

25 November 2016

File No: R/2016/35, R/2016/36, R/2016/37
Our Ref: 2016/611803

Cameron Sargent, Team Leader - Key Sites Assessments
NSW Government
Department of Planning and Environment
320 Pitt Street
SYDNEY NSW 2000

Attention: Andy Nixey, Planner - Key Sites Assessments
Email: Andy.Nixey@planning.nsw.gov.au

Dear Andy,

SSDs 6964, 6965 and 6966 - Barangaroo South Residential Towers R4A, R4B and R5

The City of Sydney (the City) has undertaken a review of documentation.

The conclusion is that the City **objects** to State Significant Development (SSD) applications for Barangaroo Residential Buildings R4A, R4B and R5, collectively known as “One Sydney Harbour” apartments.

Building R4A is a 72-storey tower with approximately 327 apartments and retail space at the ground floor.

Building R4B is a 60-storey tower with approximately 297 apartments and retail space at the ground and first floors.

Building R5 is a 29-storey tower with approximately 151 apartments, including key worker housing required under the Concept Plan, and retail space at ground and first floors.

This objection is made on the grounds of planning process being inappropriate and uncertain; and non-compliances with SEPP 65 and the ADG.

The City believes there are problems with the density and layout of the towers, leading to poorly planned apartments. The towers, subject to the qualifications noted in this letter, require rework and further examination. In terms of documentation, there are also shortcomings in the applications identified in this submission.

This objection is lodged on the following grounds:

- (1) All three SSDs may be for prohibited development under SEPP (State Significant Precincts) should the current court appeal for MOD 8 and the Crown Resort SSD be successful.

- (2) The proposals will be inconsistent with the Concept Plan, as per the design approved as at MOD 6, should the current court appeal for MOD 8 and the Crown Resort SSD be successful. There is significant planning uncertainty associated with the Concept Plan.
- (3) The SSDs have been lodged prematurely in advance of coordination with the surrounding land, most notably Hickson Park but also other land uses. There are very clear issues of lack of coordination in the applications.
- (4) There is insufficient appreciation of the context of the applications leading to inability to determine the full range of environmental impacts.

This submission outlines the City comments in the following areas:

- (a) planning issues
- (b) urban design issues
- (c) transport and access issues
- (d) public domain issues
- (e) health issues
- (f) heritage issues
- (g) public safety issues

Planning issues

Uncertainty with SEPP and Concept Plan

The SSD applications should not be determined or progressed given the level of planning uncertainty with SEPP (State Significant Precincts) and the Barangaroo Concept Plan.

There is a current appeal against the Planning Assessment Commission's approval of MOD 8 to the Concept Plan and the Crown Resort SSD. It is expected that any successful appeal will overturn amendments to SEPP (State Significant Precincts) 2005 including rezoning of public open space to development zones, uplift in gross floor area and uplift in building heights that, on the recommendations of the PAC, facilitated approval of MOD 8 and the Crown Hotel and Resort. If the appeal is successful, the enabling zoning may reinstate the land to RE1 Public Recreation (i.e. open space zone) where the three SSDs will be rendered prohibited development.

Furthermore, the creation of the tower envelopes for R4A, R4B and R5 will be invalid. As such, the SSDs will be prohibited and inconsistent with the Concept Plan.

If the appeal is successful, the Department should immediately request that the applications be withdrawn.

Premature Lodgement of Applications

Lodgement of the SSD applications is premature as the applications are not coordinated with the surrounding land. It is impossible to realistically review these proposals, in particular the ground plane, without consideration of the wider context.

The following contextual issues arise:

- (1) The design and intent of the adjacent Hickson Park remains unknown. Hickson Park, as conditioned by the PAC in MOD 8, is not yet subject to any application for approval of its design. The location of amenities, large tree planting, the required 'deep soil' zone(s), paths of travel, active versus passive spaces, etc., within the park is unknown, and the City and others are subsequently unable to determine how these buildings interface with the park. The Department, the City and others are unable to determine the full range of environmental impacts arising from the proposals. This is arguably one of the most critical issues with these applications. The interface with the park is so critical that the applications must be considered in tandem, and coordinated with, the design for the park and basement levels below. As the Barangaroo Design Advisory Panel Final Report in MOD 8, and as repeated by the PAC in their advice to the Minister for Planning in relation to MOD 8, stated:-

"Hickson Park is well protected from the wind and has the potential to deliver a pleasant and useable alternative to the waterfront parkland experience. However, as currently proposed it lacks connection to the major waterfront open space. A clear, visual, spatial and physical connection between Hickson Park and the waterfront is essential to maximise amenity and safety in the park and the ensure that it is legible as public space, not as space intended for the use of the apartments adjacent."

Hickson Park is already compromised portion open space. It was noted by the PAC as being a consequence of the siting of the Crown Hotel and Resort rather than as a strategic allocation of public open space.

The PAC's decision for MOD 8 includes a condition (Condition B3) newly introduced to the Concept Plan setting out qualitative and quantitative requirements for Hickson Park. Inclusive in this condition are the requirements for the shape of the park, view corridors, deep soil zone(s) (of a minimum area 2,000sqm and depth of 3m) and for the nature of the park to be predominantly soft landscaping.

It is not yet clear how any of the Concept Plan requirements for Hickson Park are to be satisfied. A design for Hickson Park has not been prepared and exhibited alongside:

- the Crown Hotel and Resorts SSD, including basement levels below half the park
- Lend Lease Stage 1B Basement SSD, including basement levels below the balance of the park
- the subject three SSD DAs.

Haphazard, uncoordinated and poor approaches in the past should not be repeated. The uncertainty surrounding the design, intent and abilities of Hickson Park to satisfy the Concept Plan adds sufficient grounds for the withdrawal of the current SSDs until resolved.

The three buildings have a significant impact on the design of Hickson Park, and as such the two should be designed in tandem. It is strongly recommended that a design be prepared for Hickson Park to clarify the interface with these buildings, and possible locations for large trees within

the park. In a park of such scale, and on a site of such significance as Barangaroo, anything less is unacceptable.

- (2) Pedestrian connection and desire lines from these buildings to the Barangaroo Metro Station through Hickson Park are not determined;
- (3) Environmental impacts are not coordinated. See the below commentary in this regard.
- (4) The three buildings must mitigate the unacceptable wind conditions they create within their own site boundary, and not rely on questionable future tree planting to create a habitable space.

Urban Design and Built Form issues

Lack of Building Podiums

The absence of podiums to the towers is contrary to principles of human scale, breaking down building bulk and mass and wind mitigation strategies.

Buildings without podiums run counter to the creation of consistent street wall character and is not in keeping with the buildings under construction or approved in the immediate Barangaroo South context.

Despite the City's submissions to the Darling Harbour Live Plots, Lend Lease acquired development consent for sheer towers and even with footpath overhangs.

Moreover, wind impacts are consistently downplayed in the Department's assessments.

Podium forms should be introduced on each frontage of the towers.

Wind Effects

There is a significant issue with the pedestrian wind environment created by these towers. The wind report, prepared by Windtech illustrates dense lines of trees that are positioned around the edges of each building. These trees are required to achieve a height of 7-10m, with a dense canopy of 3-6m wide (refer Figure 1 below).

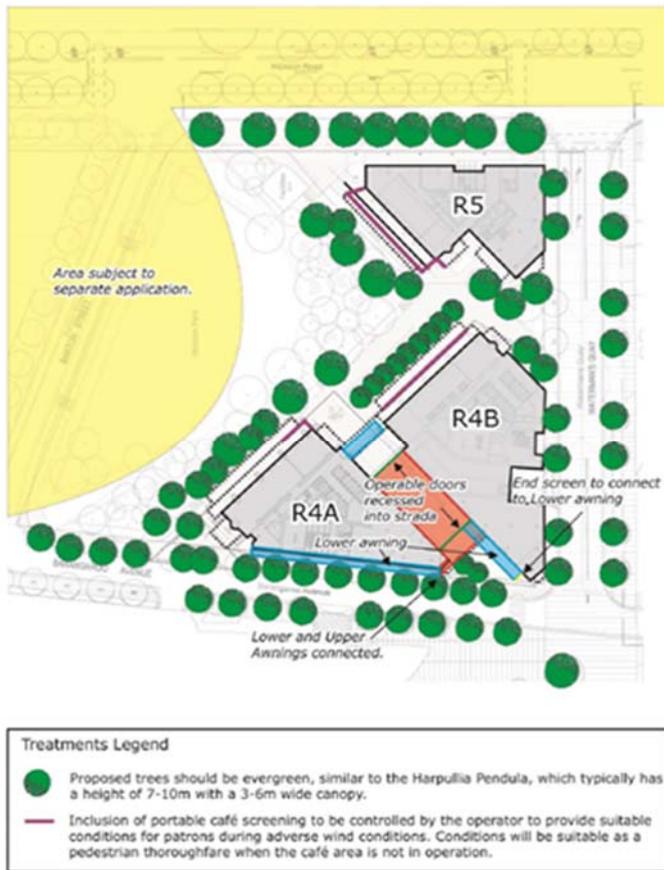


Figure 1: Extract from Wind Assessment showing trees required to mitigate wind impacts.

The following issues arise:

1. the landscape design report states that 'for technical reasons large tree planting is not possible above the floors below on podium level' (sic). The phrase is obviously a typing error, however the true meaning is quite critical. If the 'technical reasons' prohibiting large tree planting apply to all large trees on podium, presumably this excludes large trees above the basement.
2. the location of the deep soil pockets is unknown, so there is a further lack of guarantee that the required trees would be planted in the required location. The SSD applications are lodged on the basis that the buildings and immediate surrounds sit on a basement that is shallow of the ground level.

It is highly likely that the proposed tree locations shown in the wind report will not align with a well-considered park design. The trees are not placed with consideration to design constraints or opportunities, and the proposed species matches the street trees, thereby lacking diversity.

Such matters of coordination should be been resolved alongside the design for Hickson Park prior to lodgement of the SSDs.

The wind impacts of the developments have not been adequately assessed. It has been the City's experience that where wind barriers/breaks/awnings have been conditioned by the Department or the PAC that these conditions are then deleted through modification owing to lack of coordination or feasibility at a later stage.

Canopy

The “Strada canopy” between buildings R4B and R4A effectively encloses and privatises the public domain between these buildings. This is contrary to the Concept Plan and not supported from an urban design perspective. It is not in the public interest to enclose and privatise this space.

The link bridge between R4B and R4A is also not supported, irrespective of whether the strada canopy is built or not. Upper level links are discouraged in the Sydney CBD. Instead, the City encourages pedestrians to traverse the streets at ground level, to enliven, activate and participate in city life.

Little detail is provided relating to the strada canopy and link bridge, by way of architectural design, materials and finishes.

It is recommended that the design be amended to remove the canopy and overbridge link and the creation of public open space between R4A and R4B. Awnings for pedestrian protection should be installed rather than a canopy and overbridge.

Non Compliance with SEPP 65 - Compliance with the Apartment Design Guide

The design of the apartments would appear to ignore the Apartment Design Guideline. There are non-compliances in relation to basic apartment amenity criteria that are not warranted.

The apartment yield is excessive and non-compliances should be excised from the proposals.

Building separation is addressed in Sections 2F and 3F in the ADG. The aims of 2F - Building separation are:

- ensure that new development is scaled to support the desired future character with appropriate massing and spaces between buildings
- assist in providing residential amenity including visual and acoustic privacy, natural ventilation, sunlight and daylight access and outlook
- provide suitable areas for communal open spaces, deep soil zones and landscaping.

The aims of the building separation sections are clearly written to achieve more than just visual privacy. Importantly for this proposal, they speak to outlook, visual and acoustic privacy and amenity.

The proposed minimum separation distance between R4A and R4B is 13m, which is 11m less than is required 24m separation in the ADG. Design ‘measures’ such as opaque screening have been notated in order satisfy the ADG design guidance in section 3F, however the opaque facade to the R4B living rooms is likely to diminish the outlook amenity of all apartments in this location up the tower if it to be effective in providing privacy, from Level 1 to 58.

The appearance of the ‘opaque façade’ and ‘opaque privacy screen’ and their effectiveness are unknown and unable to be assessed as details have not been provided. With so little information, the City and others are unable to assess whether the Section 3F Design Guidance in the ADG has been satisfied. Stakeholders can, however, determine that Section 2F of the ADG has not been satisfied, nor have the aims been achieved.

It is recommended that the design be amended to ensure no habitable rooms or balconies are located facing one another between R4A and R4B and that buildings meet minimum separation distances. Detailed drawings of windows and materials should also be provided at a 1:50 scale.

In relation to solar access and natural cross ventilation:

- all three towers do not comply with the minimum threshold for solar access
- Building R4B has an excessive amount of apartments that receive no direct sunlight in midwinter. Solar diagrams in plan and elevation should be submitted with the application indicating compliance with the ADG controls
- all three towers are said to comply with natural cross ventilation. However, the methodology on which this is based appears not to be correct. The Applicant should lodge diagrams displaying how they believe natural cross ventilation is achieved.

No reliance can be placed on an alternative, non-compliant, measurement of solar access between the hours of 9am and 5pm as suggested in the SSD applications – these are the not the Planning Controls. Reliable decisions must be made on the consistent application of planning instruments and policies. Community confidence in the planning system would be further significantly eroded if new State Government Planning Controls (SEPP 65 and the ADG) are significantly eroded creating a highly undesirable planning precedent.

In relation to natural light and air, all three proposed towers have rooms indicated as 'studies' that have no windows. This is no longer permitted since the Residential Flat Design Code was replaced. Studies are not to borrow light and air from other rooms as now required by the ADG.

The proposed non-compliances add to a view held by the City that the residential yield being pursued is excessive and the apartments must be redesigned so that they comply with the ADG.

As the ADG is a recent initiative of the NSW Department of Planning and Environment, it is incumbent on the Department to apply it rigorously and consistently.

Transport and Access

Car Parking Supply

As with essentially all of the City's objections and submissions to Barangaroo SSD applications to date, the City contends that the amount of car parking being pursued is excessive and unwarranted. The number of car parking spaces proposed should be restricted to the rates within the Sydney Local Environmental Plan 2012.

The City calculates that, cumulatively, the application of the LEP 2012 would generate 488 car parking spaces for all three towers whereas there are 881 spaces proposed. Such significantly high car parking dependence ignores the sites ability to access excellent existing and proposed public transport options and will lead to higher than necessary road congestion on the local and district road network.

Sustainable and active transport should be encouraged over high private vehicle use.

Traffic Generation and Intersection Performance

The traffic modelling analysis in the submitted TMAP identifies a number of the intersections currently operating near or at capacity resulting in significant delays in the adjacent road network. The report claims that the SSDs will contribute modest traffic impacts to the road network. The issue of queue length at the northern approach of the Hickson Road/Sussex Street intersection is identified in the TMAP.

The traffic modelling uses a coefficient value of 0.14 for traffic generation per dwelling at AM peak. However, RMS guideline for high-density residential flat buildings (TDT 2013/04a) require a value of 0.19 to be used. The analysis reported has a much lower impact than the actual could be. It also noted that construction traffic movement in the PM peak hour was not considered at all in the modelling exercise.

The traffic reports by Arup suggest that the proposed traffic signals at the Hickson Road/Watermans Quay intersection will manage traffic circulation and the efficiency of the development traffic. Given the single access off Watermans Quay and also from the Stage 1A development, the City holds concerns about the performance of this intersection and probable vehicle queue on Watermans Quay. There is a total of around 893 vehicle spaces (including 4 large trucks, 5 service vehicles, 3 retail vehicles and 881 resident vehicles) seeking to use this one access.

It is forecasted that traffic will spill back to the Hickson Road/Watermans Quay intersection. As raised earlier, it may affect the entry and exit vehicle queues from the basement car parking. The TMAP also recognises that significant vehicle queueing currently occurs in the southbound direction on Sussex Street in the PM peak hours as a result of more congested traffic operation condition in the vicinity of the cross traffic movement at the King Street and Market Street intersection.

Given the significant number of car parking spaces in 4 levels of basement concentrating to a single access point, the traffic impacts from the proposal should be thoroughly tested.

All the traffic generation rates from the development should refer to the TDT 2013/04a for analysis.

Loading Docks

For the entire retail and residential floor space in the three towers, 5 service spaces are proposed. Adopting the rates of the Sydney Development Control Plan 2012, Building R4A alone would be required to have 5 spaces, Building R4B alone 4 spaces and Building R5 alone 5 spaces. It should be noted that the basements and loading docks should be designed for Council's waste service trucks to service the buildings. Trucks should be able to enter and leave the building and basement level in forward direction and should accommodate a 9.25 metre rigid vehicle.

Bicycle Parking and End of Trip Facilities

The submitted architectural drawings do not show any bicycle parking spaces and end of trip (locker, changing room, shower, etc.) facilities. Bicycle and EoT facilities are also not discussed in the submitted TMAP. The SEE states that the apartment storage will be used for resident bike parking but this is not documented elsewhere.

Residential bike parking should be Class 2 facilities (known as Class B in the latest Australian Standards, consolidated in one area, located at ground floor or first basement level and easily located and identified.

Retail bike parking should be Class 2 facilities, separated from residential bike parking but located with similar amenity as residential facilities – at ground floor or first basement level, easily located and identified.

Visitor bike parking should be Class 3 facilities, provided in an on-grade location near a major public entrance to the buildings and signposted.

Public Domain

Building R4A fronts the future alignment of Watermans Quay to the south and the future Barangaroo Avenue to the west. Watermans Quay will connect to Hickson Road in the east, and Barangaroo Avenue in the west, which connects through to the King Street Wharf precinct to the south.

The application seeks approval for interim and permanent landscaping works, including pedestrian paving immediately surrounding the buildings (including paving of the pedestrian plaza, referred to as the 'Strada') and a podium garden.

The public domain has a dominant frontage along Barangaroo Avenue and Building R4A shares a joint plaza (the Strada) with the adjacent Building R4B. It is noted that the Strada is proposed to be enclosed with a canopy. The reason for the canopy is not clear, elsewhere in Barangaroo they have been constructed to deal with wind speeds off the building above.

The reason for the canopy over the Strada needs to be made clear. It appears that the space is to be allocated for retail purposes rather than public domain usage.

Design drawings indicate that most of the available space in the Strada and along Barangaroo Avenue is proposed to be used for outdoor dining at ground level, leading to concerns for constricted pedestrian circulation given the number of proposed residents. This will place pressure on the adjacent park and place it at risk of overuse and encroachment.

Future public transport connections are proposed in the form of the Metro, which will be constructed on Hickson Road not far north from the developments. No pedestrian connection has been proposed across the park which is likely to bear the brunt of desire lines being worn into the park finishes. It is essential that a design for the park be prepared in conjunction with this application to make clear the use and circulation intentions.

Health issues

Mechanical Ventilation

Retail fitouts for the ground floor should be subject to separate approvals once tenancies have been confirmed. With the potential for food stores to open on the ground floor there should be no horizontal discharge for mechanical ventilation servicing food outlets. It is preferred that there is sufficient capacity for all tenancies mechanical ventilation systems to vent to the roof level to remove odour/smoke complaint from resident above. Additional, enhanced filtration must be available for proposed solid fuel cooking outlets.

Construction Noise

Exceedances of construction noise criteria are predicted at three of the identified receivers. These exceedances highlight the importance of appropriate management of the construction in terms of community consultation and providing respite periods from intrusive works throughout the day. The most prominent being control of noise at the source and implementation of alternative work methodologies.

Operational Noise – Retail Tenancies

At this stage in the development process the Applicant must make strategic decisions on the potential cumulative noise impact on residents from commercial properties (i.e. restaurants at the base of the buildings). The first floor slabs should be at least 300mm thick to minimise noise transfer from commercial tenancies. It is recommended that the majority of patrons are housed internally on the ground floor tenancies with a manageable capacity of external patrons especially for late night trading premises.

A noise masterplan should be developed for the new precinct as per the Barangaroo South Noise Masterplan with all tenancies given a maximum cumulative noise goal that each tenancy will contribute to, the traditional background +5dB approach is not appropriate in this instance as background creep will be of a particular issue as tenancies begin to operate.

Noise impact on Child Care Centres

The noise management level of 65dBA $L_{eq\ 15min}$ when outdoor play areas are in use is considered excessive particularly for childcare centres. The city recommend an operational noise level of 60dBA $L_{eq\ 15min}$ and a temporary noise management level of 65dBA $L_{eq\ 15min}$ while construction works are ongoing. The City believes this will provide a level of protection for the vulnerable children affected by noise. It is strongly recommended these outdoor areas are not utilised at all during noisy works if possible. The submitted acoustic report predicts exceedances of between 1- 8dB of an already upper limit criteria. Additional noise mitigation measures should be introduced to reduce the noise levels to an acceptable level.

The noise from the R4A building will be below overall cumulative noise levels at the surrounding most affected receivers with the exception of residences on and around R8 residences where building R4A is closest. In this location noise from R4A will be of a similar magnitude to other construction noise sources.

In the case of the internal areas of the Ku Lance Preschool, a relatively small exceedance of internal noise objectives by up to 1dBA is expected, if windows are open. This exceedance is considered acoustically insignificant. If noise levels are considered excessive by the operators, windows and doors can remain closed.

Public Safety issues

The lack of information provided with the application relating to safety and security has made it difficult to make informed commentary.

Crime Prevention Through Environmental Design (CPTED) comments for each of the buildings is cursory. It is more generalised for each apartment and does not provide any detail on which crimes the design seeks to prevent

The proposal that the through site link between buildings R4A and R4B between Hickson Park and Waterman's Cove "may be closed from 11pm or midnight" for safety and security reasons is not supported as there is no evidence provided, including any consultation with Sydney City Police, about what specific safety and security issues are being referred to.

Given the lack of specific information the following should be considered:

- Access control measures including encrypted swipe card accessible security doors, intercom, lighting and CCTV into and out of building entries and basement car parks
- A reception area at ground level positioned to provide open sightlines of all people entering and exiting the buildings
- A clear separation between public and private areas
- An overall Security Management Plan for the 3 buildings should be prepared
- design and management issues in relation to the intended use of Hickson Park after dark
- detail outlining the type and location of proposed mail boxes to guard against mail box theft which NSW Police report is increasing in the entire metropolitan area as organised crime syndicates continue to target high end developments with mailboxes located outside secure entries to commit multiple credit card and identity frauds
- the applicant is strongly advised to install and position mail boxes with non-master key locks (that is unique, individual locks for each apartment) inside the electronically accessible building entrances and to liaise with Australia Post regarding accessibility requirements

Thank you for the opportunity to raise the above submission grounds for your consideration.

Should you wish to speak with a Council officer about the above, please contact Russell Hand, Senior Planner, on 9246 7321 or at rhand@cityofsydney.nsw.gov.au

Yours sincerely,



Graham Jahn AM
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16 March 2017

File Number: 2017/109462
Our Ref: R/2016/35/A

Cameron Sargent, Team Leader, Key Sites Assessments
NSW Department of Planning and Environment
Sydney NSW 2000

Attention: Andy Nixey
Email: Andy.nixey@planning.nsw.gov.au

Dear Andy,

**Response to Submissions for State Significant Development Applications SSD
6964 and 6965 for Barangaroo Residential Buildings R4A and R4B,
Barangaroo South**

I refer to your correspondence dated 27 February 2017 inviting Council to make comment on the Response to Submissions (RtS) by the applicant for the State Significant Development Applications for Buildings R4A and R4B at Barangaroo South.

The City has reviewed the RtS and maintain our **objection** to the proposal. We have attached a Table, which addresses each response in turn. Therefore, the City does not support the proposal in its current format and is unable to provide recommended conditions of consent.

Should you wish to speak with me regarding the above, please contact myself on 9246 7592 or at ccorradi@cityofsydney.nsw.gov.au.

Yours sincerely,

Christopher Corradi
Area Planning Manager (Major Projects)

Response to Submissions for State Significant Development Applications SSD 6964 and 6965 for Barangaroo Residential Buildings R4A and R4B, Barangaroo South

Issue	Applicant's Response	Issue addressed?	City's Contention
Planning Issues			
<p><u>Uncertainty with SEPP & Concept Plan</u></p> <p>The SSD applications should not be determined or progressed given the level of planning uncertainty with SEPP (State Significant Precincts) and the Barangaroo Concept Plan.</p>	<p>Modification 8 to the Barangaroo Concept Plan MP06_0162 (Concept Plan (Mod 8)) was approved on 28 June 2016. The lodgement and exhibition of the proposal was carried out in accordance with the <i>EP&A Act 1979. Millers Point Fund Incorporated v Lendlease (Millers Point) Pty Ltd</i> [2016] NSWLEC 166 was decided in the respondents favour on 23 December 2016, rendering the appeal unsuccessful. As a result of this decision, Mod 8 to Concept Plan approval 06_0162 is valid and the proposed development of Buildings R4A, R4B and R5 remains permissible with consent.</p> <p>As this matter is now resolved, it is considered that there is no uncertainty in relation to the application of <i>State Environmental Planning Policy (State Significant Precincts) 2005</i> or the Barangaroo Concept Plan and that the assessment and determination of each SSDA may continue.</p>	Yes	Noted.
<p><u>Premature lodgement of applications</u></p> <p>Lodgement of the SSD applications are premature as the applications are not coordinated with the surrounding land. It is impossible to realistically review these proposals, in particular the ground plane, without</p>	<p>The building designs have been undertaken with the future Hickson Park and surrounding public domain design in mind. This approach of concurrently developing the design of the basement, buildings and public domain design is consistent with the approach undertaken for Stage 1A of Barangaroo South.</p>	No	<p>Lack of coordination with the design of the adjacent Hickson Park.</p> <p>Contrary to the response to submissions report, the City has not been consulted and presented with the design for Hickson Park and surrounds.</p>

<p>consideration of the wider context. The following contextual issues arise:</p> <ul style="list-style-type: none"> - The design and intent of the adjacent Hickson Park remains unknown. - Pedestrian connection and desire lines from these buildings to the Barangaroo Metro Station through Hickson Park are not determined; - Environmental impacts are not coordinated. - The three buildings must mitigate the unacceptable wind conditions they create within their own site boundary, and not rely on questionable future tree planting to create a habitable space. 	<p>Council has been one of many stakeholders consulted in the planning and design phase of each component associated with Stage 1B of Barangaroo South. Public exhibition has occurred for the Stage 1B Basement and the three residential buildings (subject of this Response to Submissions). Furthermore, Council has been consulted and presented with the future Hickson Park and surrounding public domain design. As such, there should be no impediment to Council’s review and comment on the three residential buildings.</p> <p>The design of Hickson Park is the subject of SSD 7944 and is currently under review by the Barangaroo Delivery Authority for landowners consent. As set out above, this component of the project is critical to the overall success of the Barangaroo precinct and there are a number of stakeholders who must be consulted to ensure a high quality outcome is achieved. Council has been provided with presentations on the design of the public domain.</p> <p>Throughout the development of Barangaroo, detailed pedestrian flow studies have been undertaken to determine connections to key destinations. Consistent with this approach, the SSDA for the public domain of Stage 1B and surroundings, including Hickson Park, will outline desire lines. The public domain approach and design has been developed in unison with the design of the three proposed residential towers, including pedestrian desire lines.</p>		<p>These current applications impact on the edges of the park, access to the park, environmental quality within the park (especially wind impacts), the usage of the park and the landscape design of the park, including levels and potential for landscaping due to the basement carpark encroaching under the park.</p> <p>These applications can only be considered in tandem with the design of the park. Assessment of these applications without a park design is premature and limits the potential for the park to provide the required public benefit.</p> <p>Both the RTS and the addendum to the wind report make statements that rely on the design of Hickson Park. Appendix D, part 1.3 states that the landscape has been developed with the proposed park/public domain, ensuring ‘an integrated approach for the overall area, which provides the most suitable outcome in terms of wind conditions for the precinct’. This may be, but the park design SSD 16_7944 is yet to be submitted and there is subsequently no way to confirm this outcome. As previously stated, it is impossible to realistically review these proposals- in particular the ground level- without consideration of the wider landscape design.</p> <p>In addition, all responses identify that a comfortable pedestrian wind environment</p>
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	<p>A comprehensive review of all potential environmental impacts has occurred, both in relation to each individual building and the potential cumulative implications. Appropriate mitigation measures have been provided to ensure environmental impacts are managed/mitigated effectively.</p> <p>An addendum Wind Report has been provided, which clarifies the wind mitigation measures to be implemented as part of the proposed development.</p>		<p>is reliant on landscape elements (particularly trees) located both within and beyond the scope of these applications.</p> <p>The Windtech diagram provided, shows locations where trees are required to reduce adverse wind effects. These requirements are not reflected in the architectural or landscape designs, either as tree planting or awnings. Furthermore, this diagram in no way reflects a well-designed landscape. Depending on the park design, the tree positions shown in this report could compromise the success of both the ground level tenancies and the park itself.</p> <p>This application remains premature. The design of these buildings will place significant constraints on the design of Hickson Park, and as such the two must be submitted and reviewed in tandem. The three buildings must somehow mitigate the unacceptable wind conditions they create within their own site boundary, and not rely on the adjacent public domain to create a habitable place.</p>
Urban Design and Built Form Issues			
<p><u>Lack of Building Podiums</u></p> <p>The absence of podiums to the towers is contrary to principles of human scale, breaking down building bulk</p>	<p>The proposed design of each building is in accordance with the <i>Barangaroo South Built Form and Urban Design Guidelines</i> (the Design Guidelines') approved under Concept Plan Mod 8. These controls set the parameters of each</p>	No	<p>The applicant has not addressed the issues raised and the City's objection remains. The design provides a partial podium; however, in some locations, there is no podium to mitigate the scale of the building</p>

<p>and mass and wind mitigation strategies.</p> <p>Buildings without podiums run counter to the creation of consistent street wall character and is not in keeping with the buildings approved in the immediate Barangaroo South context.</p> <p>Despite the City's submissions to the Darling Harbour Live Plots, Lend Lease acquired development consent for sheer towers and even with footpath overhangs. Moreover, wind impacts are consistently downplayed in the Department's assessments.</p> <p>Podium forms should be introduced on each frontage of the towers.</p>	<p>building envelope as well as standards in relation to podium height, street wall establishment and accessibility of the public realm. Low-rise podiums are incorporated into each building, consistent with the Design Guidelines which seek to maximise solar access at the ground plane.</p>		<p>and wind impacts experienced in the adjacent public domain. Ineffective solutions such as tree planting have been offered (yet not co-ordinated with the Hickson Park design); however, these do not replace the role of a podium. The design could therefore better address the absence of a full podium with generous awnings over footpaths or similar.</p>
<p><u>Wind Effects</u></p> <p>There is a significant issue with the pedestrian wind environment created by these towers. The wind report, prepared by Windtech illustrates dense lines of trees that are positioned around the edges of each building. These trees are required to achieve a height of 7-10m, with a dense canopy of 3-6m wide.</p> <p>The following issues arise:</p>	<p>An addendum Wind Report has been provided, which determines that the proposed design of the towers minimises the impact of existing wind conditions and that the current design provides suitable wind amelioration to mitigate any adverse wind conditions and maximise public comfort at the ground plane. It is noted that the public domain works to be proposed under SSD 16_7944, including Hickson Park, will be completed prior to the occupation of any of the One Sydney Harbour buildings in accordance with Condition B12 of the Concept Plan (as modified) and that the wind mitigation provided by this future landscaping will</p>	<p>No</p>	<p>The wind impacts created by the proposal have been discussed above; however, of particular note, the Windtech diagram provided, shows locations where trees are required to reduce adverse wind effects. These requirements are not reflected in the architectural or landscape designs, either as tree planting or awnings. Therefore the proposed wind mitigation measures presented by Windtech have not been adopted by the applicant.</p> <p>The level 2 podium gardens are highly constrained. Overlooked by a 58 storey</p>

<p>- the landscape design report states that 'for technical reasons large tree planting is not possible above the floors below on podium level' (sic). The phrase is obviously a typing error, however, the true meaning is quite critical. If the 'technical reasons' prohibiting large tree planting apply to all large trees on podium, presumably this excludes large trees above the basement.</p> <p>- The location of the deep soil pockets is unknown, so there is a further lack of guarantee that the required trees would be planted in the required location. The SSD applications are lodged on the basis that the buildings and immediate surrounds sit on a basement that is shallow of the ground level.</p> <p>It is highly likely that the proposed tree locations shown in the wind report will not align with a well-considered park design. The trees are not placed with consideration to design constraints or opportunities, and the proposed species matches the street trees, thereby lacking diversity. Such matters of coordination should be resolved alongside the design for Hickson Park prior to lodgement of the SSDs.</p>	<p>ensure that wind mitigation is maximised at the ground plane.</p> <p>The size, location and quantity of trees proposed in Hickson Park will be assessed in detail under SSD 16_7944. This SSDA is expected to be lodged imminently, and as outlined above, has been the subject of pre-lodgement consultation with a range of stakeholders including Council. For absolute clarity, tree planting will be proposed above the Stage 1B basement.</p> <p>As outlined above, the addendum Wind Report of the covering RTS Report addresses wind mitigation measures. These measures can form conditions of consent which are enforceable and can only be modified formally by the consent authority.</p>		<p>tower, these podiums serve the dual purpose of wind mitigation and communal open space. No trees are proposed due to insufficient soil depth, and the design of the spaces consists solely of shrubs and lawn. There is no fixed seating or wind protection, and the spaces lack vertical elements of a human scale.</p> <p>In lieu of trees, an architectural solution such as generous awnings, which would also protect from the elements should be explored to address "down washed" winds. This would also improve the function and comfort of the communal gardens, and to provide a more human scale. Some fixed seating or seating walls should also be provided to ensure an inherent useability. Any structures should be designed as an integrated architectural element.</p> <p>The design of the 'Strada' is problematic, as it creates a wind tunnel effect, and therefore requires doors at either end (open only between 7am-11pm). This privatises the Strada, when in fact this area is public domain and should be freely accessible to the public (and appear as such to an uninformed pedestrian). Privatising the public domain is not supported as a solution.</p> <p>An alternative solution to the enclosed Strada that addresses wind impacts and provides a more inclusive public domain</p>
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<p>The wind impacts of the developments have not been adequately assessed. It has been the City's experience that where wind barriers/breaks/awnings have been conditioned by the Department or the PAC that these conditions are then deleted through modification owing to lack of coordination or feasibility at a later stage.</p>			<p>should be explored. For example, wind impacts can be mitigated with generous awnings, which also protect from inclement weather and encourage an active public domain. Increasing building separation may also need to be considered to reduce downwashed winds.</p>
<p><u>Canopy and Bridge</u></p> <p>The "Strada canopy" between buildings R4B and R4A effectively encloses and privatises the public domain between these buildings. This is contrary to the Concept Plan and not supported from an urban design perspective. It is not in the public interest to enclose and privatise this space.</p> <p>The link bridge between R4B and R4A is also not supported, irrespective of whether the Strada canopy is built or not. Upper level links are discouraged in the Sydney CBD. Instead, the City encourages pedestrians to traverse the streets at ground level, to enliven, activate and participate in city life. Little detail is provided relating to the Strada canopy and link bridge, by way</p>	<p>The area between R4A and R4B to be known as "The Strada" provides a direct public link between the public domain at Watermans Cove and Hickson Park. The Strada has been deliberately designed to ensure that it is able to provide a pleasant pedestrian environment at all times, taking into account variable weather conditions and the need to provide protection from wind, rain or harsh sunlight. Retail and restaurant tenancies along the Strada benefit from the ability to provide seating both within the podium and outdoors, encouraging visitors into the area and minimising any harsh demarcation between public and private land.</p> <p>To protect the amenity of this predominantly outdoor space all year round, the Strada incorporates a glazed covering as well as retractable doors to be used to mitigate inclement weather conditions. These components ensure that there will be a space that provides a high level of amenity to pedestrians and visitors to the area, regardless of weather conditions.</p>	<p>No</p>	<p>The Strada is to be enclosed further, with doors at either end to mitigate wind impacts; this further reinforces that this area is to be privatised, is not in the public interest and the City's objection remains.</p> <p>The City's objection to the link bridge remains, this is irrespective of whether the Strada canopy is built or not. Upper level links are discouraged in the CBD. Instead, the City encourages pedestrians to traverse the streets at ground level, to enliven, activate and participate in city life.</p> <p>It is also noted on the plans for Buildings R4A and R4B (2000, 2001 and 2002 rev 18) that the Strada canopy, Strada doors and the link bridge are only to be constructed if both building R4A and R4B are constructed; and that if the canopy is not constructed an awning will be provided and if the bridge is not constructed the façade will be continued. This gives no certainty to what</p>

<p>of architectural design, materials and finishes.</p> <p>It is recommended that the design be amended to remove the canopy and overbridge link and the creation of public open space between R4A and R4B.</p> <p>Awnings for pedestrian protection should be installed rather than a canopy and overbridge.</p>	<p>It must be noted that the Barangaroo South Built Form and Urban Design Controls approved under Concept Plan Mod 8, designate this pedestrian link as secondary. Contrary to Council's comments, the Concept Plan (as modified) does not prohibit the provision of a canopy or link bridge between Buildings R4A and R4B.</p>		<p>is proposed and therefore the solution to the wind provided by the applicant is not valid.</p>
<p><u>Non Compliance with SEPP 65</u></p> <p>The design of the apartments would appear to ignore the Apartment Design Guideline (ADG). There are non-compliances in relation to basic apartment amenity criteria that are not warranted.</p> <p>The apartment yield is excessive and non-compliances should be excised from the proposals.</p>	<p>A detailed assessment against the ADG has been provided. The assessment provided in the RTS determines that the proposed development is acceptable and when considered holistically the proposals provide a high level of amenity consistent with the objectives of the ADG.</p>	<p>No</p>	<p>The City's objection remains. The apartments are within new buildings and the requirements of the ADG should be achieved <i>at a minimum</i>. The non-compliances clearly demonstrate that the apartment yield is excessive.</p>
<p><u>Building separation</u></p> <p>The aims of the building separation sections are clearly written to achieve more than just visual privacy. Importantly for this proposal, they speak to outlook, visual and acoustic privacy and amenity.</p>	<p>The proposal is in accordance with the Concept Plan (as modified) and the Barangaroo South Built Form and Urban Design Controls. The proposal also achieves the objectives of the ADG by offsetting outlook and providing materiality/screening to sensitive areas where privacy issues may have occurred. The opaque façade provided to some apartments in Building R4B will not adversely</p>	<p>No</p>	<p>The City's previous comments are reiterated and concerns have not been addressed.</p> <p>The aims of 2F - Building separation in the ADG are:</p> <ul style="list-style-type: none"> ensure that new development is scaled to support the desired future character with appropriate massing and spaces between buildings ;

<p>The proposed minimum separation distance between R4A and R4B is 13m, which is 11m less than is required 24m separation in the ADG. Design 'measures' such as opaque screening have been notated in order satisfy the ADG design guidance in section 3F; however, the opaque facade to the R4B living rooms is likely to diminish the outlook amenity of all apartments in this location up the tower if it to be effective in providing privacy, from Level 1 to 58.</p> <p>The appearance of the 'opaque façade' and 'opaque privacy screen' and their effectiveness are unknown and unable to be assessed as details have not been provided. With so little information, the City and others are unable to assess whether the Section 3F Design Guidance in the ADG has been satisfied.</p> <p>Stakeholders can; however, determine that Section 2F of the ADG has not been satisfied, nor have the aims been achieved.</p> <p>It is recommended that the design be amended to ensure no habitable rooms or balconies are located facing one another between R4A and R4B and that buildings meet minimum separation distances.</p>	<p>diminish outlook as residents will still be able to obtain outlook to other directions.</p> <p>These are detailed design features which will be confirmed in greater detail during the Construction Certificate process, as is standard practice.</p> <p>As outlined above, the proposed development is in accordance with the Concept Plan (as modified) and the Barangaroo South Built Form and Urban Design Controls. The proposal also achieves the objectives of the ADG, therefore is acceptable.</p> <p>Detailed drawings of windows and materials at 1:50 scale will be prepared prior to the commencement of construction.</p>	<ul style="list-style-type: none"> • assist in providing residential amenity including visual and acoustic privacy, natural ventilation, sunlight and daylight access and outlook; • provide suitable areas for communal open spaces, deep soil zones and landscaping. <p>The 2F separation aims are clearly written to achieve more than just visual privacy. Importantly for this proposal, they speak to outlook, visual and acoustic privacy and amenity.</p> <p>The minimum separation distance between R4A and R4B is 12m, which is <u>12m less</u> than is required for the 24m separation in the ADG. Design 'measures' such as opaque screening have been notated in order satisfy the ADG design guidance in section 3F; however, the opaque facade to the R4B living room is likely to diminish the outlook amenity of all apartments in this location up the tower if it is to be effective in providing privacy, from levels 01 to 58.</p> <p>However the appearance of the 'opaque façade' and 'opaque privacy screen' and their effectiveness are unknown and unable to be assessed as details have not been provided. With so little information, we are unable to assess whether the section 3F Design Guidance in the ADG has been satisfied. We can; however, determine that Section 2F of the ADG has</p>
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<p>Detailed drawings of windows and materials should also be provided at a 1:50 scale.</p>			<p>not been satisfied, nor have the aims been achieved.</p> <p>The City recommends that the design be amended to:</p> <ul style="list-style-type: none"> - ensure <u>no</u> habitable rooms or balconies are located facing one another between R4A and R4B if the building separation is to remain unchanged; and - remove the Strada canopy and level 1 link, reinstating the public open space between R4A and R4B.
<p><u>Solar access and natural cross ventilation:</u></p> <ul style="list-style-type: none"> - all three towers do not comply with the minimum threshold for solar access; - Building R4B has an excessive amount of apartments that receive no direct sunlight in midwinter. Solar diagrams in plan and elevation should be submitted with the application indicating compliance with the ADG controls; - all three towers are said to comply with natural cross ventilation. However, the methodology on which this is based appears not to be correct. The Applicant should lodge diagrams displaying how they 	<p>Solar access modelling has been undertaken to demonstrate the level of solar access achieved for all apartments. As identified in this modelling, the following percentage of solar access is provided to each building between 9am and 3pm:</p> <ul style="list-style-type: none"> - R4A – 65% - R4B – 64% - R5 – 70% <p>Cumulatively, 66% of apartments receive two hours of solar access across the three buildings. As described in the covering Response to Submissions report, solar access modelling was undertaken during an extended timeframe between 9am and 4.45pm, which resulted in the following level of solar access:</p> <ul style="list-style-type: none"> - R4A – 96% - R4B – 80% - R5 – 70% 		<p>Minimal modifications have been made and the City’s previous comments remain.</p> <p>The applicant has stated that for R4A 65% and for R4A 64% of apartments receive the required amount (2 hours) of solar access between 9am and 3pm in midwinter.</p> <p>Objective 4A-1 requires at least 70% receive 2 hours in this timeframe. An extended time scenario as proposed by the applicant to 4.45pm is not acceptable and is not envisioned by the ADG. As these are new buildings which face North it is unacceptable that the minimum Standard has not been achieved.</p> <p>The proposal uses plenums to include some single aspect apartments as naturally cross ventilated. The ADG provides solutions to increase <i>natural ventilation</i> to single aspect</p>

<p>believe natural cross ventilation is achieved.</p> <p>No reliance can be placed on an alternative, non-compliant, measurement of solar access between the hours of 9am and 5pm as suggested in the SSD applications – these are the not the Planning Controls.</p> <p>Reliable decisions must be made on the consistent application of planning instruments and policies. Community confidence in the planning system would be further significantly eroded if new State Government Planning Controls (SEPP 65 and the ADG) are significantly eroded creating a highly undesirable planning precedent.</p> <p>In relation to natural light and air, all three proposed towers have rooms indicated as ‘studies’ that have no windows. This is no longer permitted since the Residential Flat Design Code was replaced. Studies are not to borrow light and air from other rooms as now required by the ADG.</p> <p>As the ADG is a recent initiative of the NSW Department of Planning and Environment, it is incumbent on the Department to apply it rigorously and consistently.</p>	<p>All studies are provided with a line of sight to a window.</p>	<p>apartments, such as the use of plenums and light wells; however, it states that these are “generally not suitable for cross ventilation” (Objective 4B-2, Design Guidance). In this instance, as the ducts are shared, vertical and mechanically assisted, we would <u>not</u> consider this solution to offer ‘natural cross ventilation’.</p> <p>Both building R4A and R4B, each only have 50% cross ventilated in the first nine levels. This is not acceptable</p> <p>While it is noted that the ‘studies’ have been reduced in size, they still do not have a window visible ‘in any point of a habitable room’, as required by the Objective 4D-1 of the ADG.</p> <p>The applicant has stated that 62 one bedroom apartments in Building R4A and 62 one bedroom apartments in R4BN have a minimum width of 3.4m for living areas; however, 4.6m is required by Objective 4D-3 of the ADG. This is a new building and therefore the minimum dimensions should be met to ensure appropriate amenity for residents.</p> <p>The 4E-1 of the ADG requires that three bedroom apartments provide 12m² of private open space. The proposal provides 50 apartments in R4A and 53 in R4B, which only provide 11m². While this is not a</p>
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<p>The proposed non-compliances add to a view held by the City that the residential yield being pursued is excessive and the apartments must be redesigned so that they comply with the ADG.</p>			<p>significant departure, this is a new building and the requirements should be met.</p> <p>The City reiterates that the above non-compliances lend to the argument that the residential yield being pursued is excessive and the apartments must be redesigned so that they comply with the ADG and should not be provided at the expense of future residents' amenity.</p>
<p>Transport and Access</p>			
<p><u>Car Parking Supply</u></p> <p>The City contends that the amount of car parking being pursued is excessive and unwarranted. The number of car parking spaces proposed should be restricted to the rates within the Sydney Local Environmental Plan 2012.</p> <p>The City calculates that, cumulatively, the application of the LEP 2012 would generate 488 car parking spaces for all three towers whereas there are 881 spaces proposed. Such significantly high car parking dependence ignores the sites ability to access excellent existing and proposed public transport options and will lead to higher than necessary road congestion on the local and district road network.</p>	<p>The provision of car parking has been provided in accordance with the rates set in the approved Concept Plan (as modified). These rates were derived from the Sydney LEP 2005, which was in force at the time of the Concept Plan approval.</p> <p>A total of 795 car parking spaces are proposed, as shown in the basement car park plan. As outlined above, the provision of car parking is completely in accordance with the rates set under the Concept Plan (as modified).</p> <p>The Transport Management and Accessibility Plan (TMAP) submitted with the original SSDAs found that the transport network in the Barangaroo precinct can adequately accommodate increased traffic generation as a result of the proposed development. This is consistent with the findings of the traffic modelling undertaken for modification to the Barangaroo Concept Plan (MOD 8).</p>	<p>No</p>	<p>The amended proposal reduces a total of 86 resident car parking spaces from original submission (from 881 to 795). This is still excessive, particularly compared to the 469 car parking spaces that the Sydney LEP 2012 would permit.</p> <p>The Sydney LEP 2012 provides for a maximum for all three buildings (R4A, R4B & R5 with the mix of 249 x 1-bedroom, 310 x 2-bedroom and 177 x 3-bedroom) is 469 resident parking spaces.</p> <p>Considering the R4A building only with the Sydney LEP 2012 maximum car parking rate is 213. However, 377 car parking spaces are proposed (13 less from original submission) for 327 residential units.</p> <p>Considering the R4B building only with the Sydney LEP 2012 maximum car parking rate is 178. However, 300 car parking spaces are</p>

<p>Sustainable and active transport should be encouraged over high private vehicle use.</p>	<p>Throughout the development of Barangaroo South, there has been a strong commitment to encouraging sustainable and active transport. A Travel Demand Management Plan will be implemented to reduce trips made by vehicle and to encourage the use of alternative and sustainable transport modes, such as cycling, walking or public transport.</p> <p>In particular relation to the development of the residential buildings of One Sydney Harbour, bicycle parking for residents is provided in the basement, whilst visitor parking will be provided with the future Stage 1B Public Domain works. Future residents and users of the site also benefit from access to a range of public transport options, including train, ferry and bus. It is noted that development at Barangaroo has triggered the significant upgrade of access to public transport at the western edge of the CBD, with Wynyard Walk providing a dedicated pedestrian link to Wynyard Station and an additional ferry wharf under construction. The area will also benefit from the provision of a metro station upon the completion of the CBD Metro.</p> <p>The applicant also notes within their response to agency submissions regarding car share, that given the high level of public transport available to the site, and the presence of surrounding car share spaces, the decision to not provide any car share spaces within the Stage 1B basement is considered acceptable. This approach is consistent with the Stage 1A basement at Barangaroo.</p>	<p>proposed (20 less from original submission) for 297 residential units.</p> <p>The City therefore considers that the excessiveness of car parking supply as previously raised has not been addressed by the amendment and the applicant themselves state that there is a 'high level' of public transport available to the site. Therefore, the numbers proposed are not required.</p> <p>In addition, the submitted parking layout does not show any accessible car parking spaces and therefore it does not comply with Sydney DCP 2012 clause 7.8.5 – accessible parking space for adaptable units.</p> <p>Tandem parking spaces also need to comply with the Sydney DCP 2012 clause 3.11.12 and the spaces will have to be attached to the same strata title in the residential building.</p> <p>The Sydney DCP 2012 requires a minimum of 4 car share parking spaces for building 4RA and again for 4RB. No car share parking is proposed. The applicant states that there is no need for car share, as 'given the high level of public transport available to the site'.</p> <p>The City suggests that because of the 'high level' of public transport available to the site as stated by the applicant, on-site</p>
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<p><u>Traffic Generation and Intersection Performance</u></p> <p>The traffic modelling analysis in the submitted TMAP identifies a number of the intersections currently operating near or at capacity resulting in significant delays in the adjacent road network. The report claims that the SSDs will contribute modest traffic impacts to the road network. The issue of queue length at the northern approach of the Hickson Road/Sussex Street intersection is identified in the TMAP.</p> <p>The traffic reports by Arup suggest that the proposed traffic signals at the</p>	<p>The rate of 0.19 for traffic generation per dwelling during the AM peak period outlined in the RMS <i>Guide to traffic generating development</i> ('RMS Guide') is an average rate based on surveys of a number of different sites across Sydney. It is noted that the rate of traffic generation across the sites surveyed ranges between 0.07 and 0.32, which reflects the varying geography and accessibility of each site.</p> <p>As recommended by Transport for NSW and RMS, a survey was carried out to obtain the traffic generation rate which represents the likely behaviour and activity of future residents and users of the site. This survey studied sites with similar characteristics in the vicinity of Barangaroo. Based on these surveys, a rate of 0.14 trips per dwelling was adopted. This site specific rate is considered</p>	<p>Partial</p>	<p>Modelling is done based on a set of assumptions and it is hard to equate those assumptions with the real world situation and, most importantly, there are no guarantees that those assumptions hold true for the existing and/or the future context. The modelling exercise is a way to assess the possible consequences; however, every modelling professional recognise that it is really difficult, if not impossible, to predict the future scenario accurately. City's response in this regard, is that that the modelling predictions will be observed and will be referenced in future.</p>

<p>Hickson Road/Watermans Quay intersection will manage traffic circulation and the efficiency of the development traffic. Given the single access off Watermans Quay and also from the Stage 1A development, the City holds concerns about the performance of this intersection and probable vehicle queue on Watermans Quay. There is a total of around 893 vehicle spaces (including 4 large trucks, 5 service vehicles, 3 retail vehicles and 881 resident vehicles) seeking to use this one access.</p> <p>It is forecasted that traffic will spill back to the Hickson Road/Watermans Quay intersection. As raised earlier, it may affect the entry and exit vehicle queues from the basement car parking. The TMAP also recognises that significant vehicle queueing currently occurs in the southbound direction on Sussex Street in the PM peak hours as a result of more congested traffic operation condition in the vicinity of the cross traffic movement at the King Street and Market Street intersection.</p> <p>Given the significant number of car parking spaces in 4 levels of basement</p>	<p>appropriate as it reflects the site's location within the CBD and with good access to public transport. It is noted that some of the sites surveyed by RMS to generate the recommended rate for high-density residential flat buildings are outside out of the CBD and are disadvantaged by reduced access to public transport.</p> <p>As noted in the report, construction activity in the PM peak generated by the site is expected to be minimal. Surveys undertaken found that only 2% of daily construction vehicle activity occurs during the PM peak hour. It is also noted that previous applications for development at Barangaroo have not included construction stage traffic modelling for the PM peak hour.</p> <p>The intersection of Hickson Road and Watermans Quay will operate as the primary access into the site. Traffic modelling has been undertaken to confirm that the proposed design will have adequate capacity to accommodate the expected level of traffic. The traffic modelling undertaken forecasts an average queue length of between 3 and 4 vehicles on Watermans Quay during peak periods. As a result of this, it is considered that the intersection will operate at an acceptable level of service.</p> <p>It is noted that the site can also be accessed from Barangaroo Avenue, providing an alternative access route for future residents and delivery vehicles.</p> <p>As described above, traffic modelling demonstrates that the average queue length at Watermans Quay</p>		
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<p>concentrating to a single access point, the traffic impacts from the proposal should be thoroughly tested.</p>	<p>will be between 3 and 4 vehicles during peak periods. Due to the small amount of queuing, this would not affect vehicles accessing the basement car park.</p> <p>In relation to queuing on Sussex Street during the PM peak hour, it is noted that this predominantly affects traffic travelling southbound. The majority of residents seeking to access the site by vehicle at this time would likely be travelling northbound along Hickson Road to turn left into Watermans Quay and therefore are considered unlikely to be significantly impacted by queuing on Sussex Street.</p> <p>Traffic modelling has considered the cumulative impacts of the Barangaroo precinct in addition to existing development in the area. A network traffic model was developed using LinSig traffic modelling software, which comprehensively considered the impacts of the proposal across the surrounding road network.</p>		
<p><u>Loading Docks</u></p> <p>For the entire retail and residential floor space in the three towers, 5 service spaces are proposed. Adopting the rates of the Sydney DCP 2012, Building R4A would require 5 spaces, Building R4B would require 4 spaces and Building R5 would require 5 spaces.</p> <p>It should be noted that the basements and loading docks should be designed for Council's waste service trucks to</p>	<p>As the basement is shared between the three proposed buildings, the number of service vehicle spaces has been consolidated to account for the efficiency achieved by having a single basement between all buildings. The proposed number of service vehicle spaces has also accounted for the likely demand for service vehicle parking.</p> <p>Waste deliveries are expected once daily during out-of-hours periods, with other deliveries anticipated to be approximately twice during the day. As a result of this anticipated demand, the amount of service vehicle parking provided is appropriate. The</p>	<p>Partial</p>	<p>It should be noted that the proposed loading dock must not be reserved for the supermarket, or any other single tenancy, and must be available to all users within the site. A management plan, loading dock manager, loading schedule or similar must be prepared so all users are aware of their entitlements and to avoid too many deliveries being at the dock at any one time.</p> <p>Notwithstanding the above, no swept path analysis has been submitted to</p>

<p>service the buildings. Trucks should be able to enter and leave the building and basement level in forward direction and should accommodate a 9.25 metre rigid vehicle.</p>	<p>loading dock has been deliberately designed to accommodate a 9.25 metre rigid vehicle that can enter and exit the site in a forward direction.</p>		<p>demonstrate that a 9.25m Council garbage vehicle could be parked in these 4 loading bays. It is therefore recommended that further swept path analysis should be carried out to demonstrate that long vehicles can be parked in all the designated 4 spaces and egress in a forward direction.</p> <p>In addition, for Council waste collection vehicle, a minimum vertical clearance of 4m, a minimum turning circle radius of 10.5m and a minimum driveway width of 3.6m is required. It should be noted that if medium rigid vehicle are considered for servicing, then a minimum 4.5metre vertical clearance should be provided.</p> <p>Also, collection vehicles are to be able to enter and exit the premises in a forward direction. Where a vehicle turntable is necessary to meet this requirement, it is to have a capacity of 30 tonnes.</p>
<p><u>Bicycle Parking and End of Trip Facilities</u></p> <p>The submitted architectural drawings do not show any bicycle parking spaces and end of trip (locker, changing room, shower, etc.) facilities. Bicycle and EoT facilities are also not discussed in the submitted TMAP. The SEE states that the apartment storage will be used for</p>	<p>Residents are provided with bicycle storage opportunities within individual storage cages in the shared basement. This approach is consistent with the previous residential buildings in Barangaroo South, as well as the common practice of residential buildings within the City of Sydney Local Government Area. End-of-trip facilities for non-residential uses are provided in Basement Level B0.</p>	<p>Partial</p>	<p>The Sydney DCP 2012 requires that for resident bicycle spaces (Class A and or Class B: AS 2890.3:2015 Parking Facilities Part 3: Bicycle Parking Facilities) that 327 are required for R4A and 297 are required for 4RB.</p> <p>For “C” class resident visitor bicycle parking space within the site 30 each are required for 4RA and 4RB.</p>

<p>resident bike parking but this is not documented elsewhere.</p> <p>Residential bike parking should be Class 2 facilities (known as Class B in the latest Australian Standards, consolidated in one area, located at ground floor or first basement level and easily located and identified.</p> <p>Retail bike parking should be Class 2 facilities, separated from residential bike parking but located with similar amenity as residential facilities – at ground floor or first basement level, easily located and identified.</p> <p>Visitor bike parking should be Class 3 facilities, provided in an on-grade location near a major public entrance to the buildings and signposted.</p>		<p>For the retail component, for 4RA having 432m² retail component, 2 staff/employee and for 4RB for 294m², 1 staff/employee (class B: AS 2890.3:2015) and for 4RA should have 5 and for 4RB should have 4 class C retail visitor bicycle parking space should be provided.</p> <p>A total of 7 lockers for 4RA and 5 lockers for 4RB and 1 unisex shower and change cubicle should be provided for non-residential bicycle users.</p> <p>It is noted that basement storage areas on title and large enough to accommodate a bicycle in accordance with AS2890.3 can be counted as a bicycle parking space. However, as storage cases are not placed in the basement plan dimensions cannot be verified, although they are provided in the Design Report.</p> <p>The City's preference is to provide a combination of storage and a consolidated "B" class bicycle parking space on ground level or upper basement level for easy access and identification.</p> <p>No visitor bicycle parking is provided as part of this application, which is not acceptable.</p>
<p><u>Construction Traffic Management Plan</u></p>		<p>The preparation of a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with the City and</p>

			<p>the CBD Coordination Office within TfNSW and Sydney Light Rail Team, is crucial to addressing efficient functioning of business in the area surrounding the site. The cumulative increase in construction vehicle movement from these projects could have the potential to impact on general traffic and bus operations in the CBD, as well as pedestrians and cyclists particularly during commuter peak periods.</p>
Public Domain			
<p>Building R4A fronts the future alignment of Watermans Quay to the south and the future Barangaroo Avenue to the west. Watermans Quay will connect to Hickson Road in the east, and Barangaroo Avenue in the west, which connects through to the King Street Wharf precinct to the south.</p> <p>The application seeks approval for interim and permanent landscaping works, including pedestrian paving immediately surrounding the buildings (including paving of the pedestrian plaza, referred to as the 'Strada') and a podium garden.</p> <p>The public domain has a dominant frontage along Barangaroo Avenue</p>	<p>This has been addressed above.</p>	<p>No</p>	<p>Design drawings indicate that most of the available space in the Strada and along Barangaroo Avenue is proposed to be used for outdoor dining at ground level, leading to concerns for constricted pedestrian circulation given the number of proposed residents. This will place pressure on the adjacent park and place it at risk of overuse/ encroachment.</p> <p>The Applicant has not addressed this at all in their response. Images indicate a hard transition between the space at the bottom of the buildings and the Park. Concern is still raised about the transition between the Strada and Hickson Park with long term maintenance issues a high risk if the transition is not addressed at this stage with at least concept designs.</p>

<p>and Building R4A shares a joint plaza (the Strada) with the adjacent Building R4B. It is noted that the Strada is proposed to be enclosed with a canopy. The reason for the canopy is not clear, elsewhere in Barangaroo they have been constructed to deal with wind speeds off the building above.</p> <p>The reason for the canopy over the Strada needs to be made clear. It appears that the space is to be allocated for retail purposes rather than public domain usage.</p> <p>Design drawings indicate that most of the available space in the Strada and along Barangaroo Avenue is proposed to be used for outdoor dining at ground level, leading to concerns for constricted pedestrian circulation given the number of proposed residents. This will place pressure on the adjacent park and place it at risk of overuse and encroachment.</p> <p>Future public transport connections are proposed in the form of the Metro, which will be constructed on Hickson Road not far north from the developments. No pedestrian connection has been proposed across the park which is likely to bear the brunt of desire lines being worn into</p>		<p>Future public transport connections are proposed in the form of the Metro, which will be constructed on Hickson Road, not far from these developments. No pedestrian connection has been proposed across the park which is likely to bear the brunt of desire lines being worn into the park. It is suggested that a design for the park be prepared in conjunction with this application to make clear the use and circulation intentions.</p> <p>The reason for the canopy over the Strada needs to be made clear. It appears that the space is to be dedicated for retail purposes rather than public domain usage.</p> <p>Additional design detail has been provided on the Strada; however, the enclosure of this line, one of the public entry points to the new park, is not supported in principle. The arguments provided for enclosing the Strada with doors and a roof relate to the poor quality wind environment generated by the close proximity of the buildings R4A and R4B. Council's previous submission noted that the 13m building separation between R4A and R4B is non-compliant, and it now is evident that the non-compliant building separation will generate severe negative wind impacts to the ground plane, limiting the potential for an active public domain.</p>
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<p>the park finishes. It is essential that a design for the park be prepared in conjunction with this application to make clear the use and circulation intentions.</p>			<p>Privatising the public domain is not supported as a solution. Wind impacts can be mitigated through building separation, greater podium setbacks, and generous awnings which also protect from inclement weather and encourage an active public domain.</p> <p>Closing it off at either end will result in an artificial environment and will be impermeable and create pedestrian mobility issues. A better design is required.</p>
<p>Health Issues</p>			
<p><u>Mechanical Ventilation</u></p> <p>Retail fitouts for the ground floor should be subject to separate approvals once tenancies have been confirmed. With the potential for food stores to open on the ground floor, there should be no horizontal discharge for mechanical ventilation servicing food outlets. It is preferred that there is sufficient capacity for all tenancies mechanical ventilation systems to vent to the roof level to remove odour/smoke complaint from resident above.</p> <p>Additional, enhanced filtration must be available for proposed solid fuel cooking outlets.</p>	<p>Noted. Fitout and use of the ground level retail tenancies will be subject to future separate approvals. Details of mechanical ventilation will be provided with these applications.</p>	<p>Partial</p>	<p>Lend Leases submission has noted the City's concerns, but will not address noise specific issues until the detailed design stage. If these tenancies are to incorporate mechanical ventilation for cooking this needs to be designed into the building now.</p>

<p><u>Construction Noise</u></p> <p>Exceedances of construction noise criteria are predicted at three of the identified receivers. These exceedances highlight the importance of appropriate management of the construction in terms of community consultation and providing respite periods from intrusive works throughout the day. The most prominent being control of noise at the source and implementation of alternative work methodologies.</p>	<p>Throughout construction of the precinct, Lendlease will adhere to the Noise and Vibration Management Sub-Plan Barangaroo South. This Sub-Plan includes a range of mitigation measures to reduce the impacts of construction noise and is continually updated to reflect the progress of the project and to respond to noise impacts as they occur.</p>	<p>Partial</p>	
<p><u>Operational Noise – Retail Tenancies</u></p> <p>At this stage in the development process the Applicant must make strategic decisions on the potential cumulative noise impact on residents from commercial properties (i.e. restaurants at the base of the buildings). The first floor slabs should be at least 300mm thick to minimise noise transfer from commercial tenancies. It is recommended that the majority of patrons are housed internally on the ground floor tenancies with a manageable capacity of external patrons especially for late night trading premises.</p> <p>A noise masterplan should be developed for the new precinct as per</p>	<p>This detailed design element and restriction on outdoor dining will be further considered during the future separate approval processes for the ground level non-residential tenancies.</p>	<p>Partial</p>	<p>It should be noted that if the noise issues are not addressed, as in the corresponding Barangaroo South Noise Masterplan, residential amenity may be adversely impacted.</p>

<p>the Barangaroo South Noise Masterplan with all tenancies given a maximum cumulative noise goal that each tenancy will contribute to, the traditional background +5dB approach is not appropriate in this instance as background creep will be of a particular issue as tenancies begin to operate.</p>			
<p><u>Noise impact on Child Care Centres</u></p> <p>The noise management level of 65dBA Leq 15min when outdoor play areas are in use is considered excessive particularly for childcare centres.</p> <p>The City recommends an operational noise level of 60dBA Leq 15min and a temporary noise management level of 65dBA Leq 15min while construction works are ongoing.</p> <p>The City believes this will provide a level of protection for the vulnerable children affected by noise. It is strongly recommended these outdoor areas are not utilised at all during noisy works if possible.</p> <p>The submitted acoustic report predicts exceedances of between 1-8dB of an already upper limit criteria. Additional noise mitigation measures</p>	<p>As noted above the Noise and Vibration Management Sub-Plan Barangaroo South will manage the impact of noise on surrounding sensitive receivers through the implementation of mitigation measures and an appropriate procedure to respond to noise complaints</p>	<p>Partial</p>	

<p>should be introduced to reduce the noise levels to an acceptable level.</p> <p>The noise from the R4A building will be below overall cumulative noise levels at the surrounding most affected receivers with the exception of residences on and around R8 residences where building R4A is closest. In this location noise from R4A will be of a similar magnitude to other construction noise sources.</p> <p>In the case of the internal areas of the Ku Lance Preschool, a relatively small exceedance of internal noise objectives by up to 1dBA is expected, if windows are open. This exceedance is considered acoustically insignificant. If noise levels are consider excessive by the operators, windows and doors can remain closed.</p>			
Public Safety Issues			
<p>The lack of information provided.</p> <p>Crime Prevention Through Environmental Design (CPTED) comments for each of the buildings is cursory. It is more generalised for each apartment and does not provide any detail on which crimes the design seeks to prevent.</p>	<p>A CPTED Report prepared by Harris Crime Prevention Services is provided.</p> <p>Following a review of reported crime in the area of Barangaroo and Millers Point based on publicly available data provided by the NSW Police Force and the NSW Bureau of Crime Statistics and Research (BOSCAR), the CPTED report finds that the following safety and security issues may take place in the area surrounding the proposed development:</p>	No	<p>The response matrix details in final response to agency submissions details the Strada link as being “<i>deliberately designed to provide a pleasant pedestrian environment at all times</i>” despite stating in the RTS that it will operate only between 7am and 11pm. However, the City believes that due to demand of the use of the Strada, it will not be able to be closed off as</p>

<p>The proposal that the through site link between buildings R4A and R4B between Hickson Park and Waterman’s Cove “may be closed from 11pm or midnight” for safety and security reasons is not supported as there is no evidence provided, including any consultation with Sydney City Police, about what specific safety and security issues are being referred to.</p> <p>Detail outlining the type and location of proposed mail boxes to guard against mail box theft should be provided.</p>	<ul style="list-style-type: none"> - Anti-social, intimidating and/or criminal behaviour towards individuals or groups. - Internal or external criminal targeting of each tower and associated residential and/or retail property. - Unauthorised access to buildings. - Theft. - Assault. <p>Whilst the risk of these safety threats occurring is considered to be low to medium, it is found that limiting the hours that the Strada will be open will reduce the risk of anti-social or other criminal behaviour occurring in this area during night time hours when opportunities for passive surveillance are reduced.</p> <p>The CPTED Report outlines detailed security measures that will be implemented throughout the One Sydney Harbour precinct and includes recommendations for the preparations of a site-wide Crime Prevention Through Environmental Design Management Plan (CPTED) by the Barangaroo Delivery Authority.</p> <p>Mail boxes will be located in a dedicated room that will be secured in accordance with the overall secure access strategy for each building. Further details will be provided during the Construction Certificate phase, as is standard practice.</p>		<p>it provides an important link between Waterman’s Cove and Hickson Park.</p> <p>The applicant states that “<i>a dedicated room in accordance with the overall secure access strategy for each building will be provided at the Construction Certificate phase - as is standard practice</i>”. The City refutes this, as mailbox design and location information is rarely provided at any stage of the application process. Therefore, the applicant needs to provide this information now, in order to make an accurate assessment.</p>
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BASIX			
	<p>Building R4B will be designed and constructed to achieve 5 Star Green Star – Multi Unit Residential v1 Tool Design and As-Built ratings.</p>	<p>No</p>	<p><u>Plan Marking in accordance with BASIX policy</u></p> <p>BASIX policy clearly requires plans must be marked with those BASIX Commitments indicated in the DA/CC/ Certifier Check columns of BASIX Certificates. While sheet BR4A _ASD_ PA1_0005 THERMAL PERFORMANCE ASSESSMENT indicates thermal comfort design (and the City Notes that NatHERS accredited assessor stamped plans required at DA stage are not provided at the DPE on-line portal) there appears to be no other plan marking in line with BASIX requirements (other than reference to location (but not space allocation) for p.v. panels on the roof top plan. The Department needs to enforce its own policy by requiring clear plan-marking of BASIX items</p> <p><u>NCC Section J – Design for Energy Efficiency</u></p> <p>Noting Barangaroo’s commitment to “<i>be the first precinct of its size in the world and certainly the first CBD precinct in Australia, to be climate positive</i>”, the City recommends the Department seeks clearer commitments regarding high performance fit out of all retail and other NCC Section J affected spaces that are not controlled by BASIX commitments (e.g .retail, non-</p>

			<p>residential lifts, lobbies, commercial car-parking space allocation).</p> <p>The McKenzie Group's BCA reports for each building are light in detail. This essentially means that the information needed to determine that the strongest level of commitment to deliver highly energy efficient buildings at Barangaroo is deferred to CC stage and the consent authority has no line of sight to see whether all aspects of the design and technology fit-out of commercial spaces affected by Section J have actually been designed to exceed the modest EE performance standards of the NCC.</p> <p>What is needed at DA stage is a succinct summary of how the non-BASIX affected parts of the buildings are demonstrably going to exceed BCA/NCC . A table of design commitments would be acceptable.</p>
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