

Attachment A

ISSUE RESPONSE

Sydney Olympic Park Authority

Clarification of Consent Sought

It is not clear what works are being sought for consent. Works outside of site boundaries (e.g. Murray Rose Avenue and Parkview Drive road and footpath extension) appear to be part of the development application, however it is not clarified in the Environmental Assessment that the applicant is seeking planning consent to carry out such works It is recommended that the applicant clearly and unambiguously clarifies the works for which consent is sought via the submission of marked, scaled and legible plans. Should consent include out of site works (e.g. extensions to existing roads east of Australia Avenue), appropriate plans that scope out fully the extent of works are required to be prepared and submitted as part of development application (for example Murray Rose Avenue extension works should include the entire extension from Australia Avenue and necessary footpaths, street landscaping, street lighting, servicing etc)

The plan EA003a "Extent of Proponents Works" (refer **Attachment F**) clearly articulates the works for which consent is sought.

Building

Analysis of the building footprint indicates that Block A extends beyond its Western site boundary into the street zone for the Parkview Drive extension. It is asked that the applicant confirm and clarify building boundaries and ensure all building elements are within the sites building boundaries.

The car park of the building extends beneath what was originally a shared pedestrian / loading dock access way. A similar situation exists in Building 6 & 7, whereby the stratum boundaries below ground extend to accommodate the car park and revert back to the building line above ground. The car park is within the boundary of the proponent's existing landholding and it is considered that the proponent is reasonable in this approach. The easements that will be created for this condition are likely to be similar to those that exist in Building 6 & 7.

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	SOPA advised at the consultation meeting of 31 May 2010 that they believe the western edge of the office building is encroaching slightly into the Parkview Drive re-alignment road corridor. The extent of encroachment will require detailed resolution by SOPA and GPT.
Design	
The proposed Murray Rose Avenue extension shows a shift of kerb alignment	The amended architectural plans provided show the road corridor has a straight centre line. As the road is

The proposed Murray Rose Avenue extension shows a shift of kerb alignment between CH210 and CH 290 (Hughes Trueman civil design drawings). As a fundamental Master Plan principle, the street edge are to maintain a straight alignment; this has been previously agreed with GPT and plans are requested to be amended to ensure straight street alignments. If this is unable to occur reasons should be provided to demonstrate why such an outcome is unable to be achieved.

The amended architectural plans provided show the road corridor has a straight centre line. As the road is the responsibility of SOPA Hughes Trueman drawings SKC101 and SKC103 have been removed from the drawing set (refer **Attachment H**). (SKC102 remains as it documents GPT's temporary road connection to the cul-de-sac of Parkview Drive.) The final road design of Murray Rose Avenue from Australia Avenue to along the frontage of Building A will be completed by SOPA with active discussion with GPT and the assistance wherever required of GPT's consultants / contractors.

The design of the Parkview Drive extension indicates a privatised plaza. This area is a designated road corridor, providing the only public and service access to the southern brickpit (a future public park). In addition to this the Parkview Drive extension should be designed to function as an access roadway to P6 Car Park, Brickpit Park and a natural extension to Parkview Drive south of Murray Rose Avenue.

SOPA has recently decided (post lodgement of this EA) to upgrade the Parkview Drive realignment to an actual access road to the P6F car park and Brickpit Edge Park, rather than the paved Pedestrian / Loading Dock access way as documented. As the construction of this road is by SOPA, its design and resolution should not effect the DoP's assessment of this application. The proponent will work with SOPA over the coming months to assist in the design resolution of this road and its relationship to the western frontage of Building A and the car park below.

The plant as shown on drawing EA 107 (roof plan) is supported, however drawing No. EA 301 shows the plant extending to Murray Rose Avenue elevation. All relevant drawings will need to be consistent

The amended plans now show this area as "future generator location" with the main plant room area reduced, however we note that a small gas fired cogenerator may be required to achieve 6 Star Green Star and so consent is sought for plant in this area. Any future plant will be acoustically and visually screened with materials that match the main plant room area.

Articulation and Activation

Treatments to the upper levels facing the Brickpit are supported but the glazed wall at the ground level elevation is bland and unshaded. As it will take considerable time for shade tree cover to develop, consideration should be given to setting back the full height glazed wall behind the column line (as for the southern elevation) to provide some shading and create a visual separation between the ground surface and the strong banded patterning above.

The glazed wall to the southern boundary is not set back from the facade line. The plan of the Upper Ground floor is indicating a different ceiling treatment in this area rather than a set back of the facade itself.

The proponent has already incorporated at the request of SOPA four balconies to the northern facade representing a loss of 100m² of NLA and additional construction costs. In addition, the proponent has included a lobby to the Murray Rose Avenue frontage at the request of SOPA, which also created a loss of 82m² of NLA and added significant construction costs associated with the creation of voids and stairs. The proponent will also need to further reduce NLA in the Upper Ground Floor to accommodate an expansion of the garbage area to achieve 6 Star Green Star and so is not in a position to absorb a loss of a further 80m² if the facade was moved behind the column line on the northern elevation.

Other than the impacts to the project's commercial viability, the architecture of the building has included this feature since the design competition for the site was awarded to Turner & Associates and it has not been raised by SOPA before in numerous presentations or through the Design Review Panel. The building is intended to appear as though it is floating above a layer of glass and this is an important design feature as supported by the attached letter of Turner and Associates refer Attachment B). The design team will however consider incorporating additional louvres to limit glare and heat gain to the upper ground level during the development of the final detailed design.

Varying sunshade thicknesses to western elevation - sunshades should be sized to provide optimal sun shading rather than a decorative treatment to the elevations.

Sun shading will be primarily ESD driven. Vertical shades of varying thickness will be utilised to provide articulation.

The horizontal sun shading to the northern elevation appears too narrow - provide drawings showing how the sunshades work to screen direct sun into the office areas, and if necessary consider widening to improve shading

Sun shading will be driven by ESD principles on the northern elevation, The louvre system will be a "sun shelf" that may feature a 350-400mm wide louvre at the ceiling line with a wider (up to 600mm) louvre at approximately 2100mm above floor level. This system has successfully been used on the Commonwealth Bank buildings at Site 6 and 7 of Sydney Olympic Park and has the advantage of limiting glare close to the facade and reflecting natural light deep into the floor plate.

Consider future opportunities for the north western corner of the Upper ground level to be used of a Café or restaurant, capitalising on future park amenities and outlooks The proponent will consider such an opportunity for the north western corner of Building B, as having two cafes diagonally opposite each other will help to activate the cutting park when Building B is constructed.

The north western corner of Building A has a level difference to the Parkview Drive extension of between 0.3 to 0.58m subject to final design, which will create accessibility issues.

We also note that at SOPA's request the shared access path has now been changed to a local road, and it would not be appropriate for a retail use to front this road.

The proponent will, however, continue to work with SOPA to explore other methods of providing activation in the park such as Coffee cart operation or similar.

The framed roof element, linking the two wings, should be removed. Sydney Olympic Park Authority prefers that the building be articulated to read as two blocks

This feature has been a part of the architecture of Turner and Associates from the design competition through to the Environmental Assessment application. This comment has not been made in any of the previous presentations to SOPA or from the Design Review Panel, it is considered an important element of the buildings fabric as described in the attached Turner and Associates letter. However the updated drawings provided have reduced the facade extension on Murray Rose Avenue and as such the framed element referred to is now significantly reduced and is less prominent.

Facade details have not been provided. A detailed elevation sketch at 1:50 scale, indicating materials, detailing colours and finishes should be provided together with a materials sample board.

The elevation drawings provided detail the intended finishes. A materials board is included with this response - refer Turner & Associates Sample Material Board provided under separate cover.

"Solid panels colour and finish equal to Terracotta - random distribution of grooved, matt and glazed panels in 5 colours" - this should be clarified as there is a commonly available substitute for terra cotta and there are no samples provided to confirm this The final resolution of the materials will be part of the detailed design phase, however one of the signatures of Turner and Associates successful design competition entry that has carried through to the Environmental Assessment package is the stratification of the facade, which is a direct response to the stratification of the earth layers in the brickpit. This will be achieved using either Terracotta or other material equal to Terracotta in appearance and finish, as the earthy texture of Terracotta rather than a reflective surface of glass is fundamental to the architecture of the building.

GPT will submit final samples to SOPA for approval after the detailed design has been finalised.

Operational

Retail - Access to the buildings loading bays and waste storage for retail uses is not provided. Experience with previous developments indicates that retail development is an afterthought to the main use and provisions for servicing of retail development have been poor planned as a result. It is difficult to see cafe suppliers and operators using the loading dock and waste management areas and walking around the building as there is no direct access through the building. As a consequence, these "back of house" servicing requirements are carried out within the public domain. It is requested that the applicant include provisions for retail access to the base building service areas and facilities to ensure practicable "back of house" retail operations. This may result in revised layouts to ensure distances are not too fare between retail uses and base building service areas.

The Upper Ground Level includes a service corridor on the northern side of the building core that leads directly to a dedicated garbage area for the retail and the loading dock access. This corridor will be separated from the Upper Ground Floor lobby via secured entry doors and the retail tenant will be provided with a security card to access this area and the loading dock.

Furthermore the retail area has been situated at the intersection of the two lobbies and the lift access to the car park, and has been carefully located so that it receives maximum exposure to secure its viability. The proponent could have chosen to incorporate retail toilets in the building core as a cost saving measure, however the proponent has elected to provide the retail area with its own dedicated toilet area. Consequently, it is not considered that the retail area is an 'afterthought' as described by SOPA. It will also be a requirement of the retail lease to use the dedicated garbage enclosure and the loading dock.

Loading Dock Access - The drawings provided indicate that the loading dock is to be accessed via a shared pathway. This is not a desired outcome from an operations perspective due to the conflict that would arise with other users (pedestrians and cyclist) and may pose a significant risk to personal injury if not properly marked. This matter was raised through the SOPA Design Review Panel from a more aesthetic point of view. It is recommended that a dedicated and clearly demarked service area be provided. Any turning movements associated with the use of the loading dock must be provided for within the boundaries of such an area. This matter is problematic and if no alternative loading area is possible, it should be demonstrated that a delineated area is possible to support the multiple uses of the laneway.

As previously described, SOPA has now indicated that the shared access way will now be built as an actual access road to the P6F car park and Brickpit Edge Park. This road will be designed and constructed by SOPA in consultation with the proponent.

Noise - In the Acoustic Report a number of graphs are presented that indicated background noise levels of near 70dbA (L10). This seems very high and confirmation of this level is sought.

The background noise levels in the Acoustic Report that are measured as high as 70dbA are from measurements undertaken at Luna Park Sydney in order to simulate what noise levels may be experienced at Building A during the Easter Show. Acoustic measures recommended in the report will ensure the internal levels of noise comply with AS 2107 and SOPA Masterplan maximum of 45dB(A)Leq15min .

Parking - With the cancellation of the West Metro, it is difficult to see how public transport improvements to Sydney Olympic Park could sustain a 40% model spilt for day-to-day commuters. It is recommended that the traffic assessment be reviewed in respect of the cancellation of the West Metro.

It is noted that the Traffic & Transport Assessment Report has already drawn the conclusion that the lower car parking ratio is not ideal for this particular development. The report supports the current proposed level of car parking and makes reference to SOPA's own Traffic Study that determined 40% public transport usage would be unlikely to occur without significant public transport investment (ie West Metro). As the Traffic Study submitted with the EA has already factored this effect into its argument supporting the higher parking ratio, it does not need to be amended. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

It is noted that visitor and retail car parking would be proposed as on-street parking. The current on-street parking demand along Parkview Drive is already at capacity on most weekdays. It is recommended that the Traffic assessment be reviewed and assesses the capacity of on-street car parking and the expected increase in demand and appropriate mitigation measures be identified.

The development will benefit from its proximity to the P6F car park, which will be metered in a similar manner as street parking. This will mean that any visitors who are unable to find parking in the street will be able access public car parking in P6F. The fact that street parking is at capacity further reinforces the currently proposed car parking provision, which is above the 1 car space per 80m² GFA in the SOPA's Masgter Plan 2030. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

The SIDRA Analysis does not include intersection performance during weekday major events (e.g. Royal Easter Show and State of Origin). It is recommended that this analysis is reviewed and updated to include mid week major events.

The impact of events on the overall SOPA road network should be assessed within SOPA's 2030 Transport Study. Weekday events such as Easter Show or State of Origin are not representative of the normal weekday condition and a practical approach would be taken by the future building occupants in relation to these events. This is a standard issue for all tenants of SOP, including those within the QUAD buildings, the recently completed Site 8 and the CBA at Sites 5, 6 and 7. Such events will be addressed in the Operational Management Plans and Travelsmart Plans to be prepared for the building.

During the discussion with SOPA on 31 May 2010 it was clarified by SOPA that the information required was an estimate of total number of permanent car movements the development would be expected to create during morning and evening peak (excluding visitors). The development is expected to create permanent employment for up to 1,200 persons. Applying SOPA's desired medium term goal of 25% public transport usage would mean that 300 persons would use public transport. Assuming the 88 bicycle spaces were fully occupied, this will mean that a total of 812 persons will be using cars or motorbikes. The car park provided in the development will provide approximately 231 car spaces and 22 motor bike spaces, the remaining demand shortfall of 559 car spaces would be expected to be largely met by the adjacent P6F car park. On this basis a total number of 790 car movements and 22 motor bike movements during morning and afternoon peaks utilising the Murray Rose extension and / or Parkview Drive would be expected.

Standard Conditions - standard conditions, including construction certificates and occupation certificates, public domain and public landscaping strategy, construction management plans, operational environmental management plan, event management plan and accessibility compliance will be required.

Noted.

Please note that given the sites close proximity to major event venues (Sydney Showground and V8 Track) and the Site 3 residential development (MP_0127 and MP_0027), Sydney Olympic Park Authority request construction and operational management plans be submitted and reviewed by operations staff to ensure construction and operation across multiple sites are coordinated and appropriate vehicle accesses and pedestrian movement maintained.	Noted, the altered traffic conditions and road closures under event conditions will be addressed in both Construction and Operational management plans.	
Sydney Olympic Park Authority can assist in the formation of appropriate conditions of consent at a later stage of the process.	Noted	
Sydney Regional Development Advisory Committee		
The proposed development should be consistent with the overall objectives contained in the Draft Sydney Olympic Master Plan 2030	The proposed development is consistent with the objectives contained in the SOPA Master Plan 2030, as detailed in the Environmental Assessment Report.	
Car Parking provision to the satisfaction of Department of Planning and Sydney Olympic Park Authority Requirements	Noted. For further discussion regarding car parking see response to SOPA and Environmental Assessment Report.	
The layout of the proposed car parking areas associated with the subject development (including but not limited to, driveways, grades, turn paths, sight distance requirements, aisle widths, aisle lengths, and parking bay dimensions) should be in accordance with AS2890.1 - 2004 and AS 2890 - 2002	Noted, these requirements will be addressed and incorporated into the detailed design phase of the project, (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)	
Consideration should be given to installing speed humps at regular intervals within the car park to improve safety	Such measures will not be required as the length of the car park is not excessive and will not require speed humps. The car park will be 15km/h zone. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)	
The parking aisles are to be marked with pavement arrows to direct traffic movements in / out of the site and guide traffic circulation through the car park	Line marking and sign-posting with the car park will meet the relevant Australian Standards and / or BCA provisions to enable simple and logical movement within the car park, (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)	
All vehicles are to enter and leave the site in a forward direction	Noted, this is a feature of the split deck car park design and 6m wide aisles and will be provided.	

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All vehicles should be wholly contained on site before being required to stop	As described in Section 7.5.2 of the Environmental Assessment Report the booms gates / roller shutter are set in from the boundary of the site. Any peak period queuing will be mitigated through the incorporation of remote key fob entry to the secured car park, allowing users to open the gates on approach. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.) As discussed in Section 5.33 of Appendix J of the Environmental Assessment Report, adequate space is provided for a vehicles accessing the site.
The swept path of the longest vehicle entering and exiting the subject site, as well as manoeuvrability through the site, shall be in accordance with AUSTROADS	The loading dock has been designed to accommodate an 8.8m rigid axle (AS MRV swept path) for garbage collection and it is expected other regular loading dock movements will be in smaller vans and trucks. There will be no commercial vehicle access into the car park, (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.) The requirements of AUSTROADS will be met during the detailed design process.
A Construction Management Plan detailing construction vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to the Department of Planning for review prior to the issue of a Construction Certificate	The developer has already committed to the preparation of such a document (likely to be prepared by the successful Head Contractor). Refer to Section 8.3 of the Environmental Assessment Report.
The proponent is to implement a location specific sustainable travel plan (eg "Travelsmart" or other travel behaviour change initiative) to address the implications of the proposed development for non-car travel modes (including public transport use, walking and cycling). The location specific travel plan should indicate the provision of facilities proposed to increase the non-car mode share of travel to and from the site. This will entail an assessment of the proposed accessibility of the development site by means of public transport. This should be prepared in accordance with the SOPA Travel Planning Opportunities Travel Plan Guidelines	The developer has already committed to the preparation of such a document through the incorporation of this required into the lease documentation. Refer to Section 8.2 of the Environmental Assessment Report. This project team has significant experience in the preparation of these documents as Bovis Lend Lease has assisted the CBA (SOP Campus) in the preparation of such documents.
All works / regulatory signposting associated with the proposed development are to be at no cost to the RTA	Noted.

RESPONSE ISSUE NSW Transport & Infrastructure Ensure that following are included in the These polices and guidelines are addressed in **Section** 3.4 of this report. policies, planning instruments and development guidelines to be addressed in the environmental assessment: Metropolitan Transport Plan 2010 Integrating Land Use and Transport policy package; and Planning Guidelines for Walking and Cycling The Transport and Accessibility Impact Study (item 5) should include the following matters: Section 7.1.1 of The Transport and Transport An estimate of the trips generated by Accessibility Report prepared by Better Transport the proposed development Futures dated November 2009 estimated the peak hour vehicle trip movements of approximately 227 and a daily trip movements of approximately 1370. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.) The developer has committed to incorporating the The consideration of how demand for requirement to prepare Travel Management Plans travel to and from the development will within lease documentation, refer to Section 8.2 of be managed; and the Environmental Assessment Report. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.) The development is within 350m walk of the The proposed measures to increase use Olympic Park train station and the service has of non-car transport modes to meet that recently been increased to provide a 10 minute peak travel demand - consistent with the hour frequency. The station is also the terminus for NSW State Plan 2009 four bus routes and the development includes 88 bicycle spaces and is within close proximity to SOPA local and regional walking and cycling tracks. These features of the development combine to provide a variety of transport options other than private motor vehicles. Further detail can be found within the Traffic and Transport Accessibility Review prepared by Better Transport Futures. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

The Transport and Accessibility Impact Study should propose improvements to access for pedestrians between the site Sydney Olympic Park Rail Station, and between the site and bus services in Sydney Olympic Park, which connect to Parramatta and Lidcombe Rail Station. The Study should also address bicycle connections from the site to the surrounding bicycle network. Secure bicycle parking together with end-of-trip facilities should be included with the proposed residential and commercial components of the development

Parking provisions should be addressed in the proposed Transport and Accessibility Impact Study as an integral part of the Study. The Department supports minimal car parking provision based on the accessibility of the site to public transport and existing on site car parking provision with the Sydney Olympic Park site. Pedestrian improvements for access from the Development to the Olympic Park train station will be provided through the construction of the extension of Murray Rose Avenue (by SOPA) and the temporary road linking to Parkview Drive (by the proponent). Pedestrian pathways and bicycle paths that link to the regional bicycle network as described within the Traffic and Transport Accessibility Review. SOPA's overall staged plans for cycling and walking pathways will ultimately provide excellent local and regional access for these transport modes. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.) Secure bicycle and end of trip facilities are included in the building.

Parking provision were addressed in the Traffic and Transport Accessibility Report prepared by Better Transport Futures, which supports the higher ratio of car spaces on the basis that the target of 40% of trips being handled by Public Transport is only likely to occur with significant investment in infrastructure. This is also stated in SOPA's own Transport Study (2008). As this significant improvement (i.e West Metro) has not and perhaps will not occur before 2030, moving to a lower ratio of car spaces will only serve to add to the street parking issues that SOPA have raised in their letter to DoP. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

Railcorp

This significant improvement in service frequency will have an important impact on the capacity of public transport services to Olympic Park. It is recommended that the public transport accessibility of the proposed development, referenced throughout both the "Environmental Assessment Report" and the "Traffic and Transport Accessibility Report", take into account this implemented increase n service frequency, by aiming to reduce the level of car parking provision to the required level of 1 space per 80 square metres.

The service frequency of the Olympic Sprint shuttle improvement in March 2010 that occurred after the lodgement of the EA Application is welcomed by the proponent. This particular service requires passengers to change at Lidcombe station for connecting services to the City or Western Suburbs and so by its nature is not a "direct" service. On this basis we do not consider that this frequency improvement represents the "significant infrastructure improvement" referenced in the SOPA 2030 Traffic Study, which would support an ultimate goal of 40% of trips generated within SOP being handled by Public Transport. The West Metro would have been a "significant improvement in public transport", however as it has been cancelled and as alluded to in SOPA's letter to DoP it is now unlikely that SOP will achieve a 40% public transport split and this supports the proponents current allocation of car spaces. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

Sydney Water

Sydney Water Servicing

Sydney Water will further assess the impact of the development when the proponent applies for a Section 73 Certificate. This assessment will enable Sydney Water to specify any works required as a result of the development and to assess if amplification and / or changes to the system are applicable. Sydney Water requests the Department continue to instruct proponents to obtain a Section 73 Certificate from Sydney Water.

Noted. Hughes Trumean have already lodged a preliminary feasibility application with Sydney Water for the site and will formally lodge a Section 73 Application following consent.

The Proponent must fund any adjustments needed to Sydney Water Infrastructure as a result of any development. The proponent should engage a Water Servicing Coordinator to get a Section 73 Certificate and manage the servicing aspects of the development.

Extension of Sydney Water's assets down the Murray Rose Avenue extension will be funded by SOPA as part of the road construction, and any costs to establish connections from Murray Rose Avenue into the site will be funded by the proponent.

Sydney Water Area Plan

The proposed development lies with in the study area for Sydney Waters Parramatta Road Area Plan. Area planning involves undertaking a review of sustainable management of the urban water cycle and developing servicing strategies for water, wastewater, non portable water and stormwater. Sydney Water is currently assessing all possible options to sustainable services growth within the Parramatta Road Corridor study area. This assessment will allow Sydney Water to develop a preferred strategy to service the area. Sydney Water expects to complete the Area Plan by April 2010.

Noted. Members of the consultant team will be available to Sydney Water if there are any queries. The development will use significantly less portable water than other commercial developments through the incorporation of highly efficient water fittings and the buildings connection to the WRAMS system for cooling tower water, toilet flushing and irrigation.

Stormwater

Though there are no Sydney Water stormwater assets directly affected by the proposed development, the site drains just downstream of the Sydney Water Powells Creek trunk drainage stormwater channel 50. As this area is tidal Sydney Water is concerned that the stormwater generated from the development site will enter and potentially impact our system.

The site is approximately 500 metres from the nearest point of Powells creek. The flow of stormwater from the site passes under Bennelong Road and into the Bennelong Ponds that are freshwater. It then passes through culverts that are designed to accommodate a 1 in 100 year storm event before it reaches the Badu Mangroves, of which there is approximately 300m of tidal mangroves before the stormwater will reach Powells creek.

The Department should ensure that the proposed development meet contemporary water quality discharge requirements. As a minimum the 1997 NSW Environmental Protection Authority guidelines should apply. However, where Auburn Council or the Sydney Olympic Park Authority requires a higher standard, such standard shall apply.

Suspended solids: 80% reduction of annual average load

Total phosphorous: 45% reduction of annual average load

Total nitrogen: 45% reduction of annual average load

Litter: Retention of litter greater than 50mm for flows up to 25% of the 1 year ARI peak flows

Coarse sediment: Retention of sediment coarser than 0.125mm for flows up to 25% of the 1 year ARI peak flows

Oils and grease: In areas with concentrated hydrocarbon deposition, no visible oils for flows up to 25% of the 1 year ARI peak flows

The stormwater design incorporates gross pollutant traps, which will remove litter, coarse sediment and grease and oils from the stormwater runoff. Refer to the Hughes Trueman letter (**Attachment E**) for further detail regarding the gross pollutant traps.

The landscape design features linear bio-swales incorporated into "the cutting" park to improve the water quality of stormwater runoff. It is also intended that the landscaping of the future "Rim Park" will also include a bio-swale along the perimeter of Building A. These bio-swales are highlighted in the new drawing attached titled "Bio-swale Plan" LA13 Rev A (refer Attachment G) prepared by Turf Design. The landscaping comprises majority of native plants that are suited to Australian soils with low phosphorus content.

Furthermore, Turf Design has indicated that fertilising should not be required, however if in the future a building manager considered that the plants needed revitalisation, all that would be required is a single fertilizer application in spring using a native plant formation fertiliser being very low in Phosphorus content (refer to drawing LA12 Rev C in Attachment G).

These measures will help to limit and / or control the annual load of suspended Solids, total phosphorous and total nitrogen.

It should be noted that the Bennelong Ponds and the vast area of mangrove (approx 500 metres) that the stormwater will pass through before it reaches Powells Creek is superior to being passed through any commercial form of water quality treatment. SOPA is the responsible authority for stormwater before it passes into the Powells Creek trucnk drainage and discussions with SOPA have informed the stormwater design. SOPA has not raised any objection to the stormwater design in its response to the DoP.

Department of Climate and Energy Change

DECCW has reviewed the EA prepared for the proposed project and notes that the 231 car parking spaces sought exceeds the recommended maximum of 164 car spaces in the 2030 Masterplan. The EA states this is necessary as "it is widely accepted that transport provisions, in particular rail services, are inadequate to service the current daily population"

Noted, as supported by the Traffic and Transport Accessibility Review submitted with the Environmental Assessment Report together with comments made within SOPA's response to the DoP and SOPA's own Master Plan 2030. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

While DECCW acknowledges that current public transport services to SOP will need to be improved to meet the 2030 Masterplan public transport target, the provision of excessive car parking spaces encourages the use of private motor vehicles for travel to and from work. It is therefore recommended that any approval for development be in accordance with the car parking space limits in 2030 Masterplan.

A reduced level of car parking is not ideal for this site as the public transport provision will not achieve more than a 25% share without major improvements to public transport as described in the Environmental Assessment Report and within SOPA's own 2030 Traffic Study. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

As noted in the EA, 4 public car parks with a total capacity of approximately 890 spaces are located within the vicinity of the proposed development. It is likely the majority of these spaces will be in greatest demand outside normal business hours. If necessary, temporary arrangements for the provision of the additional car parking spaces could be pursued at these facilities.

SOPA's 2030 Transport Strategy has targeted an initial improvement in public transport usage from 15% to 25% and relies on a major investment in public transport (i.e West Metro) to support a 40% usage. On this basis the proposed development which may have a population of up to 1,200 people will result in 180 persons using public transport trips (15%) increasing to 300 (25%) over the medium term. Of the remaining 900 people who are not using public transport, 231 are provided with car spaces, 22 are provided with motor cycle spaces and 88 with bicycle spaces resulting in a car parking shortfall of 559 spaces. The adjacent P6F car park provides 638 spaces, and this will service the shortfall expected. The spaces provided in P6A, P6D and P6E (254 car spaces) are all earmarked as future development sites and cannot be relied upon for the life of the proposed development. (Refer also to Better Transport Futures letter dated 30 April 2010 at Attachment D.)

It is noted that the greatest demand for the surrounding public car parks is outside normal business hours, and therefore adequate capacity will be provided.