilities.

The proposed development incorporates a total of 624 bicycle parking spaces, including:

- 488 residential tenant bicycle parking spaces;
- 106 residential visitor bicycle parking spaces;
- 10 retail tenant bicycle parking spaces; and
- 20 retail visitor bicycle parking spaces.

A majority of the retail and visitor bicycle parking spaces are located within a separate room located on Level 00 adjacent to the basement entry. A further 20 visitor bicycle parking spaces have been provided within the retail forecourt parallel to the footpath on Australia Avenue.

A majority of the residential tenant bicycle parking spaces are located within a separate room on ground level at the north-west corner of the site. Some bicycle parking is also provided within the apartment storage lockers.

The proponent's Delivery Agreement with SOPA requires that a 1,500m² retail / commercial lot (cold shell) be delivered to SOPA. It is our understanding that any facilities and amenities required by the future tenant of the retail / commercial lot, such as end of trip cycling facilities, will be provided by SOPA or the tenant within the retail / commercial lot.

3.3.5 STORMWATER MANAGEMENT

A response should be provided to SOPA's submission with regards to Stormwater management.

A revised Stormwater Management Strategy has been prepared by BG&E and is included at **Appendix D**. A revised Water Cycle Management Plan has also been prepared and is included at **Appendix F**. Further detail is provided at Section 3.7 of this Report.

3.3.6 SITE SUITABILITY

Further correspondence was received from DPE on 26 April 2016 which requested that the Proponent confirm that the subject site can be made suitable for the proposed uses.

A letter has been prepared by JBS&G and is included at **Appendix K**. The letter confirms that the Phase 1 and 2 Environmental Site Assessments did not identify the presence of significant contamination that would preclude redevelopment of the subject site for high density residential and basement car parking. While one soil sample reported the presence of asbestos, the reported concentration was less than the relevant health screening level (NEPM 2013). Accordingly, the subject site is currently considered suitable for the proposed development.

3.4 OFFICE OF ENVIRONMENT AND HERITAGE

A review of the Office of Environment and Heritage submission has been undertaken. The submission confirms:

- *The proposed development is consistent with existing scale of surrounding development and located at a substantial distance from the closest SHR listed item, Newington Armament Depot and Nature Reserve.*

- *The Historic and Aboriginal Archaeological Assessment provided as part of the EIS concludes that the site is considered to have no aboriginal or historic archaeological potential or significance.*

Accordingly, no further consultation with the Heritage Division of the Office of Environment and Heritage is required.

3.5 ROADS AND MARITIME SERVICES

A review of the Roads and Maritime Services submission has been undertaken. Roads and Maritime Services raised no objection to the proposal. However, raised the following comments for consideration:

- *The Department should ensure that the development proposal is consistent with the Sydney Olympic Park Master Plan 2030.*

- *It is understood that the proposal would generate an additional 37 vehicle per hour and therefore the additional development traffic is relatively moderate, however the Sydney Olympic Park Master Plan 2030 identifies a number of intersections to be upgraded in the future, in this regard any future traffic signals and lane reconfiguration proposals would need to be referred to Roads and Maritime for concurrence under Section 87 of the Roads Act 1993.*

The proposed development achieves a high level of compliance with the relevant provisions of the Sydney Olympic Park Master Plan 2030, as demonstrated in the Environmental Impact Statement dated September 2015.

It is noted that any future traffic signals and lane reconfiguration proposal would need to be referred to Roads and Maritime for concurrence under Section 87 of the Roads Act 1993.

3.6 TRANSPORT FOR NEW SOUTH WALES

A review of the Roads and Maritime Services submission has been undertaken. A detailed response to each of the items raised is provided in the following sections.

3.6.1 ACTIVE TRANSPORT

Bicycle parking facilities should be maximised within the development to encourage sustainable modes of travel. Therefore bicycle parking should be provided in accordance with Sydney Olympic Park Master Plan 2030 (i.e. a minimum 688 bicycle parking spaces). The use of apartment storage lockers and bicycle storage facilities (such as bicycle hoists or wall mounted bicycle racks) within the units or basement car park can be considered in the calculation of spaces.

As detailed within the Traffic and Transport Response Letter at **Appendix H**, the proposed development provides bicycle parking in accordance with the Sydney Olympic Park Master Plan 2030. Specifically, the Master Plan requires the following:

- 488 residential tenant bicycle parking spaces;
- 106 residential visitor bicycle parking spaces;
- 10 retail tenant bicycle parking spaces; and
- 20 retail visitor bicycle parking spaces.

The proposed development incorporates a total of 624 bicycle parking spaces.

A majority of the retail and visitor bicycle parking spaces are located within a separate room located on Level 00 adjacent to the basement entry. A further 20 visitor bicycle parking spaces have been provided within the retail forecourt parallel to the footpath on Australia Avenue.

A majority of the residential tenant bicycle parking spaces are located within a separate room on ground level at the north-west corner of the site. Some bicycle parking is also provided within the apartment storage lockers.

Safe pedestrian crossing facilities should be investigated across Figtree Drive to provide a safe path for pedestrian and cyclists accessing bus stops on Australia Avenue and Olympic Park Station in consultation with the Sydney Olympic Park Authority.

It is understood that Sydney Olympic Park Authority will be responsible for the design and construction of the Figtree Drive public domain works in line with the Master Plan, which are to include regrading and realignment of the footpath, landscape verge, on-street car parking and the road itself. It is understood that signalised intersections and pedestrian cross facilities will be incorporated into the design and works will be funded through developer contributions.

3.6.2 CONSTRUCTION TRAFFIC MANAGEMENT PLAN

TfNSW requests that a Construction Traffic Management Plan (CTMP) be prepared in consultation with TfNSW prior to the commencement of construction. The CTMP needs to specify any potential impacts to general traffic, cyclists, pedestrians and bus services within the vicinity of the site from construction vehicles during the construction of the proposed works. Should any impacts be identified, the duration of the impacts and measures proposed to mitigate these should be clearly identified and included in the CTMP.

A detailed Construction Traffic Management Plan was prepared by GTA (dated 23 July 2015) and submitted with the Environmental Impact Statement. This document identified the impacts to traffic, cyclists, pedestrians and bus services during construction.

It is common practice for the Construction Traffic Management Plan to be further developed in consultation with Sydney Olympic Park Authority and Transport for New South Wales post approval and prior to the release of a relevant Construction Certificate. We anticipate this requirement would form part of any development consent issued for the site.

3.7 SYDNEY OLYMPIC PARK AUTHORITY

A review of the Sydney Olympic Park Authority (SOPA) submission has been undertaken. A detailed response to each of the items raised is provided in the following sections.

3.7.1 DESIGN COMMENTS GENERALLY

> ***Building height:*** *It is noted that the maximum building heights have gradually increased from 10 to 16 stories through the design development process. The Authority's Design Review Panel (DRP) has generally supported these changes but was concerned that the building articulation shown in earlier sketches has somehow disappeared and that the tallest block now appears quite monolithic. Some of the original design features such as the castellated parapet at the top of the building (which helped to reduce the visual impact of the extra height) has now been infilled. The EIS has not responded to this issue and it is recommended that the original design of the parapet be reinstated as requested by the DRP.*

As shown in the Design Report prepared by BVN and included at **Appendix B**, an iteration of the design scheme presented to the SOPA Design Review Panel introduced a castellated parapet line as a way to break down the scale of the built form (refer Figure 3).

The SSD application scheme facade is a development of this idea of reducing the scale of the built form with brick framed 'pop-out' elements (refer Figure 4). These framed brick elements articulate the façade and introduce variation in the materiality.

The use of brick creates a relationship with the podium brickwork. The 'pop-outs' are positioned along the parapet line as well as throughout the facade to further reduce the bulk and scale of the building and add special elements and articulation to the facade.

FIGURE 3 – PARAPET TREATMENT – DESIGN ITERATION PRESENTED TO DRP

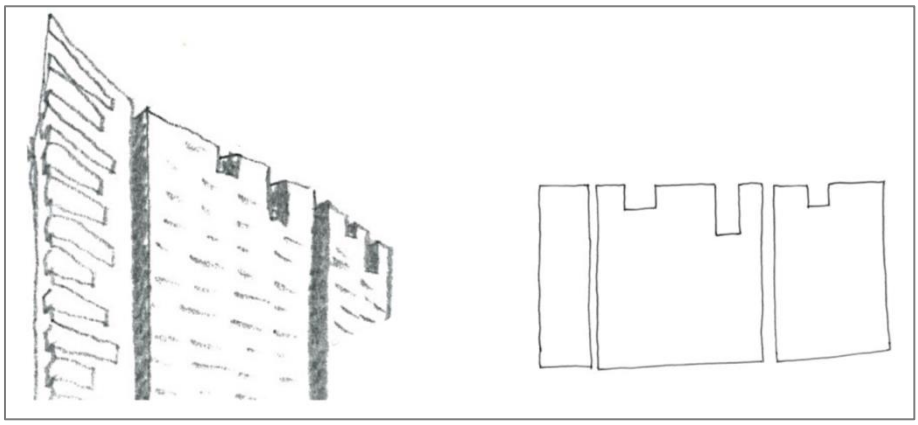
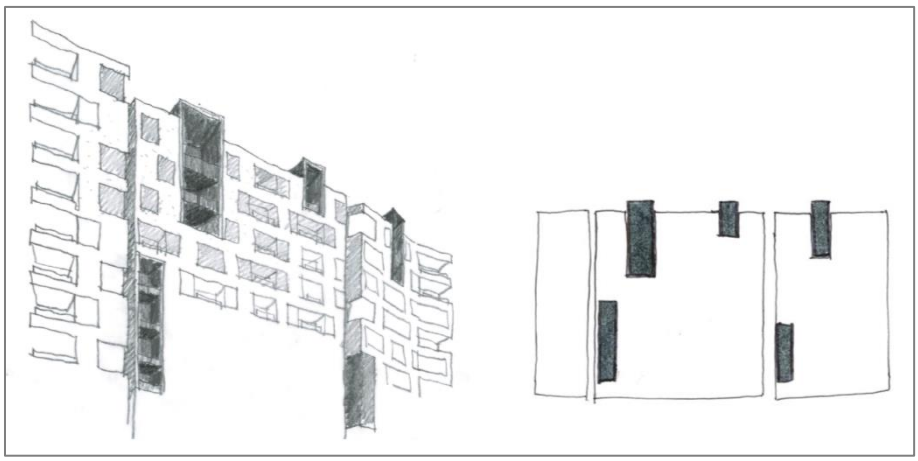


FIGURE 4 – PARAPET TREATMENT – SSD APPLICATION SCHEME

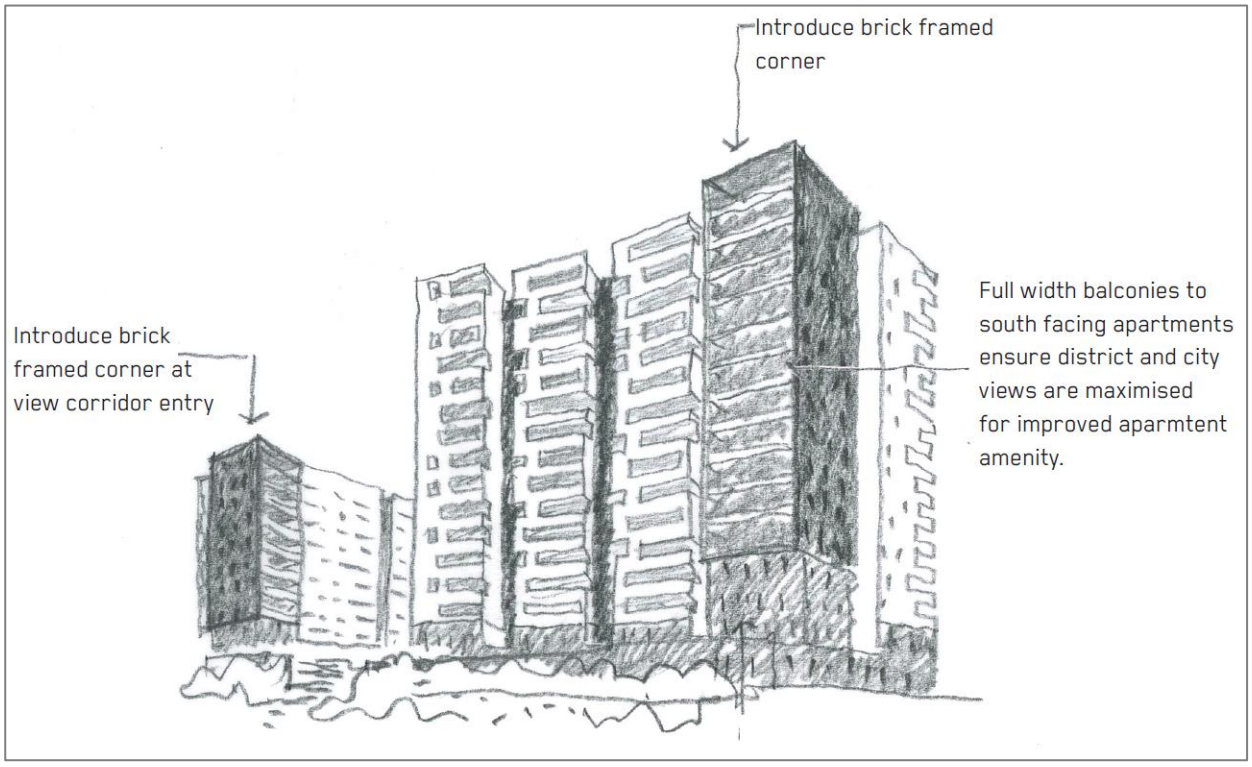


Face brickwork: *The use of face brickwork in this project is strongly supported. It will help to add warmth and texture to the urban character of Sydney Olympic Park. One concern is that earlier sketches showed the feature corner with a strongly expressed window pattern which has disappeared from the DA scheme and been replaced with full width balconies on the most visible (SE facing) frontage. It is recommended that the facebrick character of the SE frontage be reinstated to match the lower levels (1 to 3) of this tower element.*

Face brickwork is heavily featured throughout the proposed development. The face brick character of the south-east frontage is retained through the inclusion of two brick framed corner elements on the south-east and south-west buildings, which relate to the podium below (refer Figure 5).

The previously proposed window pattern on the south-east corner of the fifteen-storey tower has been replaced with full width balconies to south facing apartments in order to provide adequate residential amenity, in particular these apartments will have greater access to district and city views and natural daylight despite their southerly orientation.

FIGURE 5 – BUILT FORM ARTICULATION – BRICKWORK



Linear Park frontages: *Although the DRP has generally supported the relocation of units away from the podium facing the linear park to the south, there is a strong concern that the absence of active uses directly overlooking the park will affect security in the park. It is recommended that the podium be reviewed to include more active uses overlooking the park - this could include supermarket frontages and communal areas.*

A large number of apartments have their primary or secondary outlook onto the linear park, ensuring passive surveillance at the upper levels. The retail windows along Australia Avenue wrap around the corner, along the linear park for the full extent of the retail lot.

Two entrances address the linear park, one via stairs and one via an accessible ramp and lift, providing direct connection between the private communal garden and the linear park. Additional access to the linear park is provided for pedestrians on New Street encouraging further activation.

Off street building entries: *The generally internalised layout of the site, and the location of building entries away from street frontages are ongoing concerns. The SOP Master Plan 2030 requires that 'building entry points are within clear site of a public street frontage' (part 4.6.12) to maximise safety and security and promote active street frontages. SEPP 65 principle 7 (Safety) also promotes maximising 'activity on streets' and 'overlooking of public spaces'.*

The proposal is for a single major entry off Figtree and a secondary entrance off the new street, with all building access from within the private open space. Very few ground level apartments have direct access off the 3 surrounding public streets. The EIS rationale is that more direct entries off the streets would not be accessible. However, it is recommended that both entrance options should be provided - even stair access from the footpath up to residential lobbies would greatly benefit the safety and amenity of the streets. It would most certainly improve security within the communal area.

As stated within the Environmental Impact Statement the proposed development provides a main point of address to Figtree Drive and a level (step free) landscaped podium which provides equitable access to all buildings. This approach was presented to and supported by the Design Competition Jury in February 2015 and SOPA's Access Committee in June 2015.

Due to the level changes in the surrounding area it is not possible to provide equitable access to all buildings directly from the streets. Non-accessible entry points have been provided at the mid-point of New Street, the mid-point of the Linear Park, and the mid-point of Australia Avenue. These provide connections from the surrounding public domain to the level landscape podium.

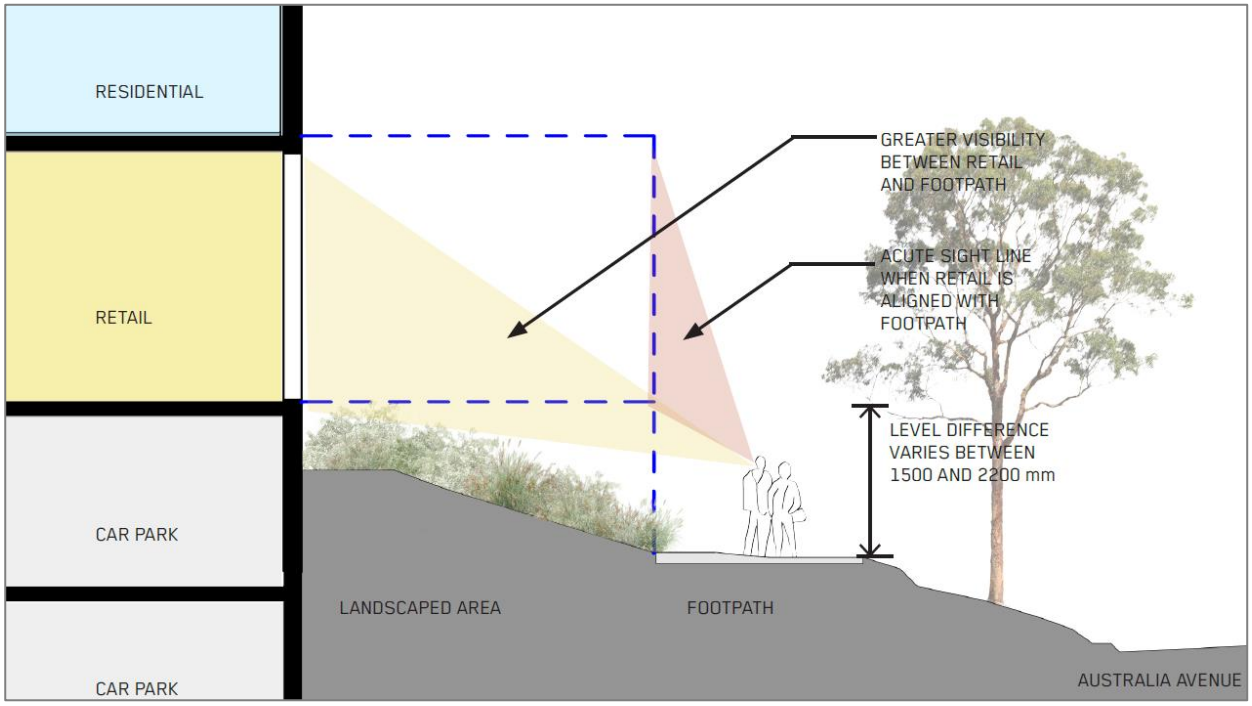
Street level entrances have been provided to ground floor apartments wherever possible. Due to significant level differences along New Street of up to 3m between the footpath and ground floor units it is impracticable to provide steps to every apartment.

Development Boundary - Australia Avenue frontage: *The building footprint does not extend to the master plan boundary on Australia Avenue, resulting in a heavily landscaped setback that gives a very suburban feel to this major frontage at the entry to the town centre. It is recommended that the ground level retail area be extended to the street boundary as shown in attached marked up sketches (SK01 and SK02). The use of brickwork for this frontage is supported.*

The footpath along Australia Avenue follows the natural slopes from Figtree drive down towards the Linear Park and the railway line. The retail RL is set so that the space is directly connected to the Fig Tree courtyard. To maximise flexibility and minimise accessibility issues, the whole retail lot has a consistent floor level. Consequently, the difference in level between the Australia Avenue footpath and the retail lot varies from 1500mm to 2200mm.

To address this level change the building has been setback from Australia Avenue to allow a terraced landscape setback (refer Figure 6). Maintaining this setback will improve visibility of the retail windows and the landscape strip will provide a higher level of amenity for those using the footpath.

FIGURE 6 – SECTION THROUGH AUSTRALIA AVENUE FOOTPATH



3.7.2 PUBLIC DOMAIN INTERFACE

360 Degrees have reviewed the comments made by SOPA in relation to the proposed landscape design and have provided a Response at **Appendix G**. The Landscape Drawings submitted with the Environmental Impact Statement remain relevant. Any changes required to the detailed design of the landscape are to be outlined in the Construction Certificate Drawings.

> ***Fig Tree forecourt:*** *The new forecourt around the fig trees at the NE corner of the site is not very public, with only 2 points of entry from adjacent footpaths, indirect pathways and all enclosed by palisade fencing. The key concern is that this area, being a forecourt for the supermarket, should be more visible, more urban and more connected with its approach points.*
>
> *It is recommended that the path and stair network be reviewed to allow for wider paths and stairs, more direct alignments and with more connections to adjacent paths. The enclosing fence should be removed. Opportunities for outdoor dining should be considered - the decking under fig tree could be suitable for this provided there is no damage to the root system.*

360 Degrees recognises the importance to create an active and connected forecourt to the retail precinct, and within the constraints of tree protection requirements has achieved this. A clear, legible and DDA compliant pedestrian entry has been designed to provide direct access to Australia Avenue from the retail courtyard, this path is a minimum of 5m wide.

An additional path provides direct access to Figtree Drive. These paths converge on a generous paved forecourt, the area of which is in excess of 110m², which provides integrated seating walls and spatial provision for future tenants to place tables and chairs. To increase visual and physical connection, we support SOPA's recommendation to remove the perimeter palisade fence.

We understand SOPA's recommendation to provide wider paths to connect the retail precinct, and acknowledge that the path up to Figtree Drive would provide greater connectivity if widened. However, there are extensive Tree Protection Zones associated with the protection and retention of the two existing Fig Trees, as documented in the Arboricultural Impact Assessment, which greatly limit the extent of excavation, hardstand and paths.

Following further review and consultation with the arborist, Arboreport has advised any increase of forecourt area, paths or addition of deck treatment within the TPZ will significantly compromise the survival of the trees and is not supported. There are significant buttress roots within the area SOPA has proposed decking, furthermore the structure and excavation required for deck footings will greatly impact the trees root system through excavation and compaction. For these reasons, we advise that SOPA's recommendations cannot be accommodated without compromise to the trees health. We believe that within the constraints, the current design addresses and satisfy SOPA's ambition for the retail forecourt while adhering to strict Tree Protection Controls.

> ***Protection of Fig Trees to be retained:*** *Civil Site works Plan BG&E C-01 008 indicates extent of basement excavation in close proximity to root plates and canopy of existing figs. It is recommended that the Arborist Report should nominate the extent of fenced enclosure for 'Tree Protection Zone' during construction works.*

The Arboricultural Impact Assessment prepared by Arboreport and submitted with the Environmental Impact Statement detailed the required Tree Protection Zones, Tree Protection Fencing, and Excavation within the Tree Protection Zones.

> ***Electrical Substations:*** *The proposed freestanding electrical substations on Figtree Drive are not supported as they are unsightly, highly visible from the public domain and unsuited to Authority's vision for a high quality residential frontage for this street. It is recommended that the substations be incorporated into the overall building envelope, in a location that provides suitable street access. This is now general practice for new development at Sydney Olympic Park (refer recently completed Lion Nathan Building at Murray Rose Avenue).*

The Proponent has investigated alternative locations for the electrical substation on Figtree Drive, however due to the strict requirements of the services provider, the slope of the subject site, and the residential floor to floor heights, it is not possible to incorporate the electrical substation into the overall building envelope without compromising activation of New Street or Australia Avenue.

The substations have been carefully integrated into the Figtree Drive landscape setback to ensure their visual presence is minimised, whilst also ensuring the pragmatic requirements of access and serviceability are provided. Surveillance of the area around the substation is maximised through the position of the substation adjacent to residential entries on Figtree Drive. The selection of plants in this area also ensures there are no areas of potential entrapment (refer to Landscape Drawings).

The electrical substations have been positioned discretely within the substantial (6.5m) Figtree Drive landscape setback and have been located to minimise their visual presence, respond to the residential entry typology and recede into the wider landscape zone.

The substation positioning and surrounding treatment has been carefully considered to respond to the pragmatic requirements of access and serviceability while also ensuring the best visual aesthetic by integrating the form and structure with that of the adjacent private residential entries.

The example cited by SOPA (Lion Nathan Building at Murray Rose Avenue) is a purely commercial development with vastly different servicing requirements and site conditions. It is not reasonable to draw a comparison between the Lion Nathan Building and Site 53. A more appropriate comparison would be the 'Opal Tower' residential development at Site 68 which received approval in June 2015 and incorporates several electrical substations within the landscape setbacks to Bennelong Parkway and the 'New Road' – which was supported by SOPA.

> ***Landscaped setbacks:*** *Typical Sections A-A, B-B, J-J etc. (360 degrees Landscape Architects) show soft landscape interface in the 'body corporate landscape zones' adjacent to SOPA streetscape/public footpaths. It is recommended that planted embankments on 'body corporate land' adjoining public footpaths are no steeper than 1 :3 to reduce risk of vegetative matter, mulch and soil spilling onto paths and creating slip/skid risks.*

All planted embankments within body corporate land adjoining public footpaths shall be no steeper than 1:3. The details demonstrating this will be documented within the Construction Certificate Drawing.

Entry steps from Linear Park: *The proposed stairs linking the private communal open area to the linear park extend beyond the property boundary and take up more than half the width of the park. Given that public access will not be permitted through the private communal open space, the new stair should be located within the property boundary.*

The secure line of the development is setback from the property boundary, footpaths, and accessible landscape zones, adding approximately 860m² of publically accessible landscape area to the linear park. No impediments have been designed to restrict public access or use of the Linear Park external to the property boundary.

The generous, wide stair leading to the property gate is designed to integrate with the landscape, as well as the accessible footpaths. The length of the stair has been driven by the 8m level difference between the podium and the linear park footpath, and has been positioned to respond to the view corridor. It provides a direct and clearly visible link between the podium and the linear park, encouraging use by residents and further activating the park.

The current design illustrates proposed public amenity improvements to the linear park which enables pedestrian access from development entry point to the existing public footpath while accounting for the extreme level differences external to the property boundary.

3.7.3 COMMUNAL OPEN SPACE

Rootable soil volumes: *All landscape areas shown over structural deck/podiums are to provide rootable soil volumes to support long term vigorous growth of trees and other plantings as shown in App G of the EIS. It is recommended that the DESIGN COMPLIANCE Drawing (360 degrees Landscape Architects) confirm compliance with minimum 2m depth/width of rootable soil area.*

All plantings over structural deck/podium have been designed to comply with SEPP 65 recommended minimum standards. Tree species selection identifies that all tree planting over slab are considered 'medium trees' (8m canopy at maturity), and require a minimum soil depth of 1m. All gardens on podium that have tree planting are minimum 1m deep and are greater than 2m wide to ensure mature growth in compliance with SEPP 65.

3.7.4 GENERAL ENVIRONMENTAL MATTERS

JBS&G have reviewed the comments made by SOPA and the EPA in relation to environmental (site contamination) matters and have provided a Response at **Appendix J**.

The Environmental Site Assessment & Hazardous Materials: *In-principle, the Authority has no issues with the general approach or conclusions drawn subject to the proponent undertaking further chemical testing for offsite disposal of any excess spoil. It is recommended that the proponent undertake further chemical testing for offsite disposal of any excess spoil.*

The Proponent shall incorporate requirements for waste classification and disposal, including sampling and analyses requirements, in the Construction Environment Management Plan for the site. This shall include, but not be limited to:

- All waste excavated fill/soil materials generated at the site will be classified in accordance with the NSW EPA Waste Classification Guidelines (2014);
- All waste excavated fill/soil materials will be transported and disposed of to a facility that can lawfully receive that type of waste; and
- Waste excavated asbestos contaminated fill will be handled in accordance with the requirements in Part 7 of the POEO (Waste) Regulation 2014 and the Notice of Exemption from Clause 79: Reporting on transportation of asbestos waste solely within New South Wales.

Geotechnical investigation: *The EIS indicates that while the groundwater table is expected to be below the excavation, some groundwater seepage into the excavation may occur, requiring pump out of groundwater around piles. It is recommended that details as to how this will be managed should be addressed in the Construction Environmental Management Plan for the site. SOPA as the landowner requires that the proponent must comply will all requirements of the POEO Act and the Department of Water (if required).*

The Proponent shall incorporate details of management of excavation seepage (if encountered) during construction in the Construction Environmental Management Plan.

Management (i.e. collection and discharge or disposal) of accumulated groundwater seepage (if encountered) during construction shall be in accordance with requirements in the *Protection of the Environment Operation (POEO) Act 1997*. Approval from the regulatory authority relevant to the discharge method shall be required prior to discharge of water (if required).

Approval from *NSW Department of Primary Industries* (Office of Water) for excavation dewatering (if required) is not considered necessary based on advice provided by Office of Water, provided dewatering (if required) is temporary and does not exceed 3 megalitres per year.

3.7.5 STORMWATER

A revised Stormwater Management Strategy has been prepared by BG&E and is included at **Appendix D**. The revised Strategy was prepared in consultation with SOPA and details the stormwater quantity and quality management proposal.

3.7.6 RAINWATER RE-USE STRATEGY

A Water Cycle Management Plan has been prepared by JHA and is included at **Appendix F**. The Water Cycle Management Plan provides an overall philosophy for the collection and reuse of collected roof water for the landscape irrigation system, and the use of the SOPA WRAMS recycled water mains for all other non-potable uses for the proposed development.

Exact layouts and sizing for the roof water collection system will be confirmed during detailed design.

3.7.7 EROSION AND SEDIMENT CONTROL PLAN

A revised Erosion and Sediment Control Plan has been prepared by BG&E and is included within the Civil Drawings at **Appendix E**.

3.8 ENVIRONMENT PROTECTION AUTHORITY

A review of the *NSW Environment Protection Authority* (EPA) submission has been undertaken. The EPA submission outlines a number of recommended Conditions of Consent and associated comments regarding licensing and regulation, odour, construction, noise, water quality, and waste management.

It is anticipated that the recommended Conditions of Consent will be incorporated into any development consent issued for the site. Comments regarding water quality have been addressed in the revised Stormwater Management Strategy, prepared by BG&E and included at **Appendix D**. Comments regarding licensing and regulation, odour, noise, water quality, and waste management are addressed in the following sections.

3.8.1 EPA LICENSING AND REGULATION

JBS&G have undertaken a review of all activities associated with the proposed development and do not consider licensing under the *Protection of the Environment Operations (POEO) Act 1997* is required for proposed contamination management activities at the site based on:

- Contaminated soil treatment is not proposed at the site; and
- Contaminated groundwater treatment (if required) will be less than 100 megalitres per year.

Activities at the site shall comply with requirements under the POEO Act 1997.

The Proponent shall refer to SOPA requirements (if any) for management of contamination in the Construction Environmental Management Plan.

3.8.2 ODOUR

An addendum to the Odour Assessment has been prepared by Pacific Environment Limited and is included at **Appendix I**. The addendum confirms the maximum odour unit concentrations at the proposed development, in a worst-worst case scenario, is anticipated to meet (but not exceed) the range of 2 OU. Therefore, it is not anticipated that odour from the operations of the LWTP are likely to be detected by future residents.

The likelihood that upset odour conditions would combine with poor dispersion meteorology (i.e. the 'worst-worst case' referred to above) is such that this scenario is extremely unlikely to occur in reality.

On this basis, it is considered that the risk of odour impacts from the LWTP under normal, and even upset, conditions is extremely low.

3.8.3 NOISE

As described in Section 3.3.2 of this Report, there exists a deed between the sub-lessee (Fujitsu) and the landowner (SOPA) of the adjoining land parcel (4 Figtree Drive), which requires the sub-lessee to prior to completion of any residential development of the adjoining sites (i.e. Site 53 SOP) undertake physical noise mitigation measures to their chillers, standby generators, and other equipment to meet the relevant noise standards.

This deed is between the sub-lessee, the head lessee and SOPA. The Proponent (Mirvac) is not a party to the deed but is aware of the obligations of the sub-lessee. Consequently, we have no control over these works but have been advised by the sub-lessee that their noise attenuation works will be complete by the completion of our residential development.

The Proponent continues to update the sub-lessee, head lessee and SOPA from time to time on the progress of its development program so that the sub-lessee has visibility of the development timelines and is able to program in the capital expenditure related to their design and construction of the noise attenuation works.

3.8.4 WATER QUALITY

As outlined in the Contamination / Ground-water Response at **Appendix J**, the potential for groundwater seepage is expected to be low based on the geotechnical investigation undertaken by Douglas Partners in August 2014 and submitted with the Environmental Impact Statement, which reported:

- Regional groundwater table is expected to be below the bulk excavation level. However, some seepage through and along strata boundaries should be expected; and
- The presence of residual clays and saturated soils comprising laminite and shale. These geology are typically of low hydraulic conductivity and are expected to produce low seepage rates.

The proposed basement design incorporates an appropriate seepage collection and management system that will prevent pollution of waters. This includes a 'wet wall' and seepage collection system including sub-floor drainage to a collection point. Collected water (if any) shall be managed via discharge of water shown to be of suitable quality and approved by the regulatory authority relevant to the discharge method.

3.8.5 WASTE MANAGEMENT

The Proponent shall incorporate requirements for waste classification and disposal, including sampling and analyses requirements, in the Construction Environment Management Plan for the site. This shall include, but not be limited to:

- All waste excavated fill/soil materials generated at the site will be classified in accordance with the NSW EPA Waste Classification Guidelines (2014);
- All waste excavated fill/soil materials will be transported and disposed of to a facility that can lawfully receive that type of waste; and
- Waste excavated asbestos contaminated fill will be handled in accordance with the requirements in Part 7 of the POEO (Waste) Regulation 2014 and the Notice of Exemption from Clause 79: Reporting on transportation of asbestos waste solely within New South Wales.

4 Conclusion

This Response to Submissions Report has been prepared on behalf of *Mirvac Projects Pty Ltd*, the proponent for State Significant Development Application referred to as SSD 7033. The application was lodged in September 2015 and seeks approval for the construction of a mixed-use development at Site 53, 2 Figtree Drive, Sydney Olympic Park, comprising:

- Four residential flat buildings, ranging in height from five to fifteen storeys, comprising 422 one, two and three bedroom apartments;
- A landscaped ground plane, comprising private communal open space, deep soil landscaping, an interpretive children's play area, and a 20 metre wide view corridor to the Bicentennial Marker;
- A small retail / commercial area of approximately 1,500m² gross floor area, potentially suitable for a small supermarket or convenience store, to be retained by Sydney Olympic Park Authority on completion;
- Three levels of basement parking, comprising 44 visitor / retail car parking spaces and 456 residential car parking spaces; and
- Construction of a new access road located on the western boundary of the site, as identified within the *Sydney Olympic Park Master Plan 2030*.

The application was placed on public exhibition in October 2015 and following its conclusion, DPE issued correspondence dated 15 December 2015 requesting that the applicant respond to the issues raised in the submissions received during the public exhibition period.

Amendments have been made to the proposed development and further technical information is submitted in response to the issued raised in the submissions.

There are compelling reasons why a positive assessment and determination of the project should prevail, as outlined below:

- The proposal demonstrates consistency with the relevant environmental planning instruments including strategic planning policy, State and local planning legislation, regulation and policies.
- The proposal fully addresses the issues identified in the SEARs and proposes appropriate mitigation measures for implementation during the pre and post construction stages.
- The proposal will result in minimal environmental impacts, all of which can be mitigated through the recommendations outlined in the supporting technical documentation appended to this Report.
- The proposal is consistent with the principles of ESD as defined by Schedule 2, clause 7(4) of Schedule 2 of the EP&A Regulation.
- The proposal will result in positive economic impacts through the provision of direct and indirect employment, during both construction and operation.
- The proposal provides many and varied public benefits to the local Sydney Olympic Park community, future residents of the development, as well as broader stakeholders, including:
  - Increased housing supply and diversity in an area accessible to public transport, community facilities, open space, healthcare services, education and employment opportunities, that will contribute towards meeting the housing targets identified in *A Plan for Growing Sydney*.
  - A mix of housing types, with varying layouts and sizes, which will accommodate a variety of households and meet a range of needs, including one, two, and three-bedroom apartments, adaptable dwellings and affordable housing.

- A high quality urban development, with a significant level of residential amenity including solar access, natural ventilation, access to communal open space, children's play spaces and communal facilities, as well as efficient and well-considered apartment plans.

- An enhanced public domain, through the provision of improved streetscapes and footpaths, deep soil tree planting and landscaped setbacks, and retention and protection of mature vegetation.

- New public access in the form of the 'New Street', providing pedestrian and cycle connections from Fig Tree Drive through to the Central Precinct 'linear park' and beyond.

- Improved local amenity through the provision of a new retail lot, suitable for a small scale supermarket, to meet the needs of the local community. As well as an associated public plaza and visitor car and bicycle parking.

- An improved interface between the existing commercial uses to the west of the site and the recently approved and constructed high-density residential environment to the north-east and parkland environment to the south of the site.

- Increased patronage of existing public transport infrastructure and use of existing pedestrian and cycle routes, by locating residents and workers in an accessible area and encouraging the use of sustainable transport options.

- Best practice sustainability measures including double-glazing, efficient appliances and fixtures, use of low volatile organic compound materials, rainwater reuse tanks, and other water sensitive urban design measures.

Given the merits of the proposal, it is requested that the Minister (or his delegate) approve the proposal, subject to the mitigation measures outlined in the supporting technical documentation appended to this Report and the Environmental Impact Statement submitted in September 2015.

Disclaimer

This report is dated May 2016 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd's (**Urbis**) opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of Mirvac Projects Pty Ltd (**Instructing Party**) for the purpose of SSD 15_7033 (**Purpose**) and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

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