

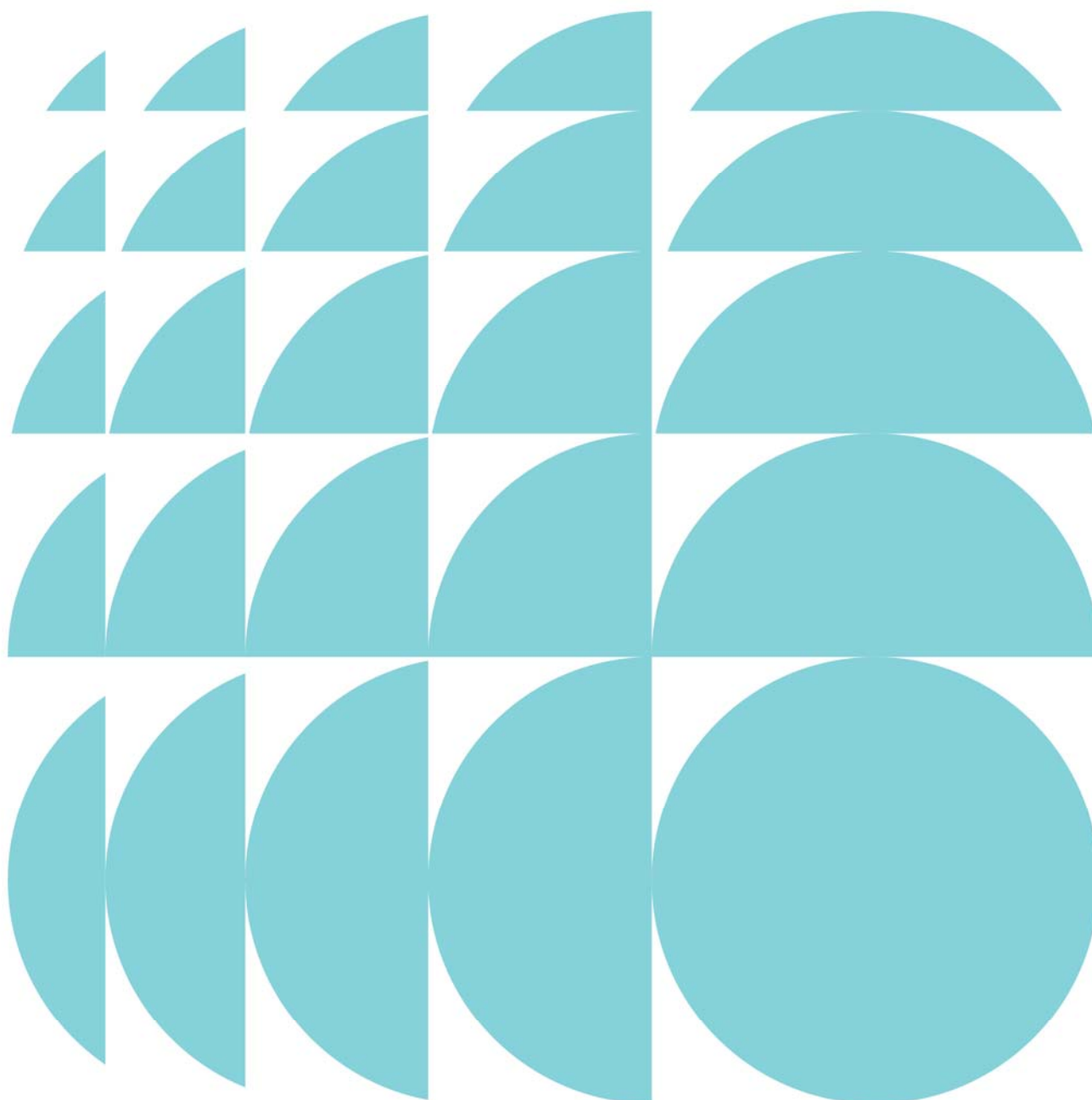
Response to Submissions

Barangaroo South
Concept Plan MP06_0162 Modification 10

Submitted to Department of Planning, Industry
and Environment

On behalf of Infrastructure NSW

17 July 2020 | 2190714



1.0 Introduction

An Environmental Assessment Report (EAR) for Modification 10 (MOD 10) to the Barangaroo Concept Plan (MP06_0162) was publicly exhibited for a period of 14 days inclusive between 29 April 2020 and 12 May 2020. The changes proposed to the Concept Plan are as follows:

- Increase the Concept Plan maximum GFA for Block 4A from 86,979 sqm to 92,629 sqm.
- Increase the Concept Plan maximum GFA for Block 4B from 19,158 sqm to 21,508 sqm.
- Increase the Concept Plan residential maximum GFA of Block 4A from 86,166 sqm to 91,816 sqm.
- Increase the Concept Plan residential maximum GFA of Block 4B from 18,287 sqm to 20,637 sqm.
- Increase the Concept Plan maximum height on the Building Envelope Plan for R4B from RL 210 to RL 235 (+ 25 m).
- Introduce an additional 3m setback to the south-western corner of R4B above RL 209 on the Building Envelope Plan.
- Align the timeframe for the delivery of Key Worker Housing (KWH) such that the total 3% of KWH (both onsite (in Barangaroo South) and offsite) will be completed by the later of the practical completion of Building R5 or the last occupation certificate of Building R5.
- Amend the State Environmental Planning Policy (State Significant Precincts) 2005 as follows:
 - Block 4A maximum GFA from 94,740 sqm to 100,390 sqm; and
 - Block 4B maximum GFA from 20,970 sqm to 23,320 sqm.

In total, twelve (12) submissions were received in response to the public exhibition of the EAR. This included submissions made by government agencies and authorities and the general public, as follows:

- Government authorities and agencies – 8.
- Members of the public – 4.

Infrastructure NSW and its expert project team have considered all issues raised in the submissions made, pursuant to the requirements of the EP&A Act.

This report, prepared by Ethos Urban on behalf of Infrastructure NSW, provides a detailed response to all of the issues raised by the various government agencies and the general public. Whilst the submissions received from agencies have been addressed individually, the submissions made by the general public have been addressed on an issue by issue basis. This approach has been adopted to reflect that many of the submissions raised similar issues and concerns.

This Response to Submissions document is structured to first provide a summary overview of the key issues (within this Introduction section); followed by a detailed tabular response to each submission.

The Response to Submission document is supported by the following attachments:

- Statement of Heritage Impact prepared by TKD Architects (**Attachment A**).
- Response to Submissions Report prepared by Astrophysicist George Georgivits, UNSW Unisearch (**Attachment B**).
- Response to Agency Feedback prepared by JMT Consulting (**Attachment C**).
- Copy of Open Information Webinar Presentation (**Attachment D**).
- MOD 10 Concept Plan – Response to Submissions prepared by Virtual Ideas (**Attachment E**).

required for clear sky view access to be available for the Sydney Observatory, the increase in height of the R4B building will have an overall minor impact.

Public Benefit and Key Worker Housing

A number of submissions raised concerns around the provision of public benefit and key worker housing. A discussion of public benefit was outlined in Section 8.11 of the EAR submitted with the Modification Application. The Modification Application will continue to deliver the prescribed amount of Key Worker Housing under the Concept Approval (MOD 8) which requires that 3% of residential GFA must be delivered as Key Worker Housing, with 2.3% delivered on site and 0.7% delivered offsite. As this Modification Application is seeking to increase residential GFA, a proportional increase in Key Worker Housing in line with the approved percentage under the Concept Plan, will also be delivered.

Traffic and Parking

Several submissions raised the potential for increased traffic generation due to the increase in gross floor area (GFA). A Response to Submissions report has been prepared by traffic consultants JMT Consulting (**Attachment C**) to respond to these issues raised. This report notes that the increase in GFA will likely result in an additional 11 vehicle movements during peak times, which JMT Consulting concludes would not have a material impact on the CBD transport network and operations. Further to this, no change is sought to the approved car parking rates which are approved under the Concept Plan (MOD 8), and therefore additional vehicles will not be accommodated on site. Transport for NSW has not raised any issues in relation to the proposed parking rates or traffic generation.

The provision of additional public transport infrastructure in close proximity to Barangaroo will also provide alternatives to and limit private vehicle usage. Most notably, the future Sydney Metro will have a station at Barangaroo, and alongside existing and future bus and train capacity, this public transport will provide future residents of Barangaroo a connection to key employment centres in metropolitan Sydney.

Bulk and scale

Some submissions raised the potential for increased bulk and scale impacts associated with the proposed increased in GFA and height to the Building R4B Building Envelope Plan. The proposed modification will not give rise to excessive bulk or scale and will continue to achieve design excellence. The design principles of the current Rogers Stirk Harbour and Partners Master Plan for Barangaroo, which accompanied the Concept Plan (MOD 8), are still retained and in fact strengthened, in particular the 'Fan' design principle which is used to describe the distribution of built form and height across the site. This also enables the creation of view corridors from the east (refer to **Figure 2**). The proposed additional height will also support the design principle of 'framing Sydney' under the originally approved master plan. The achievement of this design principle will occur through more closely aligning the heights between Building R4A and Building R4B to create a paired composition of towers that enhances the Sydney skyline, and enhancing the dramatic spatial backdrop of the three residential towers (Buildings R4A, R4B and R5) to Hickson Park.

In addition, the tallest building of the three residential towers (being Building R4A) will not be altered by the Modification Application. The approved height of Building R5 will also remain unchanged. Therefore, the descending of the residential buildings from the Harbour will still be achieved, with both Buildings R4B and R5 to remain lower in height than the approved Building R4A. This height transition is a key feature of the current Rogers Stirk Harbour and Partners Master Plan.



Figure 2: The Fan Principle

Source: Rogers Stirk Harbour and Partners Master Plan (Concept Plan MOD 8)

Response to Submissions

Agency Submissions

Key Issue Raised	Response
Transport for NSW	
The proposal has raised no substantive issues. Based on the adopted traffic generation rates used in the transport assessment to support “MOD 8” the project increase in traffic is unlikely to result in a material impact on the surrounding transport network.	This has been noted.
The argument for the use of lower traffic generation rates used in the Supplementary TMAP supporting the subject proposal are not endorsed by TfNSW.	This has been noted. The existing public transport services considered as part of MOD 10 remain unchanged from those used in the assessment of MOD 8. In particular, the introduction of a Sydney Metro Station at Barangaroo will support additional residential demand. These public transport services will provide future residents of Barangaroo a connection to key employment centres in metropolitan Sydney such as Central Station, North Sydney, St Leonards and Macquarie Park. This is discussed further in the Traffic Report provided at Attachment C .
Sydney Metro	
Sydney Metro is of the view that the proposed development would have a negligible impact on the Sydney Metro City and Southwest rail corridor, should development consent be granted. This is because the modification is not seeking any additional excavation.	This has been noted. No further concurrence is needed as part of this Modification Application. Should any future Development Applications in response to Concept Plan (MOD 10) trigger a concurrence requirement, the normal concurrence processes would still continue to occur based on the impacts of the specific Development Application.
Sydney Metro also has no comments on the DA for the purpose of clauses 45 or 85 of the ISEPP.	
Civil Aviation Safety Authority	
CASA has reviewed the information provided and has no objection in principle to the proposed buildings and found no significant issues with the Aeronautical Impact Assessment.	This has been noted.
The proposed buildings and cranes will infringe the Obstacle Limitation Surface (Outer Horizontal Surface for Sydney Airport. Therefore, approvals under the Airports (Protection of Airspace) Regulations 1996 from the Department of Infrastructure, Transport, Regional Development and Communications will be required.	Future Development Applications in response to the proposed Concept Plan modification (MOD 10) (should consent be granted) will be prepared accordingly and provided to Sydney Airport for approval.

Key Issue Raised	Response
Heritage Council of NSW	
<p>The proposed SSD and SEPP amendment is not located within the curtilage of any State Heritage Register (SHR) items. However, it was noted in the response from Heritage NSW (formerly Office of Environment and Heritage – Heritage Division) for MP06_0162 MOD 8, that there are likely to be adverse visual impacts on the setting of a number of heritage items and conservation area (Millers Point and Dawes Point Precinct, The Rocks and Walsh Bay) that are adjacent or in-the-vicinity, which would be dominated by Barangaroo South tower blocks.</p>	<p>A Statement of Heritage Impact has been prepared by TKD (see Attachment A).</p> <p>This assessment concludes that:</p> <ul style="list-style-type: none"> • The additional height to Block 4A to the area of Building R4B will have no discernible increased impact on views from the adjacent heritage items and conservation areas including the Millers Point Conservation Area and Observatory Hill; and • The increase in GFA for Block 4A and Block 4B and will have no discernible increased impact on views from the adjacent heritage items and conservation areas including the Millers Point Conservation Area and Observatory Hill. <p>Therefore, the additional height and GFA associated with the Modification Application will not increase the visual impacts to the setting of both local and State heritage items and conservation areas, both adjacent to and in the vicinity of the site.</p>
National Trust	
<p>The National Trust will not be making a submission on the modification to the Barangaroo Concept Plan (MP06_0162 MOD 10).</p>	<p>This has been noted.</p>
Sydney Water	
<p>Potable water and wastewater servicing should be available to the property.</p>	<p>Potable and wastewater servicing will be provided to the site.</p>
<p>It is recommended that the proponent schedule a meeting with the Sydney, Growth and Development Account Management team at Sydney Water to discuss the servicing requirements for this development, in particular the safeguarding of existing assets.</p>	<p>This has been noted and will occur as part of the detailed design phase of the project.</p>

Key Issue Raised	Response
Museum of Applied Arts and Sciences (Sydney Observatory)	
<p>The increased height from RL 210 to RL 235 for Building R4B will potentially result in Sky View Loss. This would particularly affect viewing of the Jewel Box Cluster, the Southern Cross and The Pointers.</p>	<p>A Response to Submissions Report has been prepared by Dr George Georgevits, an Astrophysicist with the University of NSW Unisearch (see Attachment B). This report outlines that while the increase in height will result in some additional obstruction of the Jewel Box Cluster, the Southern Cross and the Pointers, this would only occur for part of an observing session for the observatory and therefore, the viewing schedule can be appropriately arranged by the observatory to ensure these sky objects are able to be viewed first prior to obstruction. (The Skyview Impact report submitted with the Modification Application at Appendix M of the Environmental Assessment Report identifies the observing obstruction to around the months of August, September and the beginning of October only).</p> <p>Further to this, there are a variety of other conditions of note that will also have an impact on the viewing of these sky objects, including the effect of light pollution from the entire CBD, Harbour Bridge, events such as Vivid and fireworks in Darling Harbour, smog and regular weather patterns that would already interfere with the viewing of these sky objects. Therefore, the obstruction of these objects would likely occur often due to these conditions. However, it is noted that Lendlease (the applicant for Development Application's in response to Concept Plan MOD 10) will continue to work with the Sydney Observatory during future detailed DA processes to ensure that the Observatory visitor experience is prioritised, where possible.</p>
<p>The potential light spill impact of this development on observations undertaken by the Observatory has been considered as part of the original Development Consents (SSD 6965 and SSD 6966) which required a Lighting and Light Spill Report to be prepared in consultation with Sydney Observatory, which included recommendations to mitigate any potential light spill. The increased height will potentially create a higher level of light spill impact, which will need to be mitigated through the same processes as those outlined in the original Light Spill report.</p>	<p>As per the Skyview Report prepared by Unisearch to support the Environmental Assessment Report (EAR), an allowance for light spill was included within the assessment of sky obstructed by the additional R4B height. Furthermore, Condition C13 will remain in the current Concept Plan Approval which requires a Light Spill assessment, prepared in Consultation with the Sydney Observatory, as part of the building Development Applications in response to Concept Plan (MOD 10). Accordingly, further detailed light spill assessment will continue to be suitably undertaken as per the requirements of the Concept Plan to ensure the impacts of light spill are mitigated in the detailed design.</p>

City of Sydney Submission

Key Issue Raised	Response
Planning Pathway / Substantially the same development	
<p>The development history of Barangaroo South has been a constant enlargement of building density, height and bulk, with the current and proposed quantum and form of development unrecognisable from the initial concept approval. The original approval in 2007 accommodated 388,300sqm of GFA, whereas this modification will result in 602,354sqm of GFA, a 55% increase across all the modifications to date.</p>	<p>The proposed modifications are considered to be appropriate within the surrounding context and will continue to embody the established principles outlined in the Rogers Stirk Harbour and Partners Master Plan that accompanied the current Concept Approval (MOD 8). In particular, the 'Fan' design principle, which is used to describe the siting and orientation of buildings and the ascendance of building heights from south to north. This core principle has also sought to create view corridors which will not be impacted by the proposed modification.</p>
<p>The fundamental fault in Section 3BA(5) of the Savings and Transitional Regulation is the assessment need only to consider the most recent Concept Plan (Mod 8), not the original concept plan. Notwithstanding the small increase in GFA relative to the overall GFA of Barangaroo, it is unacceptable that this modification increases height and bulk, when the overwhelming public submissions to the original proposal was that it presented excessive bulk.</p>	<p>Consistent with the <i>Environmental Planning and Assessment Act 1979</i> (as amended), it is appropriate that MOD 10 be assessed on its own merits and against MOD 8, approved in June 2016 rather than the original Concept Plan.</p>
<p>As such, the proposed modifications fail "to promote the orderly and sustainable development of Barangaroo balancing social, economic and environmental outcomes" contrary to Section 3 of the Barangaroo Act 2009. Approval of the project would arguably represent a failure of Infrastructure NSW's responsibility under Clause 14(1)(a) of the Barangaroo Act "to manage the orderly and economic development of Barangaroo", the effect being an erosion of trust, confidence and certainty in the NSW planning system in general and the Barangaroo site in particular.</p>	<p>The proposed increase in height to the area of Building R4B on the Building Envelope Plan for Block 4A will also support the 'Framing Sydney' design principle of the Rogers Stirk Harbour and Partners Master Plan. This is achieved by more closely aligning the heights between Building R4A and Building R4B to create a paired composition of towers that enhances the Sydney skyline, as well as creating a dramatic spatial backdrop for Hickson Park. There are no proposed changes to the ground plane, and therefore there will be no changes in the way the ground plane is perceived or experienced at this level.</p>
<p>Further changes are flagged under Modification 9 which relates to the Central portion of Barangaroo and is yet to be progressed. Approval of the subject application raises serious concerns about the extent of changes that are likely to be approved via modification 9 and the resultant impacts, particularly regarding traffic generation, demand on open space and view / visual massing impacts for residents living to the east of the site as well as Sydney Observatory.</p>	<p>It is noted that this Modification Application relates to MOD 10 only. MOD 9 would be a separate planning application for Central Barangaroo and once lodged would be subject to assessment. Notwithstanding, MOD 10 has been assessed taking into consideration its role and positioning within the broader context of the Barangaroo site, the Sydney CBD, and Sydney as a global city.</p>

Key Issue Raised	Response
Private residential apartments and key worker housing	
<p>The proposed amendments to the SEPP and intensification of development provide for a significant increase in private residential apartments with limited public benefit or consideration of impacts on the public domain. Public space and the public domain should not be secondary to yet more development.</p>	<p>The site subject to this Modification Application (i.e. Block 4) is advantageously situated close to some of Sydney's best public open spaces including Barangaroo Reserve and the Wulugul Walk waterfront, Mercantile and Shipwright Walks, Exchange Place, as well as the future Hickson Park, Waterman's Cove and Public Pier, which all provide a strong contribution to the fabric of the city.</p> <p>With access to a range of quality open spaces and public domain (both existing and future) the precinct will comfortably accommodate the additional homes proposed for Barangaroo South, without having any adverse environmental or amenity impacts. Further information in relation to public benefit can be found in Section 8.11 of the EAR submitted with the Modification Application.</p>
<p>The application proposes to allocate a totally inadequate 184sqm of the proposed 8,000sqm increase in GFA to key worker housing in accordance with condition B11. Furthermore, it is likely that these key worker apartments will have sub-optimal amenity similar to those approved under the detailed design consent (predominantly south facing, limited natural cross ventilation and a less desirable outlook. The City recommends that 1,600sqm of the 8,000sqm (20%) be provided as permanent additional affordable housing managed on-site by a Community Housing Provider.</p>	<p>The approach and amount of additional Key Worker Housing (KWH) is in line with the current requirements under the approved Concept Plan (as Modified). Concept Plan (MOD 8) requires that KWH is delivered at a rate of 2.3% of residential GFA on site in Barangaroo South, and an additional 0.7% of the residential GFA of Barangaroo South to be delivered offsite. Therefore, the approach remains consistent with the proportional requirements of the approved Concept Plan (as Modified). Furthermore, all residential apartments, including Key Working Housing apartments, will be assessed against <i>State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings</i> (SEPP 65) and the <i>Apartment Design Guide</i> (ADG).</p> <p>It is noted that due to the location of the buildings within Barangaroo South, future residents will have access to high quality open space and public domain, Sydney Harbour, Darling Harbour, a high range of direct employment opportunities, multiple transport infrastructure services including the future Sydney Metro, retail shops, restaurants and cafes and a range of everyday services. Overall, this will provide a significantly high level of residential amenity.</p>

Key Issue Raised	Response
<p>The inner city continues to experience a significant shortage of key worker affordable housing in the nation’s most unaffordable housing market. The role of these workers, particularly those in healthcare and other emergency service providers and their ability to live close to their places of work, have been made more crucial during the current pandemic. Delaying the delivery of CHP key worker affordable housing to the end of the project as proposed creates real risk of delay and/or that it will not be delivered in a timely and reasonable manner. This once again prioritises the delivery of private market housing over affordable housing. This amendment should not be supported.</p>	<p>The commitment to deliver Key Worker Housing (KWH) will continue to be maintained as part of the proposed Modification Application. As noted above, the proposed increase in GFA will require a proportional increase in KWH to be provided at Barangaroo South as required under the Concept Plan.</p> <p>The proposal seeks to better align the timing for delivering this KWH in Barangaroo South and offsite to ensure both will be completed by the time the occupation certificate for Building R5 is issued and to align with the operation of the Sydney Metro station. It is further noted that the timeframe for delivering KWH is also subject to the delivery programmes of the community housing providers. Further information can be found in section 5.5 of the EAR.</p>
Residential amenity and reliance on public open space	
<p>It is unclear if the provision of additional floor space will be accompanied by additional communal open space. It is noted that the detailed consents for each building provided insufficient communal open space, justified by residents using the new open space provided at Barangaroo.</p>	<p>Under the <i>Apartment Design Guide</i> communal open space is required to be provided based on the site area. The approved detailed building applications for Buildings R4A, R4B and R5 provide well in excess of the required 25% of the total site area required under the Section 3 of the <i>Apartment Design Guide</i>, therefore no further change is required as the future buildings will remain consistent with the Apartment Design Guide.</p>
<p>This is inadequate given the limited public benefit provided by the proposed modification and the existing demand for open space within the inner city. In accordance with Objective 3D-1 of the Apartment Design Guide, the development should provide sufficient private and communal space within the development to meet the anticipated needs of residents before relying on public open space.</p>	
Additional car parking and traffic	
<p>The Transport Management and Accessibility Plan identifies the new Sydney Metro station, reduction in bus frequency and forecast reduction in traffic along Hickson Road to justify the additional GFA and 80-100 car spaces (and subsequent trips) anticipated.</p>	<p>No change is sought to the car parking rates which are approved under the Concept Plan (as Modified). A response to these car parking comments has been prepared by JMT and is included at Attachment C.</p>
<p>The development benefits from significant investment in public and active transport in and around Barangaroo and should not be granted the requested increase in car spaces. The City</p>	

Key Issue Raised	Response
remains concerned that the unnecessary provision of car parking will encourage private vehicle use, contrary to the Planning Priority E10 of the Eastern City District Plan and contributing to existing traffic congestion.	
As such, no additional car parking should be provided. However, if provided a restriction is to be placed on the title such that they are not used by anyone other than residents of the buildings to discourage informal commuter parking.	This matter would be more appropriate for consideration as part of future and subsequent detailed Development Applications in relation to MOD 10 (subject to approval being granted).
Visual Impact	
The City notes the visual assessment undertaken by the Renzo Piano Building Workshop which argues the added height accords with a hierarchical ascendancy of tower heights that rise from Hickson Road in the east to the zenith at Block Y (the Casino). This is a ridiculous justification.	It is noted that the towers (Building R4A, R4B and R5) have previously been approved as part of MOD 8 and subsequent detailed Development Applications for each of the individual towers have been approved. Their form has been developed to respond to the key principles of the Concept Plan Master Plan (as modified), and the Built Form and Urban Design Controls (under which Development Applications are assessed) including the tower separation controls.
The City of Sydney contends that the development as viewed from the surrounding area is visually overbearing, particularly when viewed from the new over car parking space deemed to be Hickson Park. The towers will appear as shear walls of glass with no relief or wind management. The City notes that the separation between these towers is significantly non-compliant with the 24 metre separation for buildings over 25 metres in height under the Apartment Design Guideline. The documentation supporting this modification is silent on this inadequacy.	
	<p>This Modification Application amends the Built Form and Urban Design Controls to permit the additional height on the Building Envelope Plan for Block 4A to the area of Building R4B. The existing tower separation as approved is acceptable, and no change to building separation is proposed as part of this Modification Application. The proposal will continue to achieve design excellence and provide residential amenity in accordance with the Built Form and Urban Design Controls. Any amending Development Application in response to Concept Plan (MOD 10) would also maintain the approved tower separations.</p> <p>As discussed in Section 8.2 of the EAR, the Concept Plan (MOD 10) will continue to respect and strengthen the design principles for the precinct, as established in the current Rogers Stirk Harbour and Partners Master Plan.</p>

Key Issue Raised	Response
<p>The process of maximising GFA within the approved building envelopes undermines the ability of all other buildings to achieve the desired urban design and amenity outcomes. The City has previously raised concerns regarding the lack of a defined podium on Building R5 fronting Hickson Road, with the proposed additions compounding its already overbearing bulk and failing to pick up on cues from development opposite on Watermans Quay. There also appears to be insufficient information to comprehend the impacts of the additional bulk on the surrounding streets and clear view line.</p>	<p>As discussed above, the towers (Building R4A, R4B and R5) are approved, and their form is responsive to the Concept Plan Built Form and Urban Design Controls. As part of being granted approval, their overall aesthetic and design were deemed to achieve design excellence (being designed by the Renzo Piano Building Workshop) and provide a high level of amenity.</p> <p>Amendments to the Built Form and Urban Controls are proposed as part of this Modification Application to adjust the height to the area of Building R4B in Block 4A. All other controls in Block 4B (which contains Building R5) remain instrumental to achieving design excellence and providing appropriate amenity, and accordingly no other changes are sought as part of this Modification Application.</p> <p>Future Amending Development Applications for Buildings R4B and R5 will continue to follow the Built Form and Urban Design Controls, as well as the broader planning framework that controls development of the Barangaroo Site, to achieve appropriate urban design, architecture and amenity outcomes.</p> <p>With respect to the impact of additional bulk on context, a Visual Impact Assessment was undertaken as part of the EAR (Appendix G), the methodology of which was agreed upon between Lendlease and the Department of Planning, Industry and Environment during earlier modifications to Concept Plan (being MOD 4). This Visual Impact Assessment concludes that the proposal will not impact on view corridors as established by Concept Plan (MOD 8).</p>
Loss of night sky for Sydney Observatory	
<p>Sydney Observatory provides an historic role in local tourism and science education for Sydney. The remainder of the buildings in Barangaroo have adversely impacted the Sydney Observatory, with the proposed modifications causing further restrictions on views of the Jewel Box Cluster (NGC 475) within the constellation Crux (Southern Cross) as well as the Pointers of Centaurus and the globular cluster Omega Centauri in the late winter / early spring months when visibility is best, that is, lower average nights with cloud cover. The assessment also makes no mention of view loss of other celestial objects prior to 8.24pm as shown in Figure 5</p>	<p>A Response to Submissions Report has been prepared by Dr George Georgevits, an astrophysicist with the University of NSW Unisearch (see Attachment B) which specifically responds to the comments of Council.</p> <p>As noted in the report prepared by Unisearch, the loss of sky for Sydney Observatory should be considered only in relation to the</p>

Key Issue Raised	Response
of the Sky View Impacts document prepared by UNSW Unisearch, including the Gem Cluster (NGC 3293) and Eta Carina Nebula within the constellation Carina.	view obstruction caused by the presence of Building R4B as a result of Concept Plan (MOD 10). Building R4B will not obstruct the globular cluster Omega Centauri, and the obstruction of the Jewel Box Cluster, Southern Cross and Pointers of Centaurus have been already detailed.
Views of these celestial objects are the envy of astronomers of the northern hemisphere, which due to their declination are not as visible. As such views of this part of the celestial sphere should be preserved for this historically important observatory.	
Moreover, the assessment fails to consider the cumulative light spill impacts which would result from the 100 additional apartments, creating more difficulty for the observatory to look at other parts of the night sky that are unaffected by the construction of tall towers in the surrounding area.	Gem Cluster (NGC 3293) and Eta Carina Nebula were not flagged by the Sydney Observatory during prior consultation as sky objects of interest.
The applicant should be required to undertake a thorough assessment against the principles of protecting views outlined in <i>Rose Bay Marina Pty Limited v Woollahra Municipal Council and anor</i> [2013] NSWLEC 1046.	Due to the variety of other factors, including the impact of the wider CBD and Harbour Bridge light spill, events such as Vivid and fireworks in Darling Harbour, smog and atmospheric patterns, the visibility of many of these sky objects is already limited.
	The Concept Plan (as Modified) provides for the assessment and mitigation of light spill impact, through Condition C13 <i>Lighting Strategy</i> . This condition was formed through MOD 8 to ensure that the assessment of light spill impacts occurred through the preparation of development applications for buildings and requires consultation with the Sydney Observatory. This Modification Application does not alter Condition C13. Accordingly, the assessment of light spill impacts will occur appropriately at the subsequent Amending Development Application process and in consultation with the Observatory.
	The Visual Impact Assessment at Appendix G of the EAR was prepared in accordance with the methodology set out and agreed upon by Lendlease and the Department of Planning, Industry and Environment throughout the Concept Plan (MOD 4) Application process. This methodology has been adopted for this Modification Application, to be consistent with the previous visual assessment undertaken for Barangaroo.

Key Issue Raised	Response
Private Interest versus Public Interest	
Support for the application reinforces the primacy of private over public interests at Barangaroo as seen in the previous modifications granted and resulting in the significant increase of the private realm to the detriment of public land and amenity.	As outlined above, a thorough and balanced assessment of the proposal against the Concept Plan (MOD 8) has been undertaken which identifies the proposal is acceptable within the CBD context.

Millers Point Residents Action Group

Key Issues Raised	Response
The proposal is not orderly development and fails to satisfy Section 3 of the Barangaroo Act 2009 “to promote the orderly and sustainable development of Barangaroo balancing social, economic and environmental outcomes”. It would also mean the role of Infrastructure NSW has failed under Clause 14(1)(a) of the Barangaroo Act “to manage the orderly and economic development of Barangaroo”.	Infrastructure NSW is committed to fulfilling its responsibilities under the Barangaroo Act 2009. The proposed application to modify the Barangaroo Concept Plan and corresponding amendment to the planning controls is made in accordance with Infrastructure NSW’s functions under the Act to achieve the objects set out in Section 3 of the Act.
Barangaroo South continues to be granted increased building density, height and bulk, which is not orderly development, and continues to erode trust, confidence and certainty in the NSW Planning system. The original concept plan approved in 2007 provided for 388,300sqm of Gross Floor Area. This modification proposes a 8,000 sqm GFA increase, bringing the proposed total GFA to 602,354sqm, nearly double the amount compared to the original approval.	The proposed modification to the Barangaroo Concept Plan serves to optimise the overall Barangaroo precinct, leveraging the project’s successes to date while capturing unrealised opportunity to enhance undeveloped built form.
Further changes are proposed under the, to be determined Modification 9 to the Central portion of Barangaroo. Approval of this modification, raises concerns about what the next modification will include, raising concerns about traffic generation, lack of open space and view / visual massing impacts for residents living to the east of the site, as well as Sydney Observatory.	<p>Where applicable, the Modification Application has provided an assessment against the approved Concept Plan (as Modified) consistent with the framework of planning under the <i>Environmental Planning and Assessment Act 1979 (As Amended)</i> and associated Regulations.</p> <p>Notwithstanding this, the proposed changes to the Concept Plan will deliver additional residential housing in a highly accessible location, close to jobs, parks, public transport and public amenities. The EAR lodged with the Modification Application demonstrates that the proposal appropriately balances the social, economic and environmental outcomes on the site, whilst leveraging the significant opportunity provided by the future Sydney Metro Station in Barangaroo.</p>

Key Issues Raised	Response
No proportional increase in Key Worker Housing (KWH) is proposed, it only provides an additional 184sqm of GFA for KWH.	<p>Finally, this Modification Application relates to MOD 10 only. As discussed above, MOD 9 would be a separate planning application for Central Barangaroo and once lodged would be subject to assessment. This matter has been addressed above.</p> <p>The approach and amount of additional Key Worker Housing (KWH) is in line with the current requirements under the approved Concept Plan (MOD 8). Concept Plan (MOD 8) requires that KWH is delivered at a rate of 2.3% of residential GFA on site in Barangaroo South, and an additional 0.7% of the residential GFA of Barangaroo South to be delivered off site.</p> <p>The number of KWH dwellings will therefore increase proportionally in line with the proposed increase in GFA, and in accordance with the requirements of the Concept Plan.</p> <p>Furthermore, the detailed design of the additional Key Worker Housing will be assessed against <i>State Environmental Planning Policy 65 – Design Quality of Residential Flat Buildings</i> (SEPP 65) and the <i>Apartment Design Guide</i> (ADG), ensuring high quality housing will be delivered in line with the approved Concept Plan requirements.</p>
The additional 8,000sqm of floor space will result in up to 100+ additional units, however, there is no increase in communal open space. The individual SSD approvals for the three residential towers (R4A, R4B and R5) was that, despite not having the required amount of communal open space and sunlight on their individual lots, they could rely upon the open space of Hickson Park and northern headland. This development places further strain on the public open space.	<p>The total number of apartments is yet to be established. Apartment numbers will be determined, and separate approval sought, as part of subsequent Development Applications for Building R4B and Building R5.</p> <p>The <i>Apartment Design Guide</i> establishes the requirement for communal open space and specifies that 25% of the site area is to be provided as communal open space, with no link between the quantum of open space and the number of apartments. Despite this, Buildings R4A and R4B are approved with communal open space totalling approximately 53.4% of the site area. 64% of the R5 site was also provided as communal and publicly accessible open space, exceeding the design criteria of 25%.</p>

Key Issues Raised	Response
<p>The process of maximising GFA within approved building envelopes undermines the ability of all other buildings to achieve the desired urban design outcomes. Smaller tower gets added bulk – but not clearly shown on the supporting documentation. This tower is already lacking podium on Sussex Street, which is completely at odds with its context. The modification would potentially exacerbate this and generate unacceptable wind downdraft on Sussex Street.</p>	<p>Furthermore, the locational benefits of the precinct are still relevant (including the public domain areas such as Wulugul Walk, Shipwright and Mercantile Walks, Exchange Place, Headland Reserve, future Hickson Park and Watermans Cove) ensuring that a high level of amenity is provided, consistent with the guidance of the <i>Apartment Design Guide</i>.</p> <p>A framework for built form and massing is established under the approved Concept Plan (as Modified), with prescribed maximum height and gross floor area limits, as well as Building Envelope Plans and Built Form and Urban Design Controls, which together guide development. The buildings are approved and have been done so within this site planning framework.</p> <p>The proposed Modification to the Concept Plan appropriately amends the Building Envelope Plans, Built Form and Urban Design Controls and the Gross Floor Area controls to ensure a cohesive and well-considered assessment framework is maintained, which achieves the design principles that underpin the Concept Plan.</p> <p>The wind assessment prepared for the proposed Modification concluded that wind impacts resulting from the additional 25 metres in height to the Block 4A Building Envelope would be generally unchanged from the approved Concept Plan, particularly at the ground plane. Further information can be found in the Wind Assessment completed as part of the EAR (Appendix J).</p>
<p>This development viewed from the immediate surrounding area is visually overbearing, particularly when viewed from the new Hickson Park. The proposal will appear as shear wall of glass with no relief. The increase in height will also make the two towers read like a paired composition rather than two individual towers. In this regard the City notes that the separation between these towers is significantly noncompliant with the 24-metre separation for buildings over 25 metres under the Apartment Design Guideline. The documentation supporting this modification does not address this issue.</p>	<p>This application seeks to enable an increase in the height and commensurate floor space increase, with no change proposed to the tower design and separation already approved.</p> <p>As discussed in Section 8.2 of the EAR (and discussed above), the proposed modification continues to respect and strengthen the design principles established by the Rogers Stirk Harbour and Partners Master Plan for the site, particularly in relation to the 'Fan' design principle, which sites and orients the buildings to ensure</p>

Key Issues Raised	Response
	<p>distribution of built form across the site and create view corridors towards the harbour and Sydney CBD.</p> <p>The proposed increase in height to the area of Building R4B on the Building Envelope Plan for Block 4A will support the 'Framing Sydney' design principle of the Master Plan, with the closer alignment of heights between Building R4A and Building R4B creating a paired composition of towers that enhances the contribution to the Sydney skyline, as well creating a dramatic spatial backdrop for Hickson Park.</p> <p>No change to the approved building separation between R4A and R4B is proposed as part of this Modification Application.</p>
<p>Loss of night sky for Sydney Observatory – losing view of the Crux and 2 pointers of Centaurus in the late winter / early spring months when visibility (low cloud cover) is best. This development along with the remainder of the buildings in Barangaroo have placed a significant limit on the observatory. The assessment makes no mention of light spill impacts which would result from the 100 additional apartments, creating more difficulty for the observatory to look at other parts of the night sky that are unaffected by the construction of tall towers in the surrounding area.</p>	<p>A Response to Submissions Report has been prepared by Dr George Georgevits, an astrophysicist with the University of NSW and Unisearch (see Attachment B) which specifically responds to the comments of the Millers Point Residents Action Group.</p> <p>While these sky objects are periodically obstructed during August, September and early October (see Table 1 of Attachment B), the times and positions in which these are visible are generally unfavourable due to the atmospheric factors which impact visibility and image quality. From April to October, the Observatory hosts two viewing sessions per night to capitalise on the conditions. In addition to this, viewing of these objects is unaffected for the remainder of the year.</p> <p>Light spill impact was addressed in Section 4.3 of the Skyview Impact report which accompanied the EAR (Appendix M) and is taken into consideration in relation to the viewing of sky objects. As noted above, it is also a further assessment requirement under Condition C13 of the current Concept Approval. Further engagement with Sydney Observatory will therefore be undertaken as part of future and subsequent applications for Building R4A and R4B.</p>
<p>The adjacent historic neighbourhood of Millers Point is one of the most historically significant areas in Australia. The views across Darling Harbour between Millers Point, Balmain and</p>	<p>The built form and urban design principles for Barangaroo South have always sought to preserve significant public domain, provide</p>

Key Issues Raised	Response
<p>Pymont have been part of the landscape of Sydney Harbour for thousands of years under Aboriginal occupation and management. Many 19th and early 20th century scenes of early Sydney show the lively maritime activity around Darling Harbour and the waterside connections between Millers Point and other peninsulas in the harbor. These visual connections will now be severely diminished by the proposed modifications. This is an overt act of grabbing maximum land and height for high return property on highly valuable waterside land without consideration for neighbours, historically significant views and connections, the effect on the night sky, and the general diminishing of the qualities of Sydney harbor so loved by Sydneysiders and visitors.</p>	<p>street corridors to protect and reinforce views to and from key public domain spaces and to be sympathetic to key heritage areas. The Concept Plan design principles, specifically the Fan' principle, are key in siting the buildings to maximise view corridors and view sharing on and around the site particularly from the east (refer to Figure 1 above), and this Modification Application does not vary any of the view corridors previously approved in Concept Plan (MOD 8). The Modification Application does not impact upon this Concept Plan design principle and therefore does not disconnect areas to the east of the precinct from the Harbour or any other key visual connections.</p> <p>In addition, the EAR includes a Visual Impact Assessment (Appendix G) which confirms that view impacts from Millers Point will be the same as assessed under Concept Plan (MOD 8).</p>
<p>The community consultation during the Modification 10 process has been very tokenistic. The first notice sent to the Millers Point Community Action Group (MP CRAG) regarding Modification 10 was on the 29th April – with a closing date of 12th May – just 9 working days to develop a community response and to review over 70 documents associated with the application. An open online forum was held by the Barangaroo Project team on Wednesday 6 May between 5pm - 6.30pm. This was attended by a representative of MP CRAG who was surprised that all attendees (15 in total) were not given an opportunity to introduce themselves and divulge their interests, commercial or personal, and that other than those presenting from INSW, remained as blank panels on the TEAM meeting. Meetings under such conditions are impersonal at the best of times. In addition, all attendees were instructed not to record the meeting only to be informed by the modifier at the end of the meeting that there had been a note taker involved – calling into question the ethics and validity of the process. Will the notes from the meeting be available?</p>	<p>A one-on-one briefing was offered to the Millers Point Community Action Group on 29 April 2020. However, their preference was to attend the open information webinar.</p> <p>All community consultation was undertaken in line with the required guidelines and in light of the circumstances of the COVID-19 pandemic. A letter box drop was provided to surrounding residents and businesses, notifying them of the public exhibition of the application and informing community members of the open information webinar to learn more about the proposed modification.</p> <p>The webinar was held on 6 May 2020 and was attended by community members, representatives from Infrastructure NSW and Lendlease. Issues raised included the proposal's impact on public open space, wind impacts, building design, key worker housing and future community consultation. A copy of the presentation used at the open information webinar can be found at Attachment D. Questions taken on notice from the MP CRAG representative were addressed directly with them following the meeting via email. The notes taken at the meeting were to officially record comments and questions raised. These can be found at Attachment D.</p>

Key Issues Raised	Response
	<p>Infrastructure NSW also met with representatives of the Walsh Bay Precinct Management Association in relation to the proposed modification.</p> <p>Infrastructure NSW is committed to keeping the community informed about the latest updates regarding Barangaroo, including construction milestones and application proposals. In line with this, Infrastructure NSW will continue community and stakeholder engagement on this Modification Application and any future modifications to the Concept Plan.</p>

Community Submissions

Key Issues Raised	Response
The increased height of the buildings continues the overdevelopment of the site. We believe that these changes will erode the harmony and flow of the area in which the residential towers rest.	The Concept Plan (as Modified) is based on the Rogers Stirk Harbour Master Plan that contains various core design principles. Most notably, the 'Fan' Principle of the Master Plan (as discussed above) has informed the siting and design of the buildings. The additional height proposed does not alter the Master Plan design principles, in fact it supports and strengthen it, and the harmony and flow intended from the original design is carried on within this Modification Application.
In March this year we had observed a significant increase of vehicular traffic in Hickson Road, Napoleon Street and Kent Street. Pedestrian traffic had also increased in these areas as well as in Gas Lane and Jenkins Street. We suspect that the additional accommodation achieved through the increased GFA's will further exacerbate these increases.	The Traffic Management and Accessibility Plan provided at Appendix K of the EAR found that the additional residential GFA resulting from this Modification Application would not result in any significant additional traffic to that approved under MOD 8, with approximately 11 additional vehicle movements during peak periods. Transport for NSW has agreed with this, as discussed above and at Attachment C .
The modifications sought under section 75W to the already approved concept plan (Mod 8) add no value or enhancement other than demonstrate an attempt by the developer to generate a more profitable return.	The proposed Modification builds on the NSW Government's additional investment in public transport in the precinct, by creating more homes that are located close to transport networks and jobs. The Modification will create an even more active and vibrant Barangaroo South precinct by increasing the number of residents.

Key Issues Raised	Response
	<p>This will also help activate Barangaroo South during the day, night and weekends.</p> <p>Additionally, through the proposed GFA increase, there is an opportunity to increase the living amenity of apartments in building R5, including the Key Worker Housing units.</p> <p>Further discussion of public benefit can be found in Section 8.11 of the EAR.</p>
<p>Increasing the heights of R4A and R4B will result in both buildings being read as a single, monolithic entity which will result in significant increased visual bulk when viewed from both the harbour and from Hickson Rd.</p>	<p>The increase of height to Block 4A on the Building Envelope Plan is contained to the area of Building R4B only. Therefore, the tallest building of the three towers (being Building R4A) will not be altered, and the descending of the residential buildings from the harbour will continue to be achieved, with both Buildings R4B and R5 shorter than the approved Building R4A.</p> <p>The 'Fan' effect of site master planning will also break up the view of the buildings when viewed from the surrounds.</p>
<p>The approved height of R4B allow a reprieve from the dominating and monolithic mass of the other buildings giving the skyline a bit of variance and interest. By increasing the height of R4B to almost match R4A, this would be lost and the skyline would appear flat. This type of building "stamping" is often seen in places like Dubai or China, but as demonstrated by the three buildings currently in Barangaroo it is inappropriate for the Sydney context.</p>	<p>The proposed amendment to the Block 4A controls to increase the height of Building R4B will maintain a 15-metre height differentiation between Building R4A and Building R4B.</p> <p>There are many varying buildings and building heights in the surrounding context of Barangaroo South, including the Crown Hotel. The variation of heights across the entire precinct will remain perceivable and noticeable on the city skyline.</p>
<p>The scale of the buildings facing Hickson Rd are already inappropriately high and will considerably alter the existing character of the street. Page 8 of the visual impact assessment demonstrates the wall of massing that will be created along Hickson Road and the cavernous experience that will be created walking along the street.</p>	<p>The scale of Building R5 is considerably smaller than the other buildings further setback from Hickson Road, with a maximum height of RL 107. In a CBD context, the massing of tall buildings is appropriate, and considerable ground floor activation will be provided to optimise the pedestrian experience. The relationship between approved Building R5 and Hickson Road is retained in the Modification Application. No changes are proposed to the height of Block 4B which contains Building R5.</p>

Key Issues Raised	Response
<p>The previous design allowed for more slender towers that would allow visual reprieve and read as distinct entities. By increasing the height and GFA of the buildings, they will read as one from many angles and will lose their slenderness resulting in a much greater visual impact - particularly from the harbour / Pyrmont / Balmain - see page 41 of the visual impact assessment.</p>	<p>The approved tower designs are responsive to the Built Form and Urban Design Controls. These Controls are to be amended to increase the height on Block 4A to the area of Building R4B. No change to tower separation is proposed.</p> <p>The Modification Application does include an associated amendment to the Building Envelope Plan for Block 4A (containing Building R4A and R4B), which includes setbacks to the area of the Building R4B envelope, to further ensure the slender form of that tower remains. Accordingly, the towers' slender design will continue to be read as such under future Development Application's in response to Concept Plan (MOD 10), and the distinction between buildings will therefore still be visible.</p>
<p>The increase in height and GFA needs to be considered for its impact not only on the CBD and places such as Pyrmont, but the surrounding suburbs. As myself and many other Sydneysiders have discovered is that building H1 is visible from almost every harbour-side suburb. From Rozelle to Mosman, H1 towers over the city and buildings R4A and R4B will also. While the increase in GFA and height may be presented as being modest in this documentation, the reality is that there will be a significant visual impact for thousands of Sydney residents.</p>	<p>The height proposed is appropriate within the CBD context. The CBD is highly visible from numerous viewpoints across wider Sydney and the proposed increase in height will contribute to the visual interest of the Sydney CBD Skyline. The tower forms designed by Pritzker Prize winning architects Renzo Piano Building Workshop will reinforce the commitment to design excellence. A Visual Impact Assessment was undertaken with the EAR (Appendix G) and this concludes that the Modification Application does not impact on view corridors as established by Concept Plan (MOD 8).</p>
<p>The visual impact statement shows the massing as a transparent box which does not reflect the reality. Page 26 of the visual impact document shows the impact from the park. The existing height difference between 4A and 4B allows a bit of variation in the skyline, however modification 10 would remove that variation creating a visual wall of buildings that will read as a single entity.</p>	<p>The increased height to Block 4A for Building R4B through the amendments to the Building Envelope Plan will maintain a 15 metre height difference from Building R4A, and therefore an east west ascending of building heights from Hickson Road to the Crown Resort Sydney – a key feature of the Rogers Stirk Harbour and Partners Master Plan accompanying the approved Concept Plan (MOD 8). Further to this, the 'Fan' effect of building location is maintained by the Modification Application, which breaks up the view of the buildings. Highly detailed facades and articulated tower forms will also provide visual interest and reduce the perceived bulk and scale.</p>

Key Issues Raised	Response
<p>Page 32 and 33 of the visual impact document incorrectly shows the impact of Mod 8 / Mod 10 - they appear swapped and therefore are misleading about the potential visual impact of the additional height.</p>	<p>A detailed response has been prepared by Virtual Ideas in relation to this comment (see Attachment E). The response confirms that the images on Page 32 and 33 of the Visual Impact Assessment are correct. For this Modification Application, the colour of the imaging was improved to enhance readability.</p>
<p>Insufficient detail has been shown regarding overshadowing and loss of solar access for Barangaroo, The Rocks, Circular Quay, etc.</p>	<p>Shadowing diagrams were produced by Virtual Ideas and compare the impact of additional shadow cast as a result of the increased height with the approved Concept Plan (MOD 8) building shadows.</p> <p>The updated shadow analysis demonstrates that the impact of the proposed R4B Building height increase does not cast significant additional overshadowing on key public domain areas, including Hickson Park. While there are minor portions of additional shadow cast, these predominantly fall on Sydney Harbour, roads or areas of the CBD already in significant shadow.</p> <p>Wulugul Walk would experience a slight increase in shadow for a short period of time only, however it is during a time when the remainder of the foreshore is in full sun.</p> <p>As there is no height increase on the Building Envelope Plan to Block 4B, no additional shadow will be cast from Building R5.</p>
<p>There was no public benefit from the previous modifications at Barangaroo, and this Modification takes even more amenity away from the public while providing nothing in return. Instead of a pedestrian-first experience centred around design excellence, these designs take from the public land and skyline owned by the many and use them in an incredibly selfish manner to provide profit for the few.</p>	<p>The Modification Application seeks to provide additional housing with access to public space, community and retail amenity, public and active transport. In addition to this, the pedestrian experience will be considerably improved through the provision of an activated ground plane, and pedestrianised streets, as well as the delivery of new parkland. No changes are proposed to the existing public open space and access to these spaces. Further discussion of public benefit can be found in Section 8.11 of the EAR.</p>

Statement of Heritage Impact

TKD

15 July 2020



NSW Department of Planning, Industry and Environment
4 Parramatta Square
12 Darcy Street
Parramatta NSW 2150

Attention: Mr Jim Betts, Secretary of the Department of Planning

Dear Mr Betts,

Subject: Barangaroo Concept Plan Modification 10 Statement of Heritage Impact

This Statement of Heritage Impact has been prepared to support a Section 75W Modification to Concept Plan Approval MP06_0162 (known as Modification 10) pursuant to clause 3C, Schedule 2 of Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017 (Savings and Transitional Regulation). It responds, in particular, to the following comments by Heritage NSW: *"There are no State listed heritage items within the subject site. However, the proposed addition in height has a potential to increase the adverse visual impacts to the setting of a number of local and State heritage items and conservation areas, both adjacent to and in the vicinity of the site".*

In 2014, Tanner Kibble Denton Architects prepared the Statement of Heritage Impact (SoHI) to accompany the submission for Modification 8 to Concept Plan (MP06_0162). The 2014 SoHI identified the following heritage impacts resulting from the development described in the Barangaroo Concept Plan Modification 8:

- *Concept Plan Modification 8 will have greater impact on some heritage items and sections of the Millers Point conservation area than those of development in the Concept Plan (as modified);*
- *There are no physical impacts on identified heritage items and conservation areas in the vicinity of the proposed development;*
- *A number of items and the conservation areas are already impacted by development in the northern section of Central Sydney. Impacts from the buildings in the northern section of Barangaroo South are greater than those from the Concept Plan (as modified) but ameliorated to some extent by existing tall buildings, particularly those in Kent Street;*
- *The impacts of the buildings in the northern section of Barangaroo South on a number of heritage items in its vicinity and the Millers Point Conservation Area are ameliorated by their distance from heritage items and conservation areas and the location of these buildings relative to them;*
- *The development in the northern section of Barangaroo Stage 1 as described in Concept Plan Modification 8 may impact views from the north to several heritage items and views to the south from these items. These items include the setting of Sydney Observatory, Observatory Park and items within it, and terraces at 3-9 High Street and 115-125 Kent Street. There may be limited impacts on Fort Street School, the Bureau of Meteorology and the National Trust Centre, although the setting of these items is already affected by existing large-scale development to their south and east.*
- *Notwithstanding the impacts of Concept Plan Modification 8 on several items and sections of the Millers Point conservation area, the heritage impacts of the described development are generally considered acceptable.*

Tanner Kibble Denton Architects Pty Ltd | ABN 77 001 209 392 | www.tkda.com.au

Sydney Level 1, 19 Foster Street, Surry Hills NSW 2010 Australia | T+61 2 9281 4399

Brisbane Level 14, 241 Adelaide Street, Brisbane QLD 4000 Australia | T+61 7 3087 0160

Principals Alex Kibble, Robert Denton, Megan Jones, John Rose | Practice Directors George Phillips, Jocelyn Jackson, Melanie Mackenzie

Senior Associates Ian Burgher, Angelo Casado, David Earp, Anna Harris, Emma Lee, Renata Ratcliffe, Lachlan Rowe

Associates Asta Chow, Paul Dyson, Scott MacArthur, Sean Williams

NSW Nominated Architects Robert Denton Registration No 5782 | Alex Kibble Registration No 6015

Concept Plan (Mod 10) seeks to increase the height of the Building Envelope Plan for R4B to RL 235 and increase the GFA of Blocks R4A and R4B by a total of 8,000m². In order to support the above changes, the following modifications are proposed:

- increase the Concept Plan maximum GFA for Block 4A from 86,979m² to 92,629m² and the State Significant Precincts SEPP (SSP SEPP) Block 4A maximum GFA from 94,740m² to 100,390m²;
- increase the Concept Plan maximum GFA for Block 4B from 19,158m² to 21,508m² and the State Significant Precincts SEPP (SSP SEPP) Block 4B maximum GFA from 20,970m² to 23,320m²;
- increase the Concept Plan residential maximum GFA of Block 4A from 86,166m² to 91,816m²;
- increase the Concept Plan residential maximum GFA of Block 4B from 18,287m² to 20,637m²; and
- increase the Concept Plan maximum height on the Building Envelope Plan for Building R4B from RL 210 to RL 235, noting Block 4A currently provides for a maximum height of RL 250 under the SSP SEPP.

We have reviewed the following documents in this Statement of Heritage Impact:

- Environmental Assessment Report Barangaroo South Concept Plan MP06_0162 Modification 10 and State Significant Precinct SEPP Amendment, prepared by Ethos Urban, dated 7 April 2020;
- Visual Impact Statement Barangaroo – Mod 10 Photomontages, prepared by Virtual Ideas, dated 30 January 2020; and
- View Analysis prepared by Virtual Ideas and Lendlease Integrated Solutions, dated 18 December 2019.

We have compared the views from Observatory Hill and the Millers Point Conservation Area of the Mod 8 Concept Plan with the views of the Mod 10 Concept Plan in order to assess the visual impacts of the additional height of Block R4B and the additional GFA for Blocks R4A and R4B. (Views 5, 7 and 21).

This assessment concludes that:

- The additional height to Block 4A (which contains Building R4B) will have no discernible increased impact on views from the adjacent heritage items and conservation areas including the Millers Point Conservation Area and Observatory Hill; and
- The increase in GFA for Blocks 4A and 4B will have no discernible increased impact on views from the adjacent heritage items and conservation areas including the Millers Point Conservation Area and Observatory Hill.

Therefore, the additional height and GFA associated with Concept Plan Modification 10 does not increase the adverse visual impacts to the setting of the local and State heritage items and conservation areas, both adjacent to and in the vicinity of the site.

Please contact our office should additional information be required.

Yours sincerely

TANNER KIBBLE DENTON ARCHITECTS PTY LTD



Megan Jones
Principal + Practice Director
NSW Registration No. 4148
QLD Registration No: 4357



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Response to Submissions Report

George Georgevits,
Astrophysicist, UNSW
Unisearch



UNSW
SYDNEY

Unisearch

Expert Opinion Services

COMMERCIAL-IN-CONFIDENCE

Report prepared on behalf of Unisearch Expert Opinion Services
A business of the University of New South Wales

**BARANGAROO SOUTH PROJECT
SYDNEY OBSERVATORY SKY VIEW
LOSS ASSESSMENT
RESPONSE TO SUBMISSIONS**

for

Mr Jim Betts
Secretary
NSW Department of Planning, Industry and
Environment
4 Parramatta Square
12 Darcy St
Parramatta NSW 2150
Your reference: John Riordan

by

Dr George Georgevits
Astrophysicist and Consulting Engineer

Date of Issue: 19 June 2020
Our Reference: UN101578

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APPENDIX A: Curriculum Vitae

1. TERMS OF REFERENCE

- 1 I have previously prepared a report (**the report**) for Lendlease dated 12 December 2019 on the subject of Sydney Observatory Sky View in response to Modification 10 to the Barangaroo Concept Plan (Mod 10).
- 2 The report contains sections on observational astronomy, observing issues at Sydney Observatory, the stated sky objects of interest to Sydney Observatory and an assessment of potential loss of view of these objects due to the presence of residential tower R4B at RL235 (RL stands for Reduced Level - the height above mean sea level, measured in metres).
- 3 I make regular reference to the report in my responses below.

1.1 QUALIFICATIONS

- 4 My qualifications and experience are detailed in the report.

1.2 TERMS OF ENGAGEMENT

- 5 Lendlease (together with Infrastructure NSW) is in the process of preparing a Response to Submissions ('RTS') to the Department of Planning, Industry and Environment (the **Department**), so they can continue their planning assessment.
- 6 Submissions were received by the Department during the exhibition process from the City of Sydney Council, the Museum of Arts and Applied Sciences (**MAAS** – operators of Sydney Observatory) and the Millers Point Resident Action Group.
- 7 These submissions included comments on the potential sky-view loss and light spill issues associated with more dwellings in Building R4B at the proposed height of RL235.

8 I have been engaged by Lendlease to provide astronomical advice in relation to the issues raised in these three submissions.

9 Lendlease has provided me with a copy of these submissions, and I have provided responses below, starting with the relevant excerpts from each submission, followed by my comments.

2. THE SUBMISSIONS

2.1 SUBMISSION FROM MAAS (SYDNEY OBSERVATORY)

10 The sky view loss issues raised by MAAS, provided below *in italics*, were as follows:

Sky View Loss

The sky view impacts document outlines further restrictions that the 25m increase in height of building R4B would place on the viewing of sky objects of interest from Sydney Observatory, including:

- ***The Jewel Box Cluster (open star cluster)***
- ***The Southern Cross***
- ***The Pointers (Alpha and Beta Centauri)***

11 The report that was submitted with Mod 10 addresses this issue in full, in detail.

12 These sky objects of interest pass through the area of sky that is obstructed by R4B with RL235 progressively from mid-August, through September to the beginning of October each year, during times when the observatory is open for viewing.

13 The observatory's viewing opportunities will thus be reduced for these objects somewhat during these three months on the nights when the objects enter the obstruction area.

- 14 Table #1 in the report quantifies the lost viewing time as a function of week of the year for each of these sky objects of interest.
- 15 Table #1 finishes at the beginning of October because, after this, all objects of interest have set behind the trees during observatory opening times and are thus not available for viewing.
- 16 On many nights when obstruction occurs and the observatory is open for viewing, the sky objects of interest are only obscured for part of an observing session.
- 17 These nights are not necessarily problematic because if the viewing schedule is appropriately arranged by the observatory, the required sky objects could be viewed first, while they are still unobstructed, with no real inconvenience to the observatory.
- 18 It should be noted that the seeing conditions for the part of the sky immediately above the buildings will generally be poor due to the low altitude, the large air mass through which the sky is viewed, the light pollution from nearby bright sources such as the Harbour Bridge and the many other high rise buildings, the effects of smog, scintillation, humidity and so forth.
- 19 Consequently, observing objects in the vicinity of the area obstructed by R4B would be done under observing conditions that are far from ideal, and the image quality would be relatively poor.
- 20 Based on Bureau of Meteorology weather data for Observatory Hill for September:
- on average, there will be some cloud cover for about half of the time
 - there will be 10.9 clear days
 - there will be 8.5 days when it is totally clouded over.

- 21 This, plus some Sydney entertainment night events (e.g., fireworks from the Harbour Bridge, Vivid etc.), imposes additional restrictions on the observatory's ability to conduct viable night sky observing sessions.
- 22 These issues reduce the viable observing opportunities for Sydney Observatory by an estimated 40%.
- 23 Thus 40% of the times when obstruction by R4B prevents viewing an object of interest (as listed in Table #1) can be considered irrelevant, since conditions will be unsuitable for observing.

Light Spill Impact

The Museum acknowledges that the potential light spill impact of this development on astronomical observation from Sydney Observatory has been considered as part of the original Development Consents (SSD 6965 and SSD 6966) which require that a Lighting and Light Spill Report to be prepared in consultation with Sydney Observatory, including recommendations and mitigations (where necessary) to mitigate light spill impacts. The Museum notes that the proposed increased height will potentially create a higher level of light spill impact, which will need to be mitigated through this process.

- 24 I have made an allowance for the impact of light spill in the report by adding an extra margin to the area of sky obstructed of R4B for all obstruction time calculations (see Section 4.3 of the report).

2.2 SUBMISSION FROM MILLERS POINT COMMUNITY RESIDENT ACTION GROUP (MPCRAG)

- 25 The sky view issues raised by MPCRAG are provided below *in italics*, followed by my comments.

8.0 Loss of night sky

Loss of night sky for Sydney Observatory – losing view of the Crux and 2 pointers of Centaurus in the late winter / early spring months when visibility (low cloud cover) is best.

- 26 Regarding cloud cover, Fig 2 in the report shows the mean number of clear days for each month.
- 27 For August and September, the mean number of clear days is 13.4 and 10.9 respectively.
- 28 For the months of April to October, the observatory conducts two observing sessions per night.
- 29 From Table #1 in the report, for the months of August and September, the Southern Cross and pointers are obstructed for significant periods of time for some weeks.
- 30 Viewing of these objects is unaffected for the rest of the year.

This development along with the remainder of the buildings in Barangaroo has placed a significant limit on the observatory.

- 31 The limited time spans during which viewing is impacted corresponds to times when these objects are in their least favourable positions in the sky for viewing, in terms of obtainable image quality.
- 32 This is due to the various atmospheric and other factors that degrade the image quality at low altitudes (see Section 3. of the report for details).
- 33 It is poor observing practice to view objects close to the horizon, particularly since there are a host of other, better located astronomical objects to view and during each observing session there is only time to view a few sky objects.

The assessment makes no mention of light spill impacts which would result from the 100 additional apartments, creating more difficulty for the observatory to look at other parts of the night sky that are unaffected by the construction of tall towers in the surrounding area.

- 34 This is incorrect – see paragraph #24 above and also Section 4.3 of the report.

2.3 LETTER FROM CITY OF SYDNEY COUNCIL

- 35 The sky view issues raised by City of Sydney are provided below *in italics*, followed by my comments.

Loss of night sky for Sydney Observatory

The remainder of the buildings in Barangaroo have adversely impacted the Sydney Observatory, with the proposed modifications causing further restrictions on views of the Jewel Box Cluster (NGC 475) within the constellation Crux (Southern Cross) as well as the Pointers of Centaurus and the globular cluster Omega Centauri in the late winter / early spring months when visibility is best, that is, lower average nights with cloud cover.

- 36 I have been instructed that the matter at hand only concerns potential sky view obstruction caused by the presence of building R4B, which is subject to proposed additional height, per Concept Plan Mod 10.
- 37 Building R4B never obstructs the globular cluster Omega Centauri.
- 38 The obstruction times for the Jewel Box Cluster, the constellation Crux (Southern Cross) and the Pointers of Centaurus (alpha and beta Centauri) are detailed in Table #1 of the report.

The assessment also makes no mention of view loss of other celestial objects prior to 8.24pm as shown in Figure 5 of the Sky View Impacts document prepared by UNSW Unisearch, including the Gem Cluster (NGC 3293) and Eta Carina Nebula within the constellation Carina.

39 These objects were not flagged by Sydney Observatory as sky objects of interest.

40 See also my comments in paragraphs 36 – 38 above.

Moreover, the assessment fails to consider the cumulative light spill impacts which would result from the 100 additional apartments, creating more difficulty for the observatory to look at other parts of the night sky that are unaffected by the construction of tall towers in the surrounding area.

41 This is incorrect - see paragraph #24 above and also Section 4.3 of the report.



Dr George Georgevits
B.E. (Hons), PhD

Level 2, South Wing, Rupert Myers Building
Gate 14, Barker Street
UNSW SYDNEY NSW 2052

APPENDIX A

Curriculum Vitae



Unisearch Expert Opinion Services

CURRICULUM VITAE Mr George GEORGEVITS

Qualifications

- Bachelor of Engineering (Electrical) (Hons)
Specialising in Communications, Electronics & Power
The University of New South Wales, 1974
- PhD Physics (Astrophysics)
The University of New South Wales, 2018

Present Position

Consulting Engineer, Managing Director & Principal Consultant Power and Digital Instruments Pty Ltd (PDI)
PDI specialises in providing engineering consultancy in the fields of communications, electronics, power and astronomy.

Areas of Expertise/ Special Interests

- Astronomy and astrophysics
- Cabling systems and components - design, testing and certification for standards compliance
- Data communications networks, systems and devices
- LANs, computer networks and computer technology
- Voice communications and telephony technology
- Communications service providers and Carriers
- Mobile phones, mobile networks and billing system analysis
- Radio communications, HF, VHF, UHF and microwave
- Audio systems and audio engineering
- Electrical fire investigations
- Lightning, lightning protection and earthing systems - design and testing for standards compliance
- Investigation and assessment of damages claims for communications, power and gas infrastructure
- Damages claims for electrical/electronic devices & systems
- Electronics design, manufacturing and test & measurement
- Equipment and component testing and performance certification
- Regulatory and legal aspects of communications and power
- Standards compliance and best practice
- Patent specification technical preparation and advice

- Advanced mathematics and physics, analysis of data, errors in measurements
- I am a member of three Standards Australia committees
- I speak fluent Hungarian and basic French

Professional Experience

1980 - Present

Managing Director & Principal Consulting Engineer

Power and Digital Instruments Pty Ltd

Fields of expertise are as described in the company capability statement (provided separately). PDI has successfully completed thousands of assignments for more than 200 corporate and government clients over a 40 year period.

Major multi-national corporate clients have included:

- Acheron Project (DEEPSEA Challenge Expedition for film director Jim Cameron – Avatar fame)
- Amphenol (Canada & China)
- Belden USA
- CommScope
- Lantek (Taiwan)
- LS Cable Co (Korea)
- Molex (USA and Aus)
- Molex Industrial Division (USA)
- Schneider Electric Asia Pacific (Hong Kong)
- Sunf Pu Technology Co Ltd (Taiwan and China)
- Tyco Electronics Inc. (China and Aus)
- Surtec Industries (Taiwan)

Corporate Australian clients have included:

- Acciona Australia (Sydney Light Rail Project)
- Amber Technologies P/L
- Allianz Insurance
- Barry Nilsen Lawyers
- Bluescope Steel Port Kembla Steelworks
- Campus Living Villages P/L
- CGU Insurance Ltd
- Charles Taylor Adjusting
- Clipsal Aust P/L
- Coffey Geosciences P/L
- Connection Magazines
- Crawford & Co (Loss adjusters – all states)
- Cunningham Lindsay (loss adjusters)
- Eaton Powerware P/L
- Echelon Adjusting P/L
- FDC Technologies Pty Ltd

- Hall & Wilcox, Lawyers
- Hicksons, Lawyers
- Holman Webb Lawyers
- Jarman McKenna Lawyers
- Jardine Lloyd Thompson
- Jeffery & Katauskas P/L (Geophysics)
- Lumley General Insurance
- McCabe Terrill Lawyers
- Novis health Care
- NRMA
- Omega Power Equipment Pty Ltd
- Pells Sullivan Meynink (Engineering Consultants)
- Prysmian Cables Australia (was Pirelli)
- QBE Insurance Ltd, (all states + overseas)
- Stowe Electrical
- Technical Assessing Pty Ltd
- Thiess Ltd.
- Underwriting Agencies of Australia
- Wotton & Kearney, Lawyers
- ZIP Heaters
- Zurich Insurance Ltd

Government & semi government clients have included:

- ACT Electricity & Water (ACTEW, now TransACT)
- Anglo Australian Observatory
- Aust Bureau of Statistics
- Aust. Tax Office
- Aust. National University
- Civil Aviation Authority
- NSW Crown Solicitor's Office
- NSW Police Service
- Queensland Health
- RAN
- Sydney Market Authority
- Tasmania Police
- State Rail Authority of NSW
- Unisearch
- University of NSW Voice Services Group
- Western Power Corporation

1980 - 1982

Senior Consulting Engineer

Laurie Systems Engineers.

Design and oversee installation of communications systems and networks for Woodside LNG project, North-West Shelf, Western Australia and Santos Ltd, Cooper Basin oil and natural gas projects, South Australia.

1974 - 1980

Various Telecommunications Engineering Positions

- PMG's Dept, then
- Telecom Australia, then
- Telstra, including two years with Lines Practices and Protection Section
- Four years on exchange installation projects;
- the last position held at Telstra prior to resigning was senior engineer in charge of the State Design Laboratory, New South Wales

Specific Areas of Work

- Physics and astronomy
- Testing and Certification of Cat 7, 6A, 6, 5e, 5 and Twisted Pair Cabling Components, Cables and Installations to EIA, ISO & Australian standards
- Cat 6A, Cat 6 and Cat 5e Cabling Connector Design and Testing
- Troubleshooting and Testing Installed Cabling Networks
- Lightning and Surge Protection System Design and Testing
- Earthing System Design and Testing and Power Co-ordination
- Power Systems and Cabling, including Magnetic Field Radiation Surveys
- RF Test and Measurement (PDI has a well equipped test lab)
- Radio Interference, Noise, EMC investigations and RF Sweeps for Debugging
- Optical Fibre Cabling Technologies, including Testing
- Investigation and Assessment of Damages Claims for Insurance Purposes
- Computer Systems, Software, Hardware and Networks
- Troubleshooting Electronics Circuits and Systems
- Electronics Design - Analogue, Digital and RF
- Electronics Manufacturing and Reliability Engineering
- Specialised Software Development and Interface
- Process Control, PLC's, Instrumentation and Data Acquisition
- Telecommunications Networks and Broadband Technology
- Fixed Line and Mobile Telephone Telephony
- PABX Systems, Key Systems and Cordless Telephony

Methodology

PDI was established in 1980, and has a well-proven track record in engineering consultancy, test & measurement and project management. PDI has a well-equipped lab, with balanced pair RF transmission measurements as required for LAN cabling systems and components being a house specialty.

Consultancy work is carried out primarily by the Principal, Mr George Georgevits. In addition, suitably qualified associates may be called upon from time to time as required to meet the specialised demands of particular projects.

Mr Georgevits has an Honours degree in Electrical Engineering, a PhD in Astrophysics and over 40 years experience in the industry as a consulting engineer.

Response to Agency Feedback

JMT Consulting

25 May 2020

Dear Sir/Madam

Barangaroo Concept Plan Modification (MOD 10) | JMT Consulting Review

JMT Consulting prepared a Supplementary Transport Management and Accessibility Plan (TMAP) to support a Section 75W Modification to Concept Plan Approval MP06_0162. Following the exhibition of the modified Concept Plan feedback was received from City of Sydney Council and Transport for NSW in relation to the supplementary TMAP.

Transport for NSW noted an additional 8-11 traffic movements would be generated as a result of the Concept Plan modification. TfNSW noted that this level of vehicle activity would not have a material impact on the transport network and operations in the CBD – consistent with the findings of the Supplementary TMAP prepared by JMT Consulting.

City of Sydney Council provided commentary in relation to on-site car parking numbers. It is noted that the car parking rates proposed as part of the Concept Plan modification are consistent with those currently in place for the Barangaroo Precinct, with no changes sought to these rates. The actual number of car spaces provided in future development sites will be subject to more detailed development applications. Consistent with City of Sydney's advice, these spaces are to be used by residents of the precinct and not function as commuter car parking.

Please don't hesitate to contact the undersigned should you have any questions.

Regards



Josh Milston

Director | JMT Consulting

MIEAust CPEng

Copy of Open Information Webinar Presentation and Notes

Infrastructure NSW



Barangaroo South – Modification 10

6 May 2020

Agenda

- Introduction
- Precinct Overview
- Barangaroo South
- Modification 10
- Q&A

An aerial photograph of Sydney, Australia, showing the Sydney Harbour Bridge, the Sydney Opera House, and the city skyline. The water is a deep blue, and the sky is a clear, bright blue. The city is densely packed with buildings, and the harbour is filled with boats and ships.

\$10 Billion
project value

50% Public Domain
for the community

35,000
workers & residents

Public Transport
Wynyard Walk, Ferry Terminals, Metro Station

Commitment to Climate +
carbon neutrality

\$3.3 Billion
economic benefit

6Ha Headland Park
Barangaroo Reserve

500k Tonnes Remediated
from old Sydney Gasworks

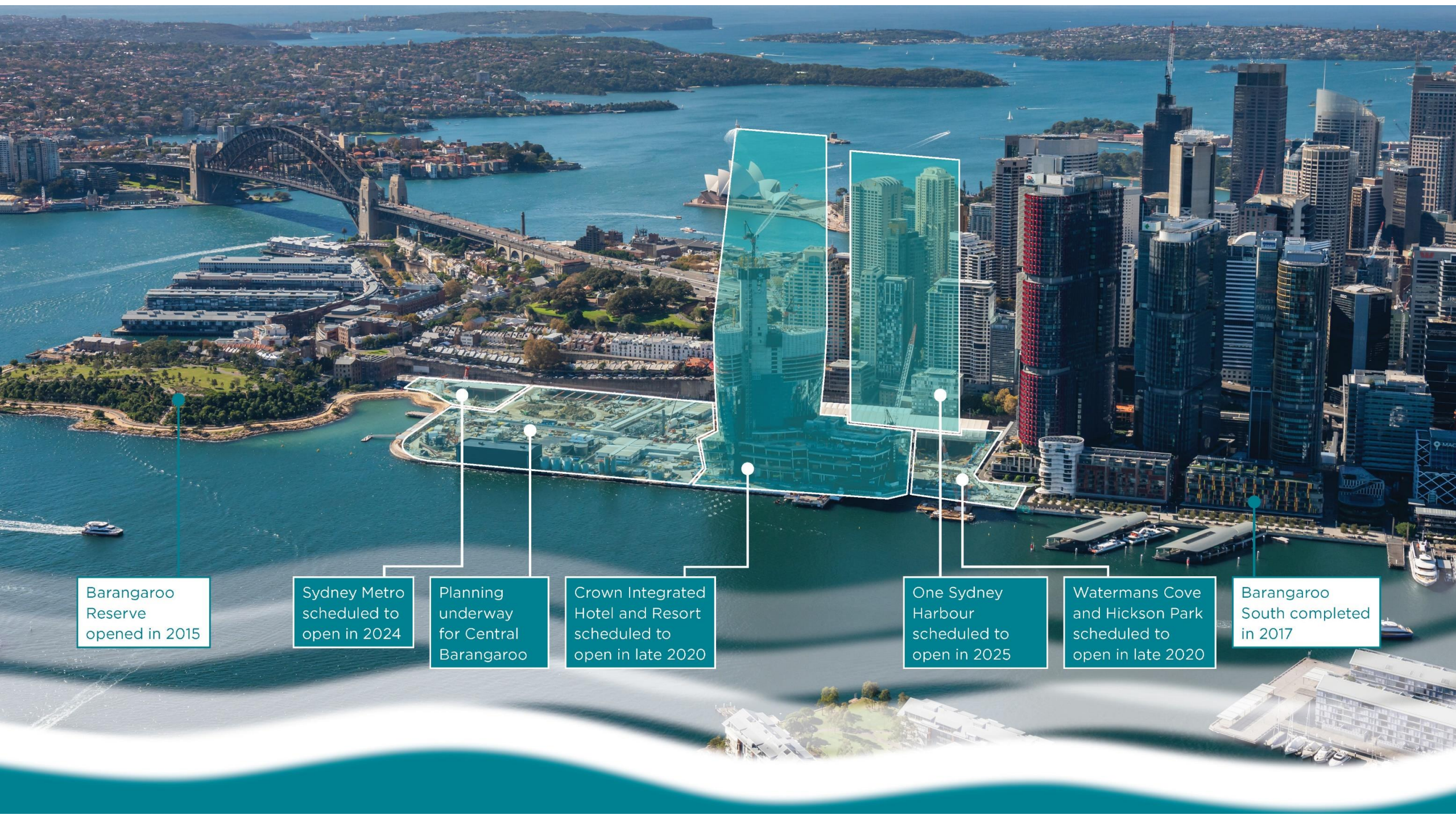
14km Foreshore Walk
on completion











Barangaroo Reserve opened in 2015

Sydney Metro scheduled to open in 2024

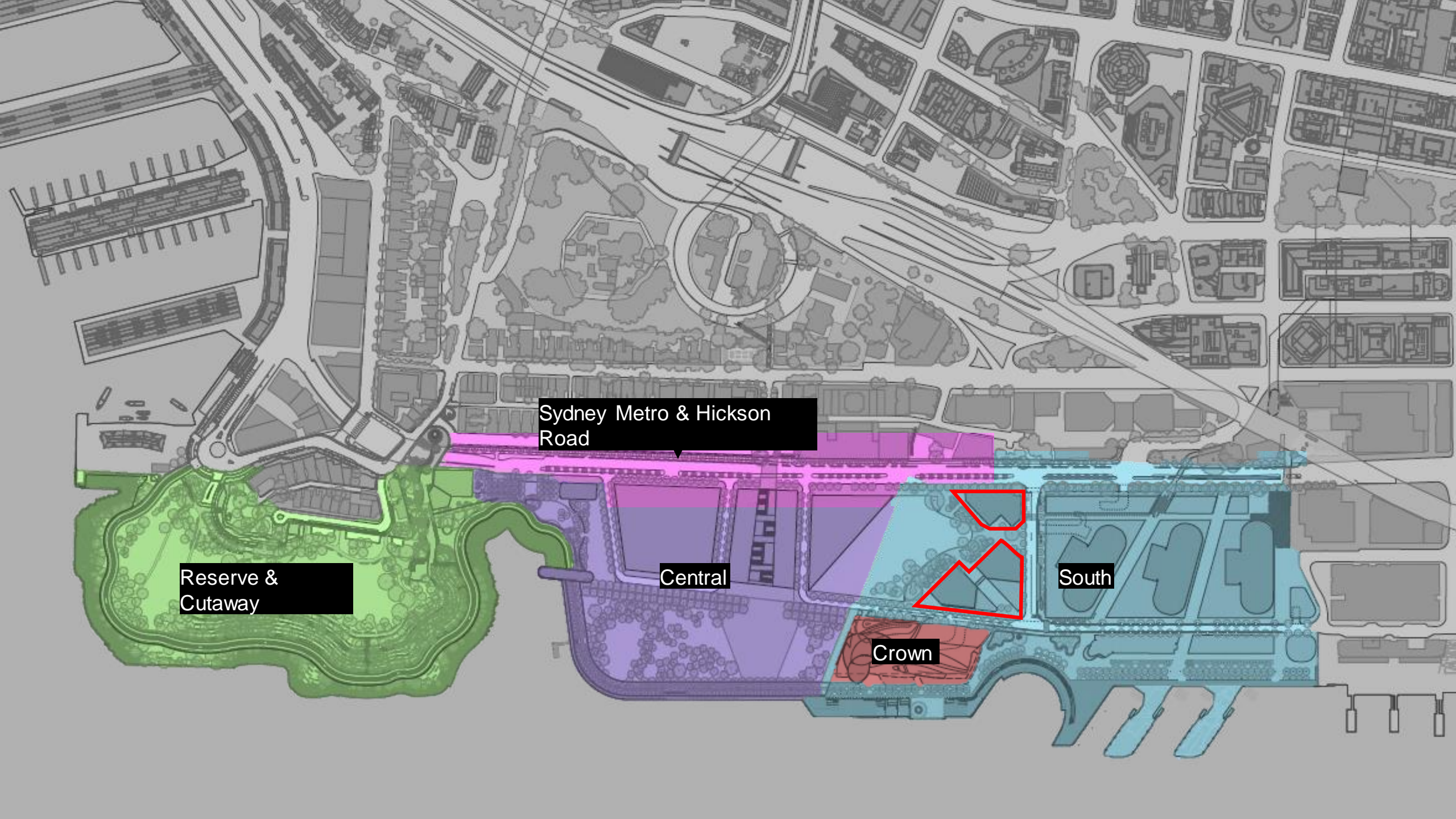
Planning underway for Central Barangaroo

Crown Integrated Hotel and Resort scheduled to open in late 2020

One Sydney Harbour scheduled to open in 2025

Watermans Cove and Hickson Park scheduled to open in late 2020

Barangaroo South completed in 2017



Reserve &
Cutaway

Sydney Metro & Hickson
Road

Central

Crown

South





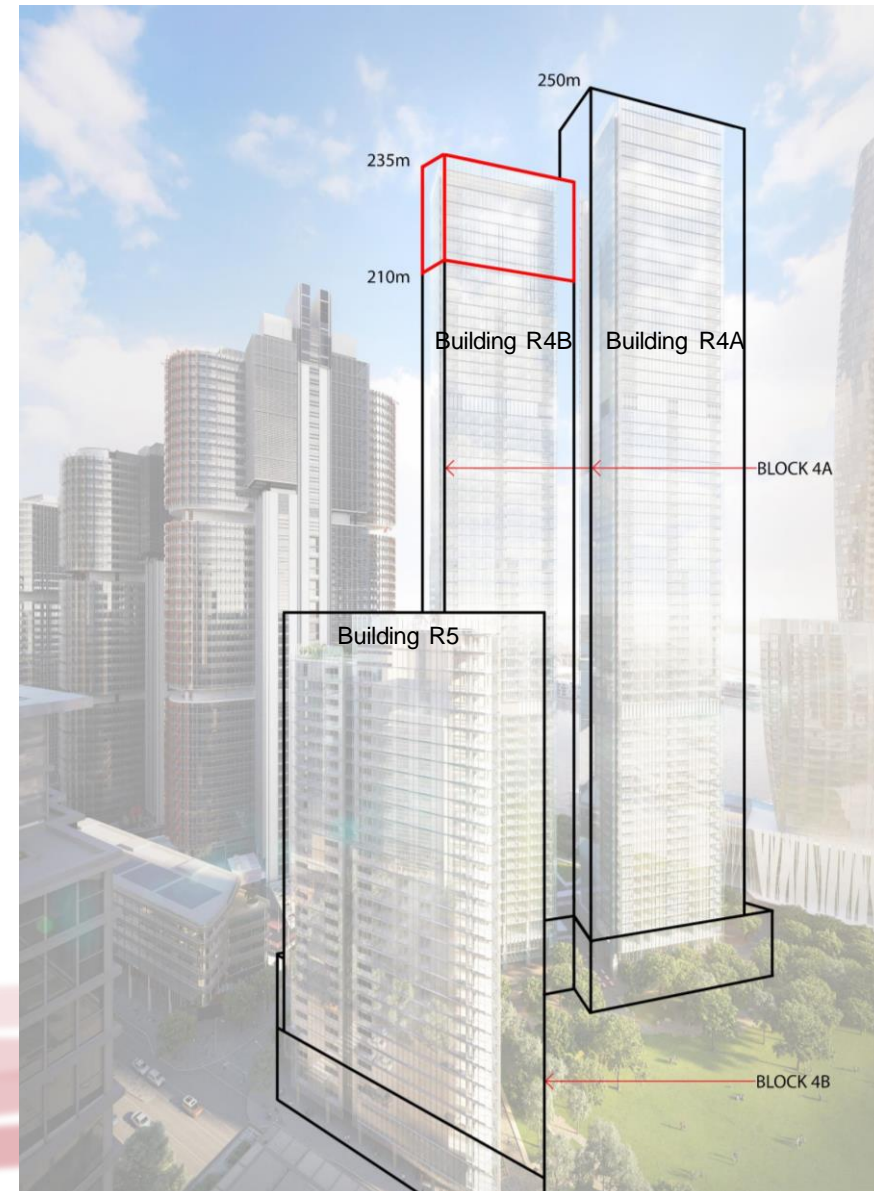


Block 4B
R5

Block 4A
R4A
R4B

Modification 10

- Building R4B envelope: height increase to 235m – allows for proposed extra 5,650m² GFA in Block 4A.
- Building R5 envelope: minor adjustment to footprint – allows for proposed extra 2,350m² GFA in Block 4B.
- Align delivery of Key Worker Housing: complete by last occupation certificate for Building R5 – expected to be by 2025.

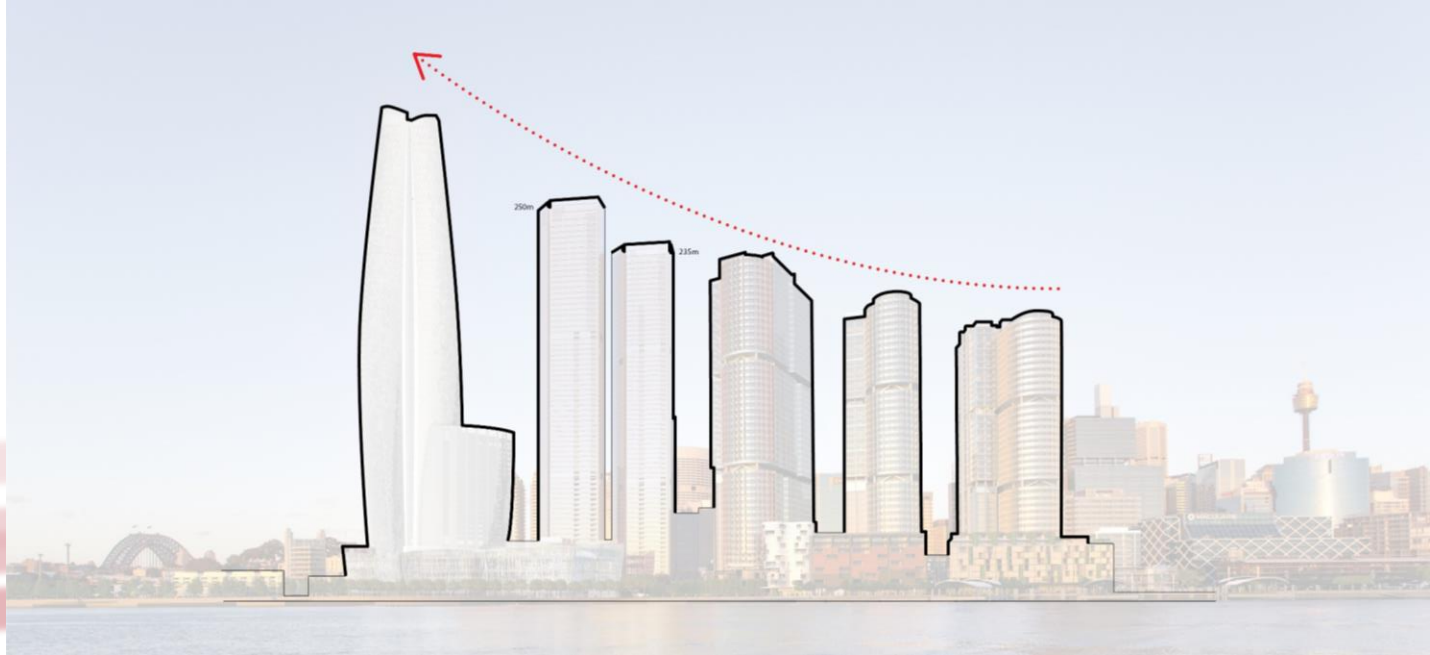


Strategic overview of Modification 10

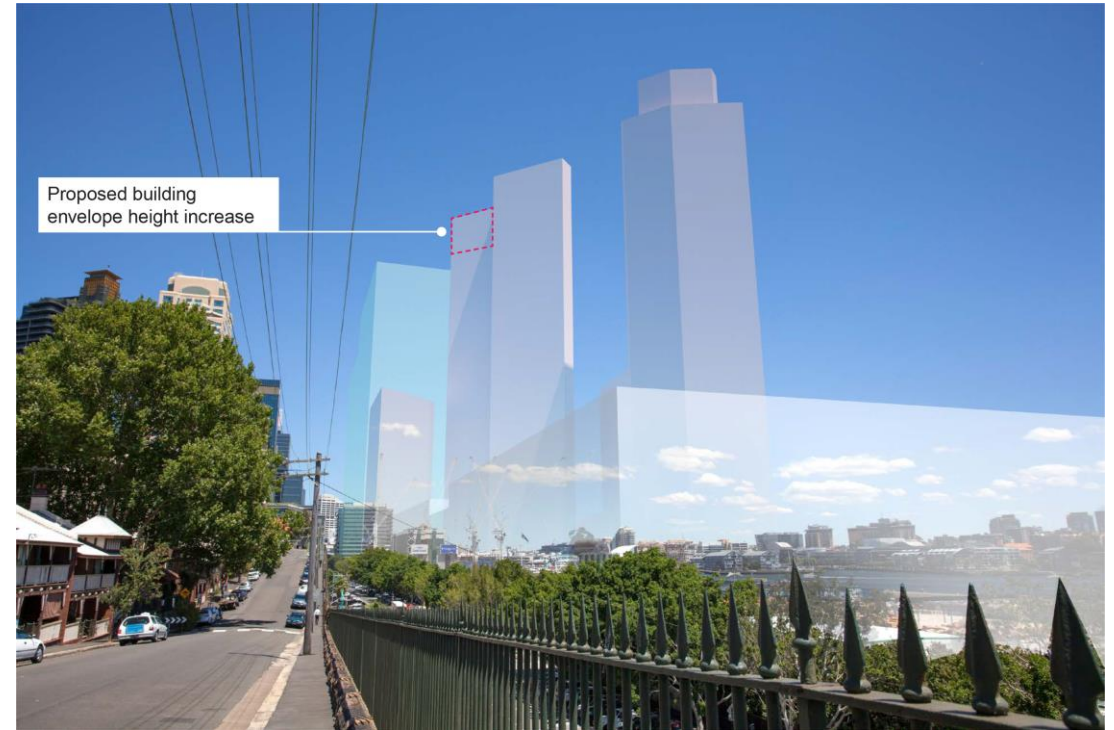
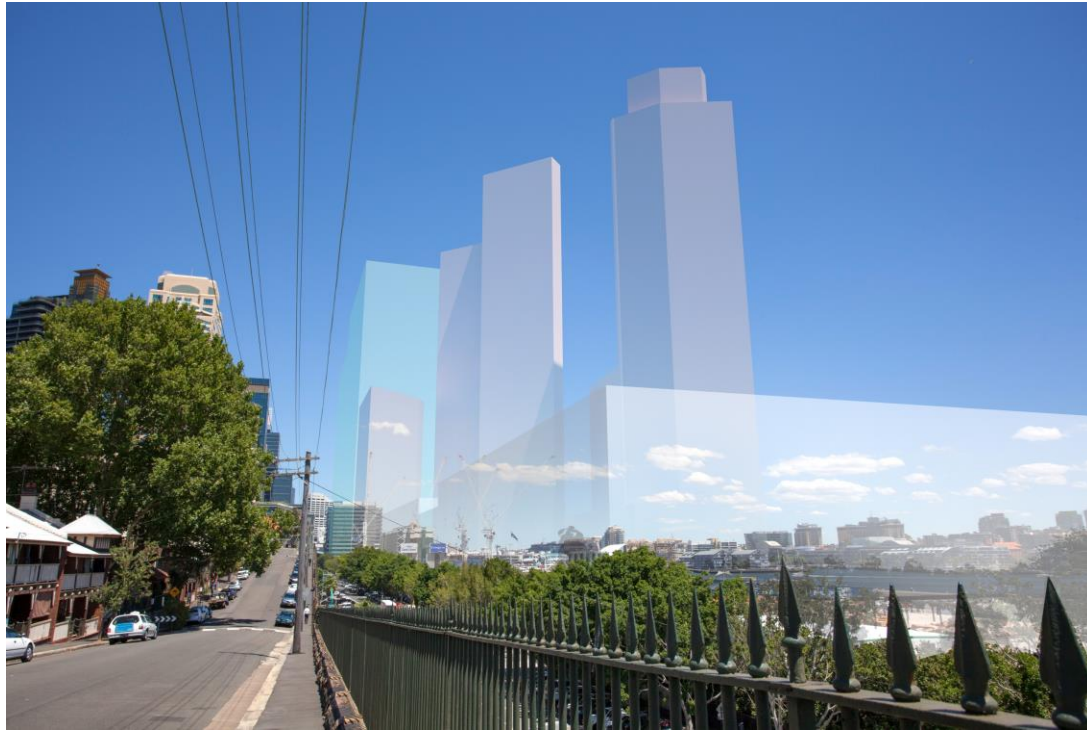
- More homes close to public transport and jobs.
- Additional housing in Barangaroo South will be supported by:
 - Sydney Metro station and other public transport connections
 - Retail, community services and public open space delivered as part of Central Barangaroo
 - Employment opportunities in Barangaroo and Sydney CBD
- Additional residents will contribute to precinct amenity:
 - Safety and surveillance
 - Activation during the day, evenings and on weekends

Strategic overview of Modification 10

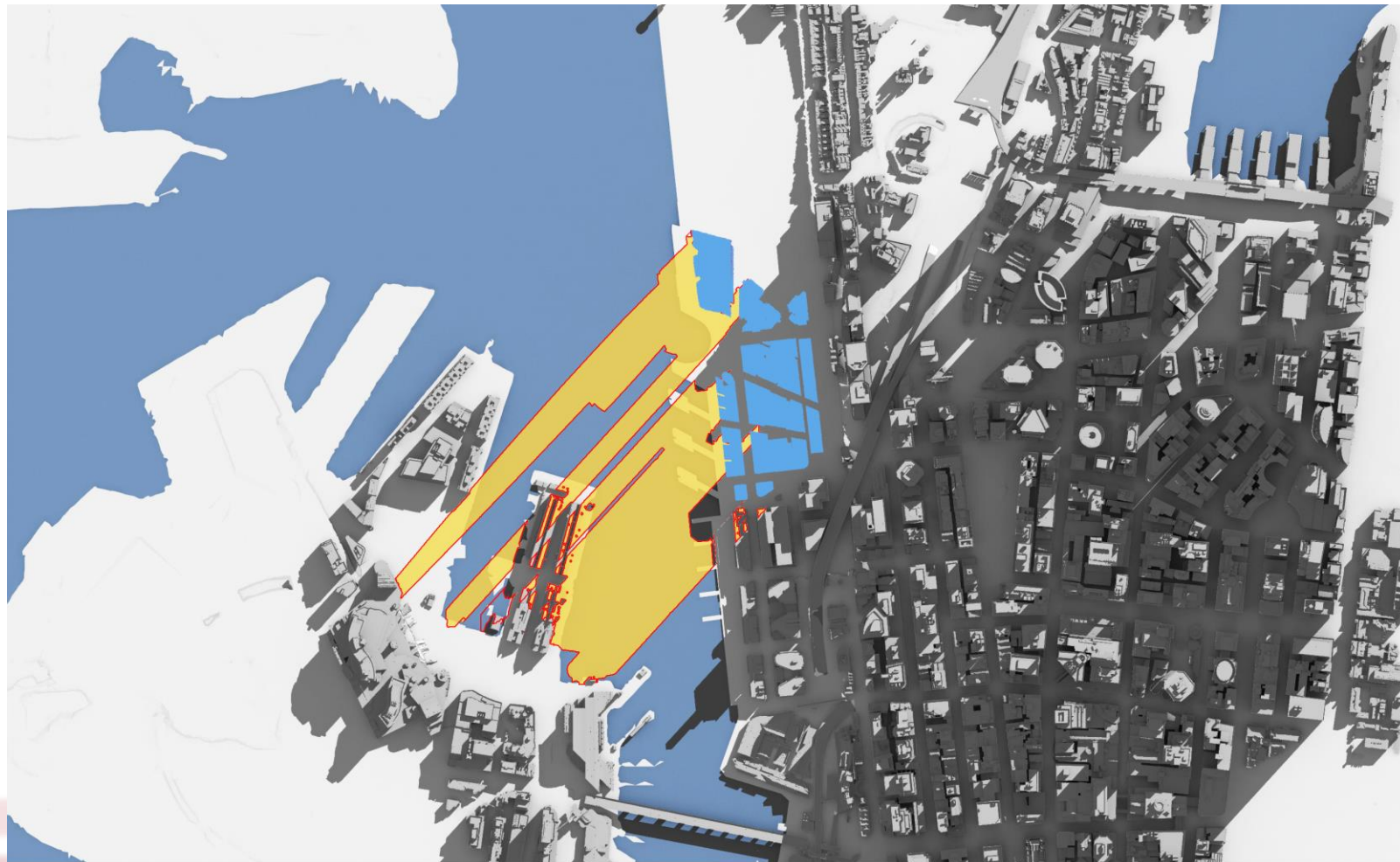
- Maintain the mix of uses approved under the Concept Plan.
- Provide high quality architecture and urban design.
- Maintains the Master Plan principles and urban design approach established for Barangaroo South.
- Environmental factors are similar to those already approved in the Concept Plan.



Visual impact assessment



Shadowing assessment



Barangaroo South Concept Plan Amendment (Mod 10) - Shadow Study (RL 235)

21st June, 9am

AEST

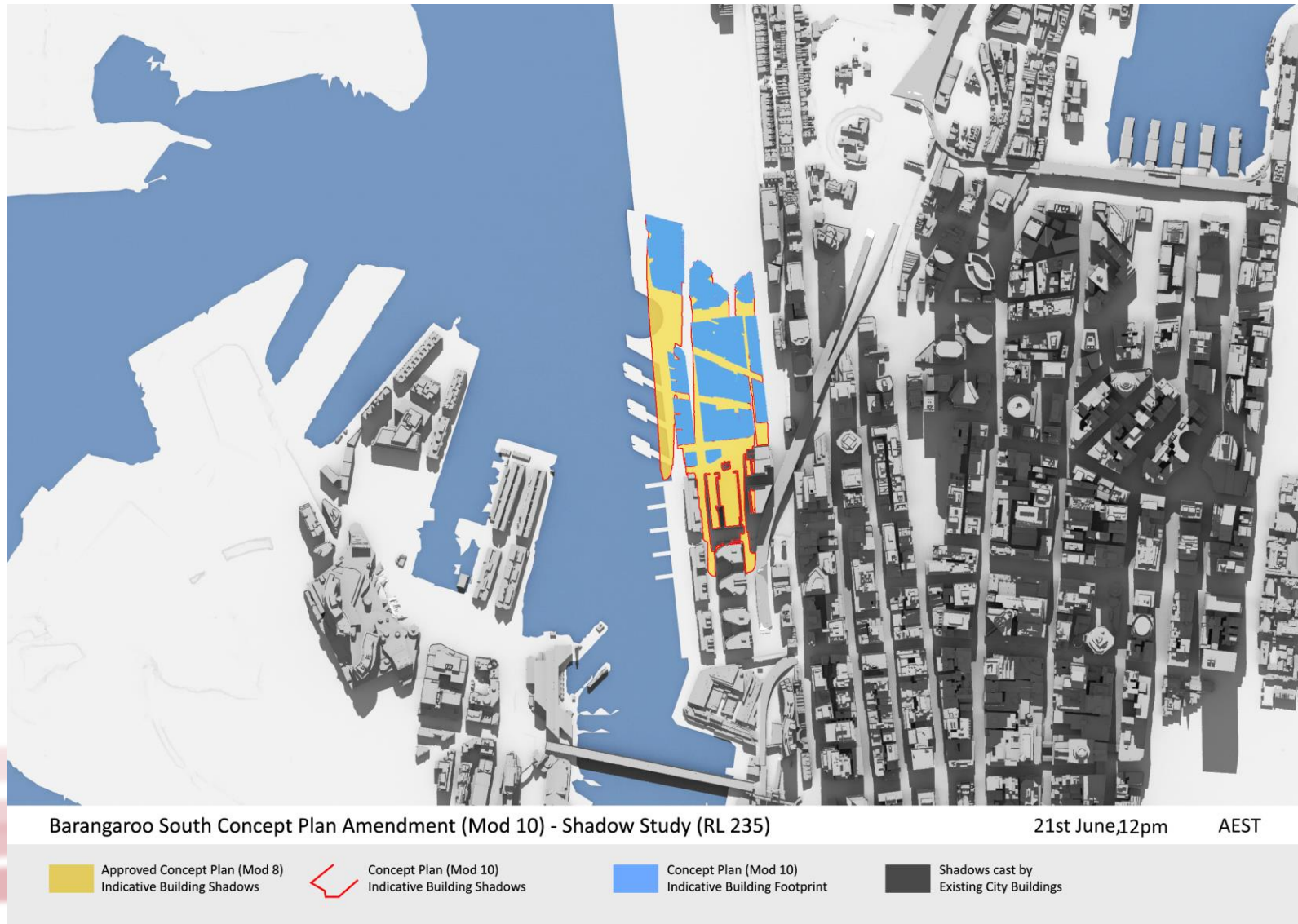
Approved Concept Plan (Mod 8)
Indicative Building Shadows

Concept Plan (Mod 10)
Indicative Building Shadows

Concept Plan (Mod 10)
Indicative Building Footprint

Shadows cast by
Existing City Buildings

Shadowing assessment



Environmental issues

- Minor increase in traffic during AM and PM peak (approx. +10 vehicles).
- Substantial improvements to the local road network due to Sydney Metro.
- Overall, the proposed changes are considered consistent with the approved Concept Plan.



Next steps

April-May
2020

- Modification 10 on public exhibition until Tuesday 12 May.
- Submissions to be made to Department of Planning, Industry and Environment (DPIE) via the Major Projects webpage.

Mid 2020

- Infrastructure NSW addresses issues raised in submissions.

Mid-late
2020

- DPIE prepares an environmental assessment report for the Minister for Planning and Public Spaces who decides to approve or disapprove Modification 10.
- If approved, Lendlease submits amending Development Applications for the changes to the two towers.

Q&A



Minutes of online forum on Modification 10 to the Barangaroo Concept Plan

6 May 2020

Online forum details

The online forum was held on Wednesday 6 May 2020 via Microsoft Teams with community members as well as representatives from Lendlease. The online forum was attended by four community members, as well as representatives from Lendlease.

The online forum commenced with a presentation given by key members of the Barangaroo project team outlining general information on the Barangaroo project and specific information on Modification 10 to the Barangaroo Concept Plan.

These minutes record the Question and Answer section of the online forum as well as general feedback given.

1. Question and answers

Q: Why are the 3pm shadow diagrams missing?

A: It was decided to show the 9am and midday shadow diagrams in the presentation. The 3pm shadow diagram is in the planning document, which can be sent via email after the meeting.

Q: With the increase of 8000 square metres in gross floor area (GFA), has there been any addition to the open space?

A: The open space remains the same - the target has always been for 50% public domain, which hasn't changed. Currently tracking to be above 50%.

Q: Is community space still being adhered to (1/3 parkland, 1/3 commercial and 1/3 community space)?

A: The commitment has always been 50% public domain across the whole site.

Q: Will the public domain be high quality? The quality of public domain in Barangaroo appears to be compromised.

A: The focus is on delivering the world's best public domain. Hickson Park is envisaged as a quieter space. Central Barangaroo will have significant public domain spaces, with a park on the waterfront, which is a significant outcome for NSW. The Central Barangaroo public domain spaces are envisaged to be active and vibrant spaces.

Q: Is the additional GFA a gift for Lendlease? It seems like the original intention for the Barangaroo precinct has been compromised.

A: The additional GFA being sought is an opportunity to leverage from the new Sydney Metro station at Barangaroo. Increasing the number of homes in Barangaroo South which is well connected to public transport networks and jobs, reinforces the sustainable future of Barangaroo.

Q: In the presentation there was a depiction of Central Barangaroo and it was mentioned that planning is underway – what stage is it up to? What height are the buildings depicted along High Street going to be?

A: The visual impact assessment that you were referring to was for this Modification 10 to the Barangaroo Concept Plan. The planning for Central Barangaroo is being worked on currently and there will be a consultation held in due course.

Q: What extra money is the NSW Government getting as a result of approval of this application?

A: Any financial arrangements Infrastructure NSW has with developers are commercial in confidence.

Q: Given the GFA has been increased in Barangaroo South, has there been a deal done with Aqualand regarding taking some of their GFA on the Central Barangaroo site?

A: Any financial arrangements Infrastructure NSW has with developers are commercial in confidence.

Q: Will Central Barangaroo include an open-air auditorium?

A: A gathering space has been in the plan since community consultation back in 2013/14. Since considerable time has passed, we now feel there is a need to consult the community again.

Q: Will new mature trees be planted in the precinct instead of younger trees?

A: It is being considered for Central Barangaroo.

Q: Will the increased height increase wind?

A: Detailed wind testing was undertaken for Modification 8 to the Concept Plan. The latest wind assessment found the additional height doesn't change the outcomes of the wind impact assessment. The condition will still be the same, particularly at ground level.

2. Feedback/ Comments

- Concerns regarding effects of wind from proposed Modification 10 to the Concept Plan as well as existing buildings in the precinct.
- Concern regarding custodianship of Barangaroo Master Plan and whether Infrastructure NSW is protecting community interests for the precinct.
- Concern regarding “overdesigned” buildings and public spaces.

2190714

Mod 10 Concept Plan - Response to Submissions

Virtual Ideas

Mod 10 Concept Plan – Response to Submissions

Mr Jim Betts
Secretary
Department of Planning, Industry and Environment
12 Darcy Street Parramatta NSW 2150

Dear Mr Betts,

We have been requested to provide a response to the submission made by a resident of Balmain East, NSW in relation to the Modification 10 to the Concept Plan that has been lodged for public exhibition with the Department of Planning, Industry and Environment. By way of background, Virtual Ideas prepared the Visual Impact Assessment for Modification 10 to the Concept Plan (Mod 10). Virtual Ideas also prepared the Visual Impact Assessment for Modification 8 to the Concept Plan (Mod 8).

The item requiring a response is noted as point 7 in the subject submission and is quoted below:

"7. Page 32 and 33 of the visual impact document incorrectly shows the impact of Mod 8 / Mod 10 - they appear swapped and therefore are misleading about the potential visual impact of the additional height."

We have reviewed the images presented on both the "Mod 10 Visual Impact Photomontages report dated 30th January, 2020" and the "Mod 8 Visual Impact Photomontages report dated 18th of September, 2014". Following this review we have determined that the resident making the submission is likely to be commenting on a revised visual treatment used to layer the semi-transparent massing envelopes in 'View 9 - Munn Reserve' as presented on pages 32 and 33 of the Mod 10 Photomontages report dated 30th January, 2020 (shown as an extract in Appendix D of this letter).

In creating the original semi-transparent massing envelopes shown in the 'View 9 - Munn Reserve' perspective, which was presented on page 25 of the Mod 8 Photomontages report dated 18th of September, 2014 (shown as an extract in Appendix A), we overlayed the massing envelopes with different blending modes and transparencies.

From the View 9 camera perspective, the result of this overlaying produced a brighter visual effect where the two massing volumes overlapped. We acknowledge this could lead the viewer to conclude that the Commercial Towers Massing Envelope is positioned in front of the One Sydney Harbour Towers and Crown Resort Envelopes, rather than behind it (refer to the illustrated mark-up of this at Appendix B and Appendix C of the letter).

While we acknowledge that the above representations presented in the Mod 8 report could potentially make it more difficult to determine the positioning of each of the massing envelopes, it was not presented in this way to intentionally misrepresent the visual impact, rather, it is a result of the rendering to display the massing envelopes.

This visual treatment was therefore revised for the Mod 10 submission so that the envelopes could be presented in a clearer way for the reader.

In both the “Mod 8 Visual Impact Assessment Report” and the “Mod 10 Visual Impact Assessment Report”, the full extent of the massing envelopes are correctly shown. Therefore, the extent of visual impact of massing envelopes has been accurately represented.

Please refer to the following Appendices for a detailed illustration of the above response.

Sincerely,

Grant Kolln
Company Director

A handwritten signature in black ink, appearing to be 'G. Kolln', written in a cursive style.

Appendix A

Appendix A has been extracted from page 25 of the Mod 8 Visual Impact Photomontages report dated 18th of September 2014 and shows the perspective 'View 9 - Munn Reserve' as presented in that report.

The blending of the transparent massing envelopes creates a brighter area which could give the impression that the Commercial Towers Massing Envelopes sit in front of the One Sydney Harbour Towers and Crown Resort massing envelopes from the camera perspective.



Image showing massing of the Proposed Concept Plan Amendment (Mod 8)

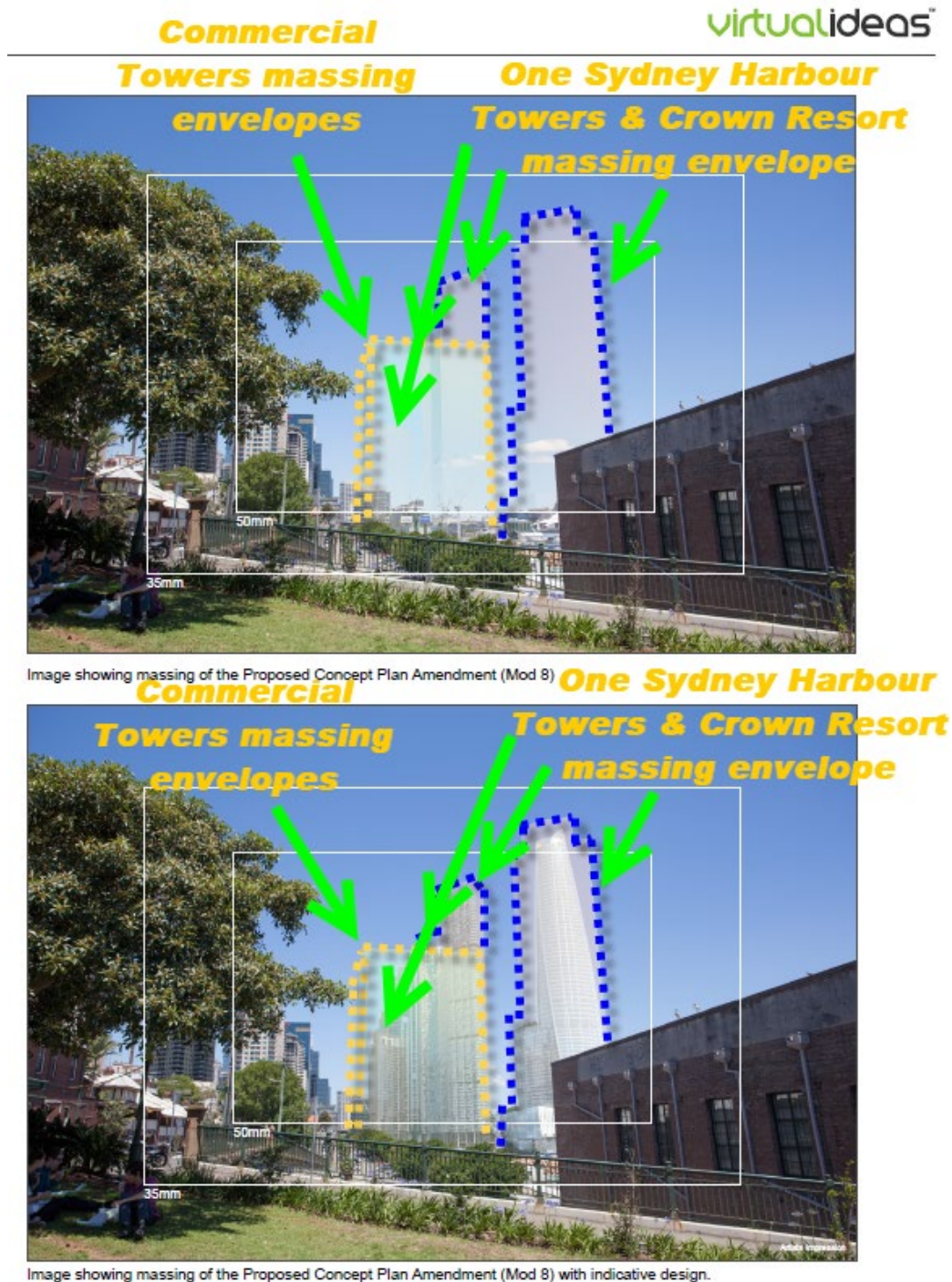


Image showing massing of the Proposed Concept Plan Amendment (Mod 8) with indicative design.

Appendix B

Appendix B has been extracted from page 25 of the Mod 8 Photomontages report dated 18th of September 2014 and shows the perspective 'View 9 - Munn Reserve'.

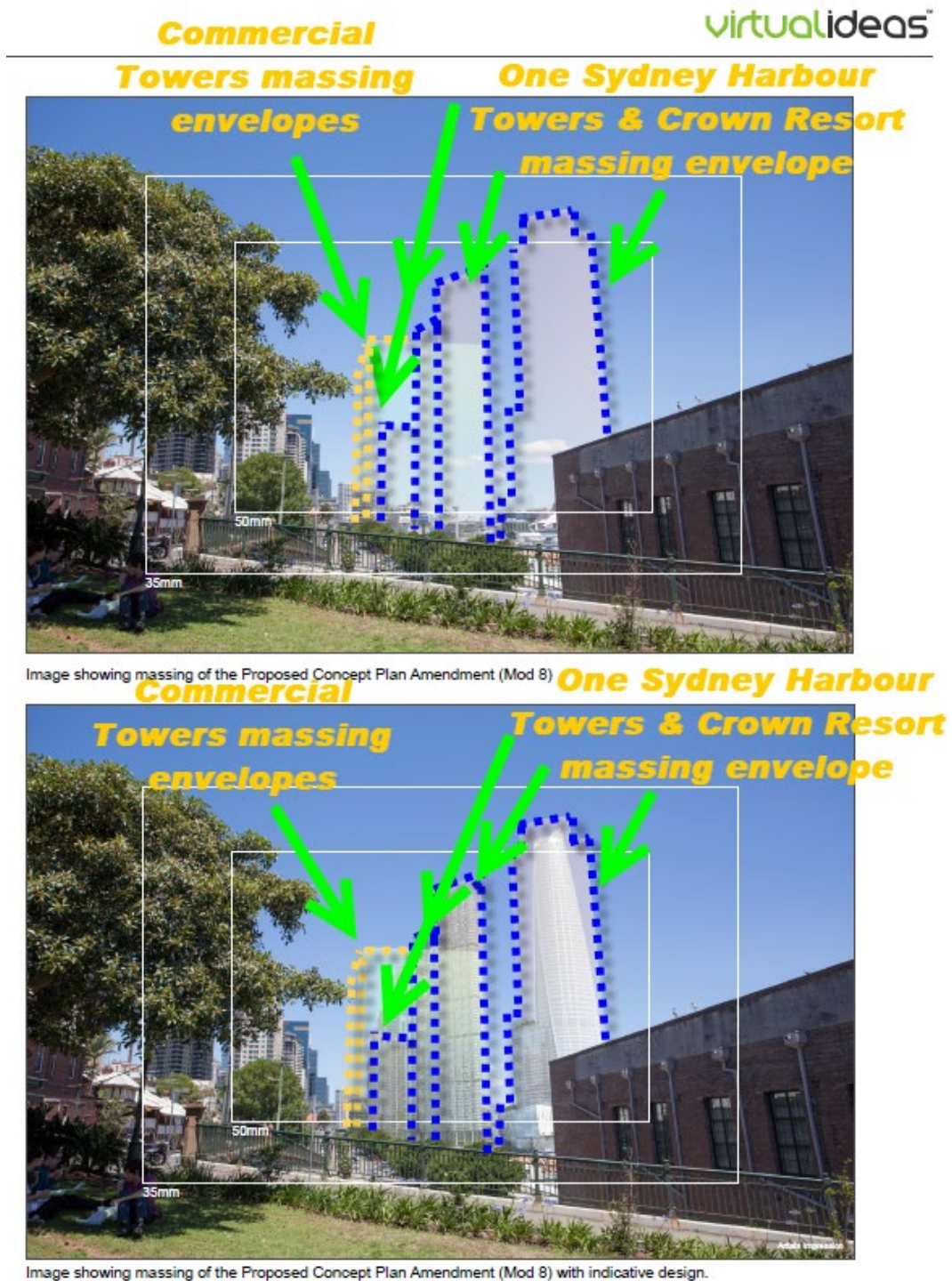
The mark-up below indicates how the overlaying of the transparent massing volumes from this camera perspective could be misinterpreted to suggest that the One Sydney Harbour Towers and Crown Resort massing envelope (the blue dotted box) sits behind the Commercial Towers massing volume (yellow dotted box).



Appendix C

Appendix C has been extracted from page 25 of the Mod 8 Photomontages report dated 18th of September 2014 and shows the perspective 'View 9 - Munn Reserve'.

The adjusted mark-up below illustrates how the massing volumes should correctly be perceived from this camera perspective.



Appendix D

Appendix D has been extracted from page 33 of the Mod 10 Photomontages report dated 30th January, 2020 and shows the perspective 'View 9 - Munn Reserve'.

The presentation of the massing envelopes were updated in the Mod 10 submission to present the adjusted blending of the transparent massing envelopes and to make it clearer that the One Sydney Harbour Towers and Crown Resort massing envelopes are positioned in front of the Commercial Towers massing envelope from the perspective of the camera.

