

STAGE 1A PUBLIC DOMAIN SSD 6303


Attachment A – Response to Submissions

Response to Schedule 1: Additional matters identified by the Department

| Issue | Lend Lease Response |
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| Integration of Stage 1A works with the broader public domain | |
| <p>Information should be submitted to confirm how the delivery of the Stage 1A public domain works will integrate with other development works scheduled in Barangaroo and the surrounding areas including the following planned works:</p> <ul style="list-style-type: none"> ▪ The upgrade of Hickson Road and key intersections (including signalisation); and ▪ The installation of temporary public domain works in Barangaroo South. <p>In respect to the Hickson Road upgrade, details should be provided to demonstrate how the planned levels for the permanent public domain (Stage 1A) will integrate with the existing and proposed levels for Hickson Road including the treatment for the eastern edge to Hickson Road where there is up to 1 metre level change. The timeframe for completion of this work should be provided.</p> | <p>The planning application contains details of how the site will integrate with Hickson Road, at its existing levels. Changes to Hickson Road are not on the Barangaroo South site and require a separate approval prior to any construction. Lend Lease in consultation with the BDA and the City of Sydney Council is preparing a design for the amended levels of Hickson Road. A Review of Environmental Factors (REF) is expected to be completed for the works associated with the potential amended design of Hickson Road.</p> <p>In the event that REF is approved and Hickson Road is upgraded, the levels within the Barangaroo South site can be modified to integrate with the proposed future Hickson Road design seamlessly. The Public Domain has been designed with sufficient flexibility to ensure that this can occur.</p> <p>The signalisation of the Hickson Road/Napoleon Street intersection is the subject of a separate application that is to be submitted to the Roads and Maritime Services (RMS) and is based on existing road levels. A design will also be provided to RMS for the future upgraded Hickson Road for information only.</p> <p>The DA replaces temporary public domain for all non-building envelope areas. The levels and materials are consistent between both the approved temporary public domain and the proposed public domain, which would allow for any temporary public domain that has been constructed to be seamlessly integrated with the permanent public domain, to allow for construction processes to occur in a staged manner.</p> |
| Active Uses | |
| <p>The proposal should demonstrate consistency with the Barangaroo Concept Plan (as amended) in respect to active uses in the public domain (i.e. outdoor seating areas). Currently the Concept Plan limits active uses in the public recreation zone to 3,000sqm in Barangaroo South. Active uses are defined in the original Concept Plan (October 2006) as including cafe kiosks and associated outdoor seating areas and such uses are to be secondary to the dominant use as public open space.</p> | <p>The non-fixed furnishing shown in the public domain for licensed / restaurant seating is illustrative only. There are no active uses proposed in the public domain application, and therefore no associated seating areas. As stated in sections 3.2 and 3.3 of the EIS submitted with the application, the application does not seek approval for any retail uses within the public domain, including the waterfront structure areas. These will be subject to separate approval(s). In the absence of any approval for such uses being provided, the area is to be and will remain unrestricted public space.</p> |



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| <p>The application seeks approval for the construction of an arbour structure (or 5.3m wide loggia) within the waterfront promenade. In conjunction with the building awnings approved for RB and R9, this area referred to as the 'terrace' has a combined width of 11.5m (noting that the buildings are typically setback 30m from the waterfront) and is proposed in two sections running parallel with RS and R9 for lengths of 54m and 78m, respectively. Whilst the current application does not seek approval for use of the arbour structure, its use is commonly depicted in the drawings as providing an extension of the outdoor seating areas linked to cafe and restaurant uses proposed to activate the ground floor level of buildings RS and R9. The intended use as an extension to the retail areas and opportunities to 'personalise' this space is also detailed in the Waterfront Place Retail Structures report prepared by Tony Caro Architecture Pty Ltd (Appendix G). The effect of the proposed arbour structure is to reduce the 'true' publicly accessible component of the waterfront promenade. This being the case, further justification for the construction of the arbour structure as an extension of the 'terrace' should be provided including to confirm that it will not diminish the level and legibility of public access along the foreshore (including covered/ weather protected access).</p> | <p>The non-fixed furnishing shown in the public domain for licensed / restaurant seating is illustrative only and would be subject to a future approval.</p> <p>The Waterfront Promenade has been carefully designed to positively provide for and support a range of functions including pedestrian movement and other activities such as sitting, ferry access, as well as future food and beverage venues. Whilst not part of this application, activation of the promenade through restaurant seating is shown indicatively because it is considered to be a key component of ensuring the vitality and therefore long term success of Barangaroo.</p> <p>Providing a 30m wide waterfront area without providing space for uses that provide activation and vitality would be a far worse outcome for the public domain. An example of where this has recently occurred is in front of the NAB building at Docklands in Melbourne. Photos of the public domain below illustrate that by not providing uses along the foreshore will ultimately lead to the area becoming devoid of activity.</p>  |

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| | <div data-bbox="1223 269 1895 772"></div> <div data-bbox="1223 799 1895 1254"></div> <p data-bbox="1223 1281 2029 1390">Sufficient public access, will be available along the waterfront promenade via both the wide pedestrian walkway provided between the waterfront structures and the harbour, and also a 2m pedestrian walkway between the R8 and R9 buildings and the waterfront structures. This latter walkway will be linked to main waterfront promenade with stairs and ramps.</p> |

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| | <p>In the 'Barangaroo Pedestrian Walkway Evaluation' report by Arup dated 02/04/14 (See Attachment K) the predicted the Level Of Service (LOS) and pedestrian movements in the 2m pedestrian zone as follows:</p> <ul style="list-style-type: none"> ▪ Weekday AM flow: LOS A (<0.31 ppl/m²) ▪ Weekday Midday flow: LOS B (0.31 – 0.43 ppl/m²) ▪ Weekend Day: LOS C (0.43-0.72 ppl/m²) <p>The report states, 'Walkway LoS C or above (i.e. A, B, or C) is deemed an appropriate level of performance for the Precinct to allow for bidirectional movements.' And that "Overall, the provision of pedestrian walkway space within the Barangaroo South Precinct, and the allowance for retail activity and seating adjacent to these spaces is deemed to be appropriate for the estimated pedestrian demand during peak periods."</p> |
| <p>The proposed zones for public access and outdoor seating associated with the café and restaurant uses within the 'terrace' area should be confirmed on the waterfront series of drawings.</p> | <p>This application does not include the use of the public domain for outdoor seating. Any such use is subject to a licence agreement with the land owner (BDA) and a separate development approval. The principles that will underpin the manner in which the area is potentially used will incorporate adequate areas for public access. For example, ramps up from the promenade to the retail glass line are provided at the ends and midpoint of each building. Additionally there will be a minimum zone of 2m width along the face of the buildings retained for pedestrian circulation should licenced seating areas be proposed .</p> |
| <p>Further to the above, the application proposes the potential enclosure of the harbour structure with a retractable blind system in order to meet environmental performance requirements for the terrace and in particular, to shelter this area from inclement weather conditions. The department advises that it does not support the proposed retractable blind system as it adds to the perceived 'privatisation' of this area and provides a visual barrier demarcating the private and public realm.</p> | <p>The blinds are likely to be used only in inclement weather (approximately 2-3% of the year for rain and approximately 10% for wind). Without the opportunity for (operable) weather protection, the spaces become unusable during times of inclement weather, and therefore the protection will improve public access to the space.</p> <p>Restaurants are publicly accessible areas and, as described above, would contribute significantly to the vitality of the Waterfront Promenade and will be one of the reasons for why a person would choose to visit the Waterfront Promenade, particularly at times when extreme weather is being experienced.</p> <p>It is considered that the presence of a blind will not "demarcate" public and private domains. The retractable blinds are intended to be visually permeable and as such are not anticipated to significantly interrupt sightlines to/from the waterfront.</p> |
| Remediation | |
| <p>The application should be amended to confirm that it seeks approval to remediate those areas of the site which fall outside the scope of remediation approved in MP_ 10_0023 and MP11_0002. These areas should be clearly identified on a plan.</p> | <p>The proposed development has been amended to include the remediation of those areas of the site which fall outside the scope of remediation approved in MP_ 10_0023 and MP11_0002, as identified as required during the carrying out of works, in accordance with the relevant Remedial Action Plan (RAP). An updated letter from AECOM has been provided at Attachment J.</p> |
| <p>The letter from the Site Auditor (Appendix E) should be updated to reference the amended letter from AECOM dated 6 May 2014 and not the AECOM letter dated 12 March 2014 which was submitted for the EIS adequacy review.</p> | <p>The Site Auditor's letter has been updated to reference the updated AECOM letter and is included at Attachment J.</p> |

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| <p>Cycle Parking</p> <p>To date, the final site wide solution for bicycle parking has been deferred until the permanent public domain plan. In this regard, it is unclear how the application accommodates the permanent cycle parking requirements for Barangaroo South and in particular, how the temporary spaces approved for C3, C4 and C5 will be accommodated as permanent spaces in Barangaroo South.</p> | <p>The application seeks to provide 84 bicycle parking spaces (42 bike racks) for visitors to the site will be provided in various locations across the public domain comprising:</p> <ul style="list-style-type: none"> • 25 bicycle parking spaces for visitors to commercial buildings in Stage 1A; • Between 59 spaces to serve visitors to other uses on the site. <p>This quantum of parking has been determined based on the expected peak population estimates for a typical weekday for the Barangaroo South site. The Barangaroo development proposes to provide bicycle parking for 2% of the visitor population – at the upper end of the anticipated visitor bicycle mode share range and exceeding the rate to be provided in the adjacent Darling Harbour Live development public domain (1.5%). This equates to 118 spaces for Barangaroo South Stages 1A and 1B, of which half (59) will be provided within the Stage 1A public domain and the remainder will be located within the Stage 1B development. This quantum of parking is in excess of the proportion provided for any other public domain area in Sydney. Please refer to the Traffic Assessment (Attachment F), which clearly articulates the basis for which the number of spaces in the public domain were determined using best practice standards.</p> <p>The temporary cycle parking areas that formed part of the temporary public domain for Buildings C3, C4 and C5 were provided in order to make use of the street frontage areas should the Hickson Road Buildings be delayed, not because there was demand generated by the buildings that required their provision. The numbers of spaces was a nominal amount determined based on the space available, not demand. The more recent Basement Modification 6 approval provided an alternative arrangement for these spaces following a more detailed consideration of the best way to activate the spaces on a temporary basis. Accordingly there is no demand or reason that the nominal number of temporary spaces that were shown for the commercial buildings should be provided in the permanent public domain.</p> |
| <p>The provision of cycle parking (and the support infrastructure) is an essential component of achieving the 6 star Green-star commitment (Green Building Council's office rating tool). Justification for the limited number of cycle spaces proposed in Stage 1A should be provided including to confirm that the proposal is in line with the development's sustainable transport targets.</p> | <p>The structure of Green Star provides the applicant with the ability to earn points in a variety of ways, other than by provision of bicycle parking. The bicycle parking being relied upon to contribute to the achievement of the Green Star rating is located within the basement, not the public domain (noting that Commercial Building C4 has already received its GBCA 6 Star Design Rating).</p> <p>The public domain provides a number of visitor bicycle spaces for Barangaroo that is in excess of the proportion provided for any other public domain area in Sydney. The Traffic Assessment (see Attachment F) articulates the basis for which the number of spaces in the public domain were determined using best practice standards.</p> |

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| Lighting | |
| <p>The Lighting Plan, DA209 Rev.L prepared by Aspect I Oculus in conjunction with the Lighting Report (Appendix H) prepared by Lend Lease provides limited information in relation to the proposed lighting strategy for Union Walk and City Walk. These pedestrian walks appear to rely on lighting from Commercial Building C4 for illumination of the public domain. In addition, there is limited lighting (ie. partial awning lighting only) indicated as the only public domain lighting source for the extent of these Walks to the west of Lime Street.</p> | <p>The agreed approach with the BDA is that the public domain in Union Walk and City Walk is illuminated by lighting located in the cornice or on the building, rather than on street poles. This strategy enables the civic qualities of the Walks to be emphasised, free of visual clutter and barriers to pedestrian movement. The titling arrangements for the site will ensure that appropriate access arrangements/agreements will be in place to allow for maintenance of lighting that is cornice and building mounted to serve the public domain lighting.</p> |
| <p>Advice should be provided from a Lighting consultant to confirm that the level of illumination to Union Walk, City Walk and Transport Place meets the requirements of AS1158 series-lighting for roads and public spaces and AS4282-1997 for the control of obtrusive effects of outdoor lighting.</p> | <p>The Lighting Report and covering letter included at Appendix H of the Public Domain Planning Application, states that the proposed lighting will meet the requirements of these Australian Standards.</p> |
| <p>Further to the above, it is unclear whether the lighting shown on the buildings (ie. lighting from awnings, cornices and lobbies) represents lighting that is currently approved or whether approval is being sought for this lighting. The scope of all proposed (new) lighting should be clarified on Plan DA209.</p> | <p>This public domain application seeks approval for all public domain lighting, including building mounted and cornice lighting. Accordingly, all lighting shown on Landscape drawing DA209 is included in this application at Attachment B.</p> |
| Furniture and Fixtures | |
| <p>Transport Place, Union Walk and City Walk have been identified as major pedestrian thoroughfares in the application. The current design proposes the limited provision of street furniture and fixtures including those which typically address pedestrian comfort and needs i.e. weather protection and seating etc. The response to submissions should outline the rationale behind this minimalist approach including to demonstrate how this will not undermine the quality and functionality of these spaces.</p> | <p>Limited furniture and fixtures are proposed because the walks are intended to carry significant pedestrian movements. The spaces are principally movement spaces and are not intended to perform the function of a 'dwelling' space such as parks or the Waterfront Promenade.</p> <p>The removal of visual clutter and barriers also serves to emphasise their role and character as civic spaces, which is a principle that has been maintained from RSHP/Lend Lease's original bid, and is supported by the NSW Government through the BDA.</p> <p>Furthermore, it is important that some spaces at Barangaroo retain flexibility to be temporarily fit out for public events on occasion.</p> <p>Providing weather protection structures in the public domain is very uncommon and it is proposed to rely on the protection provided from the adjoining buildings, not unlike the rest of the Sydney CBD (e.g. Martin Place, Hyde Park, Darling Harbour, Town Hall square) or any other city.</p> |
| Planting Strategy | |
| <p>The Concept Plan (as amended. Mod 6) includes the provision of street trees (secondary evergreen street trees) along the length of Transport Place. The Stage 1A public domain application significantly reduces the extent of tree planting in Transport Place, proposing that tree planting be limited to the Transport Place arrival space only. Justification for this change in strategy should be provided.</p> | <p>More detailed design investigations inherent in the Stage 1A Public Domain (and not undertaken at a Concept Plan level) have provided a clearer understanding of the opportunities and constraints present in the area. Specifically, the subsurface conditions with existing services and basement structure preclude tree planting except in planters as detailed in Section 4.3.1 of the EIS. It is noted that alternative solutions such as planters were considered and deemed not appropriate because of the spaces urban/civic nature and high pedestrian volumes. It is also noted that TfNSW's submission raised the importance of Transport Place providing an unobstructed connection between Wynyard Walk with the Ferry</p> |

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| | Wharves. |
| The concerns raised by the DPI (Agriculture NSW and NSW Office of Water) in relation to the noxious weed declaration and the invasive qualities of the species selection (Honey Locust (<i>Gleditsia triacanthos</i>)) for the waterfront promenade should be addressed. Specifically, the response should demonstrate through design, that the potential for the species to become invasive is minimised, if not eliminated. | A detailed response to this matter has been provided in the response to DPI below. |
| Paving and Surface Details | |
| <p>The paving types identified in the Public Domain Stage 1A Landscape Report (refer Page 42) and Plan DA06 should be clarified on Plan DA205 and the 'detail' plans. The identification of the paving types on these plans are currently inconsistent and therefore, application of the paving types throughout the public domain is unclear. For example:</p> <ul style="list-style-type: none"> • The Hickson Place - 'special paving' detailed on DA321 is not shown on DA206. • Shelley Lane - paving detail on DA318 and paving types on DA206 are inconsistent / differently identified. | The Landscape Plans and Report (see Attachment B) have been updated to address the identified inconsistencies. |
| The waterfront promenade is anticipated to accommodate high pedestrian volumes. The proposed use of timber as the surface for the waterfront promenade should be justified in terms of its durability and robustness and furthermore, its ongoing maintenance requirements. | <p>The use of timber was directed by the landowner (who will be responsible for future maintenance) as a continuation of the approved approach for the Central Waterfront and the existing materials used at King Street Wharf. Thereby tying the waterfront together with a consistent (and successfully proven) material.</p> <p>It is noted that the Pedestrian Demand Study prepared by ARUP (see Attachment K) demonstrates that the waterfront will be likely to experience only moderate volumes of pedestrian traffic (outside of special events).</p> <p>In light of the above, the use of timber, consistent with the two adjoining waterfront precincts, is considered appropriate.</p> |

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Response to Agency and Council Submissions

| Key Issues Raised | | Lend Lease Response |
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| Sydney Water | | |
| 1 | Planning and Design Sydney Water will not be providing any Notice of Exhibition comments to SSD 6303. Sydney Water will continue to liaise and consult with the developer to ensure our requirements are met. | Noted. |
| Environment Protection Authority (EPA) | | |
| 1 | On the basis of the information provided the EPA does not anticipate any significant impacts over and above what already occurring and being managed at the site. The EPA notes however, that removal of the hardstand has the potential for some additional noise and dust, and work immediately adjacent to the sea wall needs to be properly managed to ensure no plumes in Darling Harbour. The EPA recommends that all relevant Environmental Management Plans (EMP) are updated to include these works. Specifically, in relation to air quality, based on the information provided, the historical and ongoing air quality management and mitigation framework established at the site (and within other approval processes for the site), the EPA considers the proposed works generally fall into the low risk category in terms of potential air quality impacts and therefore no additional approval conditions will be necessary. | Noted. The noise and dust impacts from the removal of the hardstand areas has been assessed and appropriate mitigation measures adopted. The measures include updating the environmental management plans to include these works as recommended by the EPA. |
| 2 | In relation to noise & vibration the EPA recommends the following conditions: <ul style="list-style-type: none"> Work at the premises must be conducted between 7am and 6pm Monday to Friday, 7am to 5pm Saturdays and at no time on Sundays or Public Holidays, unless inaudible at any residential premises; and A Construction Noise and Vibration Management Plan (CNVMP) must be developed for the proposal (as already required for other activities in Barangaroo South). | The requested hours of construction are: <ul style="list-style-type: none"> Monday to Friday for the Towers are 7am to 7pm; and 7am to 5pm on Saturdays. These are the same construction hours as have been approved for the other approvals at Barangaroo South. The assessed construction impacts for the development were modelled on the basis of these proposed hours and were determined to be manageable within acceptable limits. Therefore, Lend Lease submits that there is no reason for the weekday construction hours to be reduced by an hour to cease at 6pm. The ESCMP envisaged that a CNVMP would be prepared for the construction of the Public Domain. |

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| Key Issues Raised | | Lend Lease Response |
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| 3 | <p>In relation to waste the EPA recommends the following conditions:</p> <ul style="list-style-type: none"> Any waste to be disposed offsite, must be classified in accordance with the Waste Classification Guidelines (DECCW 2009) and sent to a place that can lawfully receive that waste; and Any asbestos material generated onsite must either be: <ul style="list-style-type: none"> (i) classified in accordance with DECC 2009 (which may mean that the waste has a higher classification than Special Waste (asbestos waste)) and disposed offsite to place that can lawfully receive that waste; or (ii) meet the requirements of the Driscoll Report with respect to on-site management. | Noted. Lend Lease has no objection to either of the requested conditions. |
| 4 | <p>In relation to water the EPA recommends the following condition: <i>For any over-water or near water construction activities associated with the seawall modification, a Floating turbidity barrier must be installed in Darling Harbour (as proposed in the EIS). Additional sediment and erosion controls including construction material/waste clean-up procedures must be proposed and implemented as per an updated Erosion and Sediment Control Plan.</i></p> | Noted. Lend Lease has no objection to either of the requested conditions. |
| Department of Primary Industry | | |
| 1 | <p>Comment by Fisheries NSW Fisheries NSW has no objections to this proposal and advise that the planned Water Sensitive Urban Design measures are commendable. The use of erosion and sediment control measures during construction is recommended. In particular, a silt curtain is to be used should any works in the adjacent waterway be conducted.</p> | Noted. The ECSMP indicates a silt curtain will be used along the foreshore. |
| 2 | <p>Comment by Agriculture NSW Agriculture NSW advise that any proposed landscaping needs to consider noxious weed regulations/ determinations.</p> | <p>Further advice has been provided from the Barangaroo Headland Park's consultant horticulturalist, Stuart Pittendrigh (see Attachment H), in response to the concerns raised by the Agriculture NSW. The advice clarifies that the proposed <i>Gleditsia triacanthos</i> 'var' <i>inermis</i> 'Shademaster' is a variation of the weed species <i>Gleditsia triacanthos</i>, not a straight cultivar and will be almost fruitless. It is also noted that the species is endorsed by the ACT Government's Territory and Municipal Services (TAMS). A TAMS Fact Sheet is provided at Attachment I, which describes it as thornless and an almost fruitless form, and recommends it as a shade tree for public domain areas.</p> <p>Additionally, and in light of the Department's submission, each of the trees will be entirely contained within a sealed concrete trench below the promenade. The only potential opportunity for suckering is through the proposed tree grates, which it can be managed through an appropriate ongoing public domain maintenance regime.</p> |

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| 3 | <p>Comment by NSW Office of Water</p> <p>The NSW Office of Water (Office of Water) has reviewed the Environmental Impact Statement and provides the following comments below, and further detail in Attachment A. In terms of protecting riparian habitat around the harbour foreshores and waterways, it is recommended the EIS, the Stage 1A Landscape Report and the Tree Planting Strategy are amended to delete any reference to the planting of Honey locust at the Barangaroo development site.</p> | See response to Attachment A below. |
| 4 | <p>Attachment A</p> <p>The EIS notes the Waterfront Promenade is proposed to be planted with a double row of Honey locust (<i>Gleditsia triacanthos</i>) (see Section 3.4, page 26). The proposed use of <i>Gleditsia triacanthos</i> is of concern and it is recommended that unless it can be demonstrated that "Shademaster" is a non-invasive variety, Honey locust, should not be planted along the waterfront. Prior to approving the project, the DP&E should consider information relating to Honey locust available for example on the NSW Department of Primary Industries (DPI) website, the Australian Government Department of the Environment website and the Queensland Department of Agriculture, Fisheries and Forestry website.</p> <p>In terms of protecting riparian habitat around the harbour and its waterways, the Office of Water recommends the EIS (dated May 2014); the Stage 1A Landscape Report (dated 7 April 2014, in Appendix A of Volume 1 of 2); and the Tree Planting Strategy (Drawing No. LA_MP AO DA210, dated 5/5/2014 in Volume 2 of 2) are amended to:</p> <ul style="list-style-type: none"> delete any reference to planting Honey locust at the Barangaroo development site from these documents, use local native plant species from the relevant vegetation community along the waterfront. <p>The Office of Water has previously recommended local native riparian vegetation is established along the foreshore area at Headland Park.</p> <p>licensing arrangements for the Barangaroo site adequately covers the Stage 1A Public Domain project for example, in relation to the proposed volumes of groundwater to be dewatered, the location etc. If the Stage 1A Public Domain project differs to the current licensing arrangements the Office of Water should be advised on this.</p> | <p>The use of the Honey Locust along the waterfront was a specific request of the Barangaroo Delivery Authority in order to maintain a consistency in the promenade from Headland Park through to the southern boundary of Barangaroo.</p> <p>Further advice has been provided from the Barangaroo Headland Park's consultant horticulturalist, Stuart Pittendrigh (see Attachment H), in response to the concerns raised by the NSW Office of Water. The advice clarifies that the proposed <i>Gleditsia triacanthos</i> 'var' <i>inermis</i> 'Shademaster' is a variation of the weed species <i>Gleditsia triacanthos</i>, not a straight cultivar and will be almost fruitless. It is also noted that the species is endorsed by the ACT Government's Territory and Municipal Services (TAMS). A TAMS Fact Sheet is provided at Attachment I, which describes it as thornless and an almost fruitless form, and recommends it as a shade tree for public domain areas.</p> <p>Accordingly, and in consideration of the urban nature of the promenade, the proposal for <i>Gleditsia Tricanthos var inermis</i> has been maintained.</p> |
| 5 | <p>Groundwater</p> <p>The Office of Water requests that the proponent confirms whether the current groundwater licensing arrangements for the Barangaroo site adequately covers the Stage 1A Public Domain project for example, in relation to the proposed volumes of groundwater to be dewatered, the location etc. If the Stage 1A Public Domain project differs to the current licensing arrangements the Office of Water should be advised on this.</p> | <p>The current Groundwater licence for the site, under Part 5 of the Water Act 1912, will not apply to the public domain works.</p> <p>There will no longer be any boreholes actively dewatering the site during the public domain works. Nominal amounts of surface water and water associated with the excavation in the public domain will be managed locally by the project team through either baffle bins/sucker truck or ground re-injection under guidance of Lend Lease's environmental team.</p> |
| Transport for NSW | | |

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| 1 | <p>Construction Pedestrian and Traffic Management Plan</p> <p>Further consideration needs to be given to construction impacts and management, in particular the cumulative impacts arising from the overlap of construction projects within the Barangaroo and Wynyard Precincts and the recent changes to the construction program for the Wynyard Walk project. This also includes consideration of impacts on the delivery and construction of these projects.</p> <p>Potential construction impacts that are not adequately addressed include:</p> <ul style="list-style-type: none"> ▪ Impacts on the existing transport services within the precinct including buses. ▪ Impacts on pedestrian flows, safety and accessibility (mobility impaired pedestrians, including wheelchair access) within the Barangaroo Precinct; ▪ Recent changes to the construction program for the Wynyard Walk project; ▪ Impacts on emergency access and egress; and ▪ Construction traffic impacts. <p>TfNSW therefore requests that a detailed Construction Traffic and Pedestrian Management Plan be prepared in consultation with TfNSW to address the above for the Wynyard Walk project prior to the commencement of construction. The Plan should include the cumulative construction impacts of all the projects anticipated to occur within the Barangaroo and Wynyard Precincts that overlap with the Stage 1A Domain Works, Barangaroo South project.</p> | <p>Lend Lease has requested, but not been advised of the updated Wynyard Walk construction program and hence is not in a position to consider the impacts of the updated program.</p> <p>Lend Lease will continue to manage the impacts to vehicular and pedestrian flows, and emergency access and egress, with the relevant Road Authority.</p> <p>Importantly, Lend Lease and the BDA are also involved in regular planning and construction coordination meetings in respect of both Wynyard Walk and the proposed Ferry Hub, to identify and manage the activities of all projects in an integrated manner.</p> |
| 2 | <p>Cyclist Access and Facilities</p> <p>The Sydney City Centre Access Strategy diagram is provided at Figure 9 of Appendix F of the EIS for reference whilst the EIS does not show the southern strategic cycle connection as shown in the Sydney City Centre Access Strategy. Appendix F of the EIS incorrectly states that Barangaroo South is well connected to cycleway networks. Proposed connections to cycle network are still to be determined. The responsibility of the proponent is to develop the connections to the strategic cycleway network in liaison with TfNSW. TfNSW requests that connections between Barangaroo South and the strategic cycle network be developed, in consultation with TfNSW, to address the Sydney City Centre Access Strategy.</p> | <p>The Sydney City Centre Access Strategy indicates that Barangaroo South will be served by a number of dedicated bicycle routes, including the existing facility on Kent Street and 'yet to be determined' Strategic Cycleway Network routes that will connect existing networks to Hickson Road at Barangaroo. The proponent of the subject-DA for Barangaroo South Stage 1A Public Domain, Lend Lease, is not responsible for the provision of the cycle network nominated indicatively under the Sydney City Centre Access Strategy.</p> <p>As part of a separate scope of works, Lend Lease and the BDA are currently working with TfNSW to assist with the design of a scheme for improvements to Napoleon Street that accommodates a dedicated bicycle facility (whether shared or dedicated) on Napoleon Street, which will provide a connection for cyclists directly into the Stage 1A development to the Barangaroo Site. There is an existing cycleway on Hickson Road to connect cyclists to the north. In the event that Hickson Road is upgraded, a dedicated two-way cycleway on Hickson Road is proposed. Lend Lease in consultation with the BDA and the City of Sydney Council is preparing a design for the amended levels of Hickson Road and the potential inclusion of a cycleway. A REF is expected to be completed for the works associated with the potential amended design of Hickson Road.</p> <p>The proposed public domain at Barangaroo South will have cyclist-accessible connections to the surrounding road and pedestrian network, which will ensure that cyclists using the future Strategic Cycleway Network routes, once designed and constructed, will be able to access the site. Lend Lease will continue to work with key stakeholders, including TfNSW, to ensure that good connectivity for cyclists can be provided into the Stage 1A development.</p> |

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| 3 | <p>Ferry Wharf</p> <p>The Barangaroo Integrated Transport Plan should be considered by the EIS. While the Ferry Hub is represented schematically in diagrams, the importance of this connection has not been sufficiently recognised throughout the EIS document. TfNSW requests that the applicant modifies Stage 1A design, in consultation with TfNSW, to adequately accommodate the Ferry Hub. This process should be started prior to the response to submissions, and the response to submissions should include an indication of how this process will be managed.</p> | <p>Lend Lease, the Barangaroo Delivery Authority and Transport for NSW has met on many occasions in relation to the proposed Barangaroo Ferry Wharf, including the following specific meetings:</p> <ul style="list-style-type: none"> - 14 February 2012: Barangaroo Ferry Wharf Options Analysis Stakeholder Workshop - 19 March 2012: Barangaroo Ferry Wharves and Navigation - 3 April 2012: Barangaroo Ferry Wharf Options Analysis Stakeholder Workshop - 20 April 2012: Barangaroo Ferry Study – waterfront interface - 29 November 2012: Barangaroo Ferry Wharf Planning update - 20 September 2013: Barangaroo Ferry Wharf – interface requirements - 7 November 2013: Barangaroo Ferry Wharf – Landside requirements - 7 February 2014: Barangaroo Ferry Hub – Interface requirements - 6 May 2014: Barangaroo Ferry Hub Landside Working Group - 2 June 2014: Barangaroo Ferry Hub Landside Working Group - 12 August 2014: Barangaroo Ferry Hub Landside Working Group - 18 August 2014: Barangaroo Ferry Hub Landside Services Meeting - 19 August 2014: Barangaroo Ferry Hub Urban Design meeting - 25 August 2014: Barangaroo Ferry Hub Urban Design Meeting - 26 August 2014: Barangaroo Ferry Hub Landside Services Meeting <p>None of the issues identified in these meetings has a major impact on the public domain design. Key issues discussed include service locations and detailed investigations of proposed levels and grades. The proposed development includes the capacity for service connections and access to the intended future Ferry Wharves adjacent to the subject-site. Discussions will continue to progress and may be accommodated within the detailed design (Construction Certificate) stage of the project, or within TfNSW's own planning application that will follow this DA. Weekly and fortnightly meetings will continue to be held with TfNSW Barangaroo Ferry Hub project team and the Barangaroo Delivery Authority to discuss and agree the detailed coordination issues.</p> |
| | The location of the Ferry Wharves is incorrect in all figures both in Appendix F of the EIS and the development application. The wharves should be located further north, fully within the Barangaroo Delivery Authority (BDA)/Lend Lease boundary as was communicated and agreed to by Lend Lease previously. | Recent discussions with TfNSW indicate that the location and size of the Ferry Wharves is not yet finalised. The figures in the amended Transport Report (see Attachment F) have been updated to indicate a more correct location of the Ferry Wharves at the time of writing, but it is noted the final location will only be available as part of the Ferry Wharf Planning Application. |
| | Section 4.3.2 of the EIS states that "The interface between King Street Wharf and the Waterfront Promenade has been designed to ramp down within the Stage 1A site to meet the level of the existing public domain." The interface with the Ferry Hub must be considered in designing this element, taking into account the previously agreed location of the proposed Ferry Wharves (i.e. attaching wholly within the BOA site). | The location of the wharves are yet to be finalised by Transport for NSW. Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate this issue via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team. |
| | It is not clear from the EIS if allowance has been made at the waterfront promenade for special event queue management at the Ferry Wharves and circulation along the foreshore. TfNSW requests that a special event queuing space be reserved for ferry operators to use to marshal event crowds with temporary infrastructure. | There is adequate space for special event queuing on the foreshore. Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate this issue via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team. |

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| | TfNSW signs need to be incorporated into the signage package. The ferry wharf identifier sign, wharf numbering, orientation for customers alighting from ferries, location of the commencement of Wynyard Walk etc all need to be incorporated. In particular, Locations D.1, S.1 and CoS T.1 need to incorporate TfNSW Train and Ferry mode identification in maps and wayfinding artwork at all installations. Provision also needs to be made for the incorporation of Light Rail mode identification at a future stage at Locations D.1, S.1 and CoS T.1. | It is considered that TfNSW signs will be incorporated within a signage package that is within the Ferry Hub planning application. Recent meetings have identified potential for some TfNSW content to be included on the signs proposed in this application. It is noted that the proposed signs did not seek consent for the content which is still to be determined. Lend Lease and the Barangaroo Delivery Authority will continue to work with TfNSW to ensure that appropriate signage for public transport infrastructure is integrated into future signage at Barangaroo. |
| | TfNSW advises that the Ferry Wharves should be clearly visible from the landside and therefore does not support the proposed solid row of trees along the Waterfront Promenade as it impacts the visibility of the wharves. It should be noted that the Barangaroo Integrated Transport Plan makes provision for a break in the row of trees lining the Waterfront Promenade at the locations of the Ferry Wharves. | The continuous double row of trees on the waterfront is a requirement of the BDA and was included in the approved Concept Plan Mod 6 scheme. There is a break in the trees at Transport Place to clearly define the pedestrian movement spine that links the ferries to Wynyard Walk. The proposed trees have a mature height of 3-4m that allows clear views to the Ferry Hubs. |
| | It is likely that the lighting associated with the Ferry Wharves will be of a higher level than the level proposed for the boardwalk area. TfNSW is not clear how the lighting level of wharves intersects with the adjacent area. TfNSW requests that the lighting concept plan be coordinated and reviewed with the TfNSW Barangaroo Ferry Hub project team. | Noted. The lighting plans and specifications have since been provided directly to Transport for NSW. Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate this issue via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team. |
| 4 | Interface with Transport Place The primary connection between the City and the waterfront is Transport Place as this includes the linkage between Wynyard Walk and the Ferry Wharves. TfNSW requests that the Landscape Report addresses the role of Transport Place as the linkage between Wynyard Walk and the Ferry Wharves and between the City and the waterfront. | Aspect Oculus has updated its Landscape Report (see Attachment C) that addresses the importance of Transport Place as a linkage between Wynyard Walk and the Ferry Wharves and between the City and the waterfront. |
| | The ramp grade at the southeast corner of the site is shown at 1:36 with a drop in level of +2.88 to +2.5 towards King Street Wharf. The ramp does not appear to dovetail with the ramp drawing shown in Civil Drawing BPO CD0000013/11. TfNSW requests that ground levels at Hickson Place and the eastern end of Transport Place be coordinated with the Wynyard Walk project team. | The ramp grade at the southwest corner of the site achieves a 1:36 fall with a drop in level from +2.85 to +2.5. This is consistent with Civil Drawing BPO CD0000013/11. Lend Lease is attending, and will continue to attend, regular coordination meetings with the Wynyard Walk project team and the Barangaroo Delivery Authority in relation to this and many other aspects of the public domain. Additionally, the levels in Hickson Place and Wynyard Walk have been coordinated to the extent that Lend Lease were asked to provide comment, and have done so on the proposed Wynyard walk design drawings in respect of ground levels. Both Hickson Place and Wynyard Walk levels are consistent with the coordination agreements made over the past 12 months. |
| | Grading Plan (Drawing No. LA_MP AO_DA204) and Hickson Place Detail Plan (Drawing No. LA_MP AO_DA321) show grading down towards the escalators and elevators at the end of Wynyard Walk. Finished levels should slope away from external elevator and escalators so as to discourage water flow into their associated pit structures. TfNSW requests that the levels be confirmed with the input of the Wynyard Walk project team. | Lend Lease is attending, and will continue to attend, regular coordination meetings with the Wynyard Walk project team and the Barangaroo Delivery Authority in relation to this and many other aspects of the public domain. Additionally, the levels in Hickson Place and Wynyard Walk have been coordinated to the extent that Lend Lease were asked to provide (and provided) comment on the proposed Wynyard walk design drawings in respect of ground levels. Both Hickson Place and Wynyard Walk levels are consistent with the coordination agreements made over the past 12 months. Specifically in relation to this area, the escalator pit is in fact slightly raised over the surrounding area, which has in turn been graded to facilitate the necessary and required overland flow regime toward Hickson Rd and down Shelley Street. |

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| | It is noted that the eastern portion of Transport Place, which will directly interface with Wynyard Walk, will be subject to a future planning application. This area is crucial to the effective functioning of Transport Place as a primary pedestrian connection. TfNSW requests that consultation be undertaken with the TfNSW Wynyard Walk project team with regards to this section of works and how it will be delivered. | Noted. Transport for NSW will be consulted by the Barangaroo Delivery Authority in relation to the future application for these works. |
| | In Section 3.2 of the EIS the description of the role of Transport Place should acknowledge the connection between the City (via Wynyard Walk) and Barangaroo Ferry Hub. Section 4.2 of EIS provides details of a design review undertaken of Barangaroo South and includes comments made by the Design Review Panel in Table 3. One of the comments in Table 3 includes "For the public domain design at Transport Place generally, there is a need to ensure ... the successful role of Transport Place as connector between major transport hubs." This comment has not been adequately addressed in the Stage 1A Public Domain Response in Table 3 or in the EIS generally. TfNSW requests that the proponent reconsiders the treatment of Transport Place to achieve a design outcome which satisfies the Design Review Panel requirement to recognise the role of Transport Place as "connector between major transport hubs". | Aspect Oculus has updated its Landscape Report (see Attachment C) that addresses the importance of Transport Place as a linkage between Wynyard Walk and the Ferry Wharves and between the City and the waterfront. |
| 5 | Bicycle Parking TfNSW requests that the cycle parking provision be provided based on City of Sydney requirements, rather than on the mode share targets which are not considered to be appropriate. TfNSW requests that the proponent provides bicycle parking based on City of Sydney Development Control Plan 2012. | The City of Sydney DCP does not apply to the site and nor does it provide appropriate controls for a development of this nature. All bicycle provision for the site to-date has been based on mode share targets and therefore it is appropriate to continue with this methodology. Section 3.7 of the Arup Public Domain Traffic Assessment (see Attachment F) demonstrates that the proposed provision is in line with best practice and indeed greater in proportion relative to the projected number of visitors to the site than what has been provided anywhere else in Sydney recently. It is noted that the provision of spaces is in addition to those spaces being provided within the basement for the tenants / residents of the buildings on the site. |
| 6 | Bus Provision Appendix F of the EIS does not address bus access to the site. The Barangaroo Integrated Transport Plan makes provision for bus stops on Hickson Road to support bus servicing of Barangaroo. TfNSW advises that Hickson Road has been identified as a bus corridor under the Sydney City Centre Access Strategy prepared by TfNSW. As such, TfNSW advises that the proposal should include corresponding bus stops on Hickson Road near its intersection with Napoleon Street. Each bus stop must be able to accommodate a minimum of two 14.5 metre non-rear steer buses and should include adequate shelter and seating facilities. The bus stops must be positioned on the departure side of the Hickson Road/Napoleon Street intersection. | The location of bus stops on Hickson Road is not part of the Stage 1A Public Domain application. Hickson Road is not part of the project site and is the responsibility of the BDA. Lend Lease and the BDA will continue to liaise with TfNSW regarding the future provision of bus stops on Hickson Road. |
| | The proposed intersection arrangement at the Hickson Road/Globe Street North intersection allows one travel lane and a parking lane on the eastern side of Hickson Road based on Figure 7 of Appendix F. This arrangement would have the potential to block bus movements by the right turning vehicles from Hickson Road onto Globe Street North and cause delays to buses as well as general traffic. TfNSW requests that the proponent assesses the impacts on bus movements at this intersection and propose mitigation measures for the impacts identified. | The Hickson Road/Globe Street North intersection is not part of the Stage 1A Public Domain application and was only shown in the subject figure for context only. |

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| 7 | Drainage The Site Analysis (Drawing No. LA_MP AO _DA 1 03) shows an overland flow path passing the area of Transport Place outside of the site boundary. There is no reference to overland flow elsewhere in the EIS. TfNSW requests that the overland flow paths be shown and these should not intersect with the elevator and escalator structures of Wynyard Walk. | The site analysis plan has been amended to say 'Existing overland flow' (see Attachment B). |
| | The details of stormwater outlets shown in vicinity of the Ferry Wharves are not clear and stormwater lines are not labelled. TfNSW requests that the details of stormwater outlets and lines be provided. | The Stormwater Drainage Plans (see Attachment D) have been updated to reflect the drainage in this area. |
| 8 | Pedestrian and Cyclist Access Section 3.1 of Appendix F is titled as Traffic. Pedestrian and Bicycle Flows. However, no information is provided in relation to pedestrian and cyclist flows in this section. The site will be accessed from ferries delivering pedestrians and cyclists, and this should be acknowledged. Provision for cyclists alighting from ferries to join nearby cycle paths and vice versa should be made whilst ensuring pedestrian safety. TfNSW requests that the applicant demonstrate how Level of Service (LOS) better than D be achieved for pedestrians along City Walk, Union Walk and Transport Place. | The figures in the amended Transport Report (see Attachment F) have been updated to indicate the correct location of the Ferry Wharves. Forecast pedestrian flows for the key pedestrian routes through the Stage 1A precinct have been included within updated figures in the report. These pedestrian flows were derived from the Barangaroo Precinct Demand Study (2013). This study, developed in collaboration with Lend Lease and the Barangaroo Delivery Authority, provided a detailed analysis of pedestrian flows on key routes, including forecast Level of Service. |
| | TfNSW requests that pedestrian and bicycle connections to the development site be provided to connect the area located north of the Stage 1A site. | The figures in the amended Transport Report (see Attachment F) have been updated to indicate the correct location of the Ferry Wharves. |
| 9 | Pedestrian Facilities The pedestrian crossing in Lime Street, north of Shelley Street is situated too close to the basement access. TfNSW requests that a safety review be undertaken for this pedestrian crossing. | The pedestrian crossing has been positioned on the primary pedestrian desire line to accommodate pedestrians travelling between Wynyard Walk and the waterfront. The majority of traffic movements will occur south of the crossing, with only a small number of vehicles expected to continue north past the car park entry. |
| | TfNSW requests that kerb ramps be provided to cater for all pedestrian movements at all intersections. | Noted |
| | The EIS and Appendix T do not adequately address whether wind conditions would be suitable for waiting ferry patrons (eg sitting, standing) and/or whether mitigation measures would be required. The wind report should be updated to consider amenity for ferry patrons and propose mitigation if required. Whilst subject to separate applications, the effects of wind from buildings surrounding Transport Place (C5, C6, R 1, R? and R9) on the pedestrian and ferry wharf environment should be appropriately addressed in the public domain. | The Wind Assessment has been updated to consider the wind conditions for waiting ferry patrons on the foreshore (See Attachment G). The Study shows that the wind conditions would be suitable for sitting for about 85% of the time and standing 100% of the time. |
| | The Southern Waterfront (Drawing No. LA_MP AO _DA308) appears to show continuous kerb to edge. This will need to be modified to receive the Ferry Wharves. The continuous timber boardwalk is an attractive element on the foreshore but it may not be suitable for the pedestrian crossing points at the ferry wharf entries and may also need to be modified. These issues should be subject to further review and coordination with the TfNSW Barangaroo Ferry Hub project team. | The raised kerb (as can be seen on the Section drawings) does not continue at the Ferry wharves crossing points. Lend Lease will ensure that the detailed drawings at the construction certificate stage reflect this. The continuous timber boardwalk along the Waterfront Promenade is an important public domain element and a requirement of the Barangaroo Delivery Authority. A timber boardwalk is successfully in place at Ferry Wharf 3 at King Street Wharf to the South of this site. |

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| | The angled pedestrian crossings in Lime Street increase the pedestrian walk distance and are not preferred. TfNSW requests that the pedestrian crossings be provided in accordance with RMS/SHFA and City of Sydney guidelines. | The pedestrian crossings have been located on key pedestrian desire lines and satisfy relevant RMS requirements. AS 1742.10 Section 6.5 Manual of Uniform Traffic Control Devices, Part 10 pedestrian control and protection states: <i>"Whilst the crossing is usually at right angles to the line of the road, it may be angled by not more than 30 degrees where local circumstances require."</i> The crossings at the intersection of Lime St and City Walk and Union Walk intersections are less than 30 degrees from the road alignment and therefore comply. |
| | Drawing PD_LP 200_SK007 in the Appendix F of the EIS shows a pedestrian crossing to connect Union Walk to the Water Promenade. However, Section 3.5 of Attachment F contradicts this. TfNSW advises that Union Walk, City Walk and Transport Place should connect with the Waterfront Promenade with pedestrian crossings across Lime Street to allow safe and efficient pedestrian connection to the Barangaroo Ferry Hub. | The Traffic Report has been amended (see Attachment F) to show the additional crossing and is now consistent with the public domain drawings. |
| | The details associated with the high pedestrian activity area are not provided in the EIS. TfNSW requests that the details of high pedestrian activity area including locations of signage and the proposed treatments to reduce vehicle speeds be provided in particular along Lime Street. | The linemarking and signage plans detail (see Attachment D) the regulatory signage and linemarkings at the proposed crossing locations. The proposed treatments are shown on the Public Domain Drawings. Further details will be subject to design development and will be documented as part of the construction documentation. |
| 10 | Service Vehicle Access TfNSW requests that details of the provision for articulated service vehicles to access Barangaroo South be provided with adequate clearance between swept paths at the intersections in accordance with relevant Austroads guidelines. TfNSW also requests that the proponent demonstrates how it is managed, if the articulated service vehicle access is not provided. Loading docks need to be designed in accordance with Australian Standards AS 2890.2. Continuous turning paths of service vehicles accessing the loading dock via Globe Street should be shown between Hickson Road and the loading dock to confirm that service vehicle movements would be able to enter and exit in forward motion safely and would not cause any pedestrian safety issues at this location. | The largest vehicle that may enter the Stage 1A loading dock will be a 12.5m Heavy Rigid Vehicle (HRV). The road and public domain have been designed to accommodate this vehicle, with a swept path analysis undertaken in accordance with relevant Austroads Guidelines. The loading docks are not the subject of this application. Although it is noted that they will comply with the relevant Australian standards and deliveries to the loading dock will be strictly managed by on-site staff, similar to other major loading dock facilities across the Sydney CBD |
| 11 | Services The drawings suggest all services are to be placed in a service trench which is to be filled with mass concrete. However, services may require future access and this may need to be redesigned. | All services trenches are to be backfilled to meet the relevant authority requirements. There are limited areas of protection required for the proposed Jemena gas main. Final protection will be documented as part of the construction documentation. |

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| | <p>TfNSW requests that details of the following be provided:</p> <ul style="list-style-type: none"> Service termination at the wharf end. Power conduits (number of and material), coordinates of these conduits, termination of conduits and the location of power from substations. It is noted that previous documents (Lend Lease Barangaroo Public Domain Stage 1A, Rev C- Issued 06 May 2014, Section 2- design principles) notes power outlets are to be terminated above ground. Communication conduits and termination points. Data connection between ferry terminal and ferry administration/operations room (in building R7). Location of the hydrant main termination. Interconnecting pipework to wharves (subject to the position of the wharves). Sewer termination points to each wharf. | <p>TfNSW's requests are noted and adequately accommodated in the Stage 1A Public Domain scheme at this stage. No further action is required as part of the Stage 1A application in relation to these items. Lend Lease has held numerous meetings and communications with TfNSW Barangaroo Ferry Hub project team in relation to the land side services throughout 2014 (refer to item 3 above).</p> <p>Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate these issues via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team. A specific regular meeting in relation to the land side services provision is being held with TfNSW Barangaroo Ferry Hub project team.</p> |
| | <p>The location of the termination power point and water point appears adjacent to the southernmost ferry wharf. The wharf outline is required to show where the terminations are likely to be.</p> | <p>Noted. Lend Lease awaits advice from TfNSW Barangaroo Ferry Hub project team in relation to the finalisation of the ferry wharf locations.</p> <p>Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate this issue via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team.</p> |
| | <p>Power from substations was previously understood to be located within basement B2 level. However, power seems to be from R1 Basement. TfNSW requests that this detail be clarified</p> | <p>All substations within the Barangaroo basement are located on Level B2. The substation that the power is provided from should not be of concern to TfNSW. Notwithstanding this, Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate this issue via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team.</p> |
| 12 | <p>Taxi Provision</p> <p>The proposed location for the taxi rank is on the southern side of Globe Street and with none on Lime Street. TfNSW requests that the proponent provides an additional taxi rank on the eastern side of Lime Street and taxi pick up/drop off location on the northern side of Globe Street.</p> | <p>The relevant plans have been amended to reflect the bays along Lime Street as taxi zones. Due to staging limitations, no parking or taxi zones have been provided in Stage 1A to the north side of Globe Street, which will form part of the Stage 1B public domain application.</p> |
| 13 | <p>Traffic Management</p> <p>It is incorrectly stated in the Appendix F of the EIS that local road access is not provided via George Street from the north-east.</p> | <p>The amended Traffic Report (see Attachment F) has been updated to correct the stated error.</p> |
| | <p>Shelley Street at Sussex Street is to be closed to all traffic in mid 2014. TfNSW requests that the vehicular access routes and the traffic signage plan be updated to reflect this closure.</p> | <p>The Transport Report has been updated (see Attachment F) so that the subject section of Shelley Street has been indicated as "intended for future closure".</p> |
| | <p>Appendix F of the EIS states that 20,000 visitors may visit the Barangaroo Site. No basis has been provided for 30% of the total visitors are visitors to Barangaroo south. TfNSW requests that further justification be provided.</p> | <p>Forecast visitor numbers, both to Barangaroo South and the entire site, are consistent with the outputs of the Barangaroo Precinct Demand Study (2013). This study, developed in collaboration with Lend Lease and the Barangaroo Delivery Authority, provided a forecast of populations across the development site for an end state (full build out, i.e. ~2025) scenario.</p> |
| | <p>The Transport Management and Access Plan (TMAP) prepared as part of the Barangaroo Concept Plan needs to be updated. TfNSW requests that an addendum report be prepared to update the TMAP with changes to the traffic and transport management associated with the Stage 1A Public Domain Works.</p> | <p>There are no significant changes that are being proposed as part of the Stage 1A Public Domain application that necessitates an addendum report to be prepared for the TMAP.</p> |

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| 14 | Tree Planting Strategy Section 3.4 of the EIS makes reference to Transport Place using <i>Waterhousia floribunda</i> planting. This is not shown in the Tree Planting Strategy in Appendix A (Drawing No. LA_MP_AO_DA210). The Tree Planting Strategy indicates that Transport Place would be paved and open, without trees. This was also conveyed in a BOA briefing delivered to TfNSW on 12 June 2014. Clarification is required to confirm the planting strategy for Transport Place. This should take into consideration the purpose of Transport Place as a key pedestrian connection between Wynyard Walk and the Barangaroo Ferry Hub. TfNSW requests that the applicant considers adequate sight lines approaching the intersection of the Waterfront Promenade and Transport Place to avoid planting trees conflicting with pedestrian traffic, particularly those rushing to the Ferry Wharves. | The reference in the EIS is incorrect. To clarify - Transport Place is to be a paved and open public space without trees, as shown on Drawing LA_MP_AO_DA210. Approaching the waterfront (moving West), sightlines will be maintained through Transport Place at Lime Street (<i>Harpulia pendula</i>) and also through the Waterfront row of trees (<i>Gleditsia triacanthos</i> 'var' <i>inermis</i> 'Shademaster'). The <i>Harpulia pendula</i> will have a crown at maturity of up to 2.5-3m, with the <i>Gleditsia</i> 'Shademaster' having a crown of over 3m above ground – This will provide clear sightlines beneath the crown for pedestrians. The maintenance of any street tree will be important in ensuring the tree is crowned appropriately. |
| | There is an apparent conflict between the Circulation Diagram (Drawing No. LA_MP_AO_DA_1_02) and the Tree Planting Strategy (Drawing No. LA_MP_AO_DA210). The Circulation Diagram correctly recognises the Primary Pedestrian Connection status of the east-west flow between Wynyard Walk and the Ferry Hub/waterfront. However, the double row of promenade planting in front of the wharf shown in the Tree Planting Strategy has potential to impede pedestrian flow and sight lines to the Ferry Hub. TfNSW requests that the proponent consults with TfNSW regarding the landscaping treatment adjacent to the ferry hub taking into account ferry operational requirements and transport outcomes. | The waterfront row of trees (<i>Gleditsia triacanthos</i> 'var' <i>inermis</i> 'Shademaster') will have a mature crown height of above 3m to the underside, ensuring that pedestrian movement and sightlines are not impeded. Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate this issue via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team |
| | Tile proposed Vegetation Strategy (drawings LA_MP_AO_DA202 and LA_MP_AO_DA203) does not provide sufficient clear space in front of tile wharves and will create high levels of crowding in front of tile wharves which will be critical during special events. | The plan view shown in the referenced drawings (LA_MP_AO_DA202 and LA_MP_AO_DA203) is best understood by also referring to section drawing LA_MP_AO_DA302. The waterfront row of trees (<i>Gleditsia triacanthos</i> 'var' <i>inermis</i> 'Shademaster') will have a mature crown height of above 3m to the underside, ensuring that pedestrian movement and sightlines are not impeded. Recent discussions with the Barangaroo Ferry Hub Project team indicate that suitable area to manage special events is in fact available within the proposed design. Lend Lease and the Barangaroo Delivery Authority are continuing to assist and coordinate this issue via the weekly and fortnightly coordination meetings that are currently being held with TfNSW Barangaroo Ferry Hub project team |
| City of Sydney Council | | |
| 1 | Future Maintenance The Stage 1A Public Domain covers land that is under the care and control of, or adjoins land that is proposed to be under the care and control of, various public authorities including the City. Currently the Barangaroo Delivery Authority is the caretaker for Hickson Road and would be the caretaker for Globe Street when it is constructed. Sydney Harbour Foreshore Authority is the caretaker for Shelley Street. It is recommended that the City be consulted when relevant conditions of consent are to be satisfied so that any future transfer of ownership of Hickson Road, Shelley Street or other public domain and associated infrastructure does not cause maintenance issues when assets that are not installed to the City's specifications. | Lend Lease is not the current owner of the public domain, nor the surrounding road network, and will not be involved in any potential future dedication of lands to Council or others. Under the terms of the PDA, Lend Lease is responsible for design and construction only. The public domain area remains, at all times, in the ownership and control of the Barangaroo Delivery Authority. |

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Attachment A – Response to Submissions

| Key Issues Raised | | Lend Lease Response |
|-------------------|---|--|
| 2 | <p>Design Issues</p> <p>The City supports the general arrangement of uses and structures and the widespread use of the City's palette of public domain materials. The following detailed design comments are made:</p> | Noted. |
| 3 | <p><u>Paving</u></p> <p>The City endorses the use of the City's paving palette along Hickson Road, Globe Street and Lime Street, and in adapted form for the major cross-site links at City Walk, Union Walk and Transport Place.</p> <p>The ground plane to the colonnade along Hickson Road forms part of this DA.</p> <p>The City does not support the interruption of this colonnade with stairs and ramps.</p> <p>It is not clear if the choice of in-situ concrete to the waterfront edge has been made to continue existing paving treatment from King Street Wharf, but some form of continuity at this junction would be preferable to a sudden change of paving type and pattern. The City encourages some form of continuity in paving materials at the junction with King Street Wharf, helping to reinforce that Barangaroo South is part of an extended foreshore walk connecting through to Darling Harbour.</p> | <p>Lend Lease in consultation with the BDA and the City of Sydney Council is preparing a design for the amended levels of Hickson Road. A REF is expected to be completed for the works associated with the potential amended design of Hickson Road. The levels proposed within the Stage 1A public domain application must necessarily be based on the current situation and ownerships and therefore is unable to consider the outcome of a future REF. Should the REF be approved, the implication is that all steps will be removed as the levels onsite and off-site will be matched.</p> <p>King Street Wharf paving is a light brown coloured limestone. The concrete aggregate material proposed mitigates between this colour and material and that proposed for the Central waterfront so that there is a contextual relationship across the entire waterfront. Additionally, the King Street limestone has not been considered appropriate from a performance, procurement or design objective point of view.</p> <p>Notwithstanding this, there is a strong visual connection between King Street Wharf and Barangaroo South with the continuation of timber sleepers, timber boardwalk and concrete edge. The tones of the in-situ concrete paving will be similar to the porphyry stone tiles of King Street Wharf.</p> |
| 4 | <p><u>Footpath alignments</u></p> <p>The kerb alignment at the corner of Globe Street and Lime Street produces a reduced footpath width at this intersection. The radius of the kerb should be tightened to ensure an even width of footpath around this corner.</p> | The proposed kerb alignment is temporary for Stage 1A, and has been designed for the turning paths of required vehicles until the time that the road is widened as part of the Stage 1B Public Domain. At the time of the Stage 1B application the kerb will be realigned. |
| 5 | <p><u>Access and safety issues</u></p> <p>Further thought should be given to the change in level shown in "Waterfront Perspective View 2" (LA_MP_AO_DA304) and in "Section A-A Waterfront" (LA_MP_AO_DA302). A drop of 450mm between the terrace area and lower concourse represents a potential safety hazard. Consideration should be given to some visual and/or tactile means (change of paving colour or texture) to signal this level change. A handrail or some other barrier may be required to be installed if accidents occur, and this would be a less than desirable urban design outcome.</p> | A review of tactile indicators will be undertaken with DDA consultant as part of the detailed design phase for construction documentation. |
| 6 | <p><u>Street furniture</u></p> <p>Globe Street and Lime Streets should be experienced as generic City streets. The City's suite of street furniture, including the tree grate (and tree guard if needed) should be used in these locations, and adjustments made to ensure they are installed according to the City's street codes and to meet all access requirements. It is noted that some perspective views of the Waterfront Walk show something similar to the City's tree grate, but this is not indicated on the Material Palette/Samples drawing (LA_MP_AO_DA206).</p> <p>It is assumed that with the exception of the waterfront seat, street furniture, bins, bubblers, bollards, tree grates and guards will be from the City's suite.</p> | <p>Council furniture will be used throughout Barangaroo South with the exception of the waterfront seat and the tree grates.</p> <p>The tree grates have been designed to allow street activation (retail seating on the grate), respond to the industrial 'wharf' theme and provide access to the tree pits.</p> |

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| 7 | <p>Public Domain Issues</p> <p><u>Public Squares</u></p> <p>Details of the design for the Global Square should be provided given it forms a key node in the public domain.</p> <p>Hickson and Transport Places are denoted as new squares. Transport Place is not a new area but seems to have been made slightly larger. Its function as a public square is likely to be compromised given its junction with vehicular traffic. Hickson Place forms a new arrival space and is a key decision point for visitors before they head off from the bottom of the pedestrian bridge. The increase in space is a good addition at this important link.</p> | <p>It is not appropriate to provide a permanent design for Globe Square at this time as it interfaces with Stage 1B, which is still undergoing design development. Accordingly a temporary public domain solution is proposed, and the final permanent solution will form part of the Stage 1B public domain application.</p> |
| 8 | <p><u>Planting</u></p> <p>The loss of tree planting from Transport Place has positives and negatives. The loss of greenery will be a loss to the amenity of the space but will open up views of Darling Harbour from Napoleon Plaza and Margaret Street through the proposed loggia. The City would prefer to see some street tree planting between the termination of the loggia structure and the waterfront.</p> | <p>As noted the change has positives and negatives. However, ultimately the change is driven by the underground civil conditions / easement and pedestrian circulation needs which prevent planning from occurring in the area.</p> |
| 9 | <p><u>Levels and grading</u></p> <p>Hickson Road is shown at existing levels which introduces a level change and access issues from the public footway onto the podium. A number of proposals are being considered for Hickson Road that change these levels to meet at grade. The Agency should ensure that any approval does not exclude the need to allow for future height change.</p> <p>The height changes along Shelly Street onto Transport Place need further consideration in regards to accessibility.</p> | <p>Lend Lease in consultation with the BDA and the City of Sydney Council is preparing a design for the amended levels of Hickson Road. A REF is expected to be completed for the works associated with the potential amended design of Hickson Road. The levels proposed within the Stage 1A public domain application must necessarily be based on the current situation and ownerships and therefore is unable to consider the outcome of a future REF. Should the REF be approved, the implication is that all steps will be removed as the levels onsite and off-site will be matched.</p> |

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Attachment A – Response to Submissions

| | Key Issues Raised | Lend Lease Response |
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| 10 | <p><u>Lighting</u></p> <p>The City notes that the City of Sydney Smartpole has been specified for street lighting, but there was insufficient information on pedestrian lighting fixtures included in the submission to comment from an urban design perspective. A detailed Lighting Masterplan should be prepared. Considering the high volume of pedestrian traffic and potential for crime, lighting categories specified for CBD streets as per AS1158 are V1 and P1 + 4 lux vertical. Dimming provisions may be activated during curfew hours.</p> <p>P2 category is only specified for predominantly residential precincts. P3 category is not appropriate for City retail/residential precincts and should not be used. Blue light sources are not recommended and strong objection has been shown by Sydney Observatory in the past.</p> <p>Standard outreach arm length for 7.2m Smartpole is 2.0m and not 2.5m. Full cut-off luminaires with zero upcast complying with the requirements of Sydney Lights Design Code should be used.</p> <p>The Lighting Masterplan should be endorsed by Sydney Observatory.</p> | <p>The Barangaroo South Lighting Masterplan by Speirs & Major was provided with the public domain application. The masterplan shows the design intent and compliance with AS1158.</p> <p>The road lighting will comply with AS1158 and will achieve a V1 and P1 + 4 lux vertical.</p> <p>The road lighting complies with AS1158 and will achieve a V1 and P1 + 4 lux vertical rating.</p> <p>The design intent for the waterfront lighting is to create a safe and ambient lighting scheme to suit the harbour edge. A recent study of light levels at the harbour edge conducted by Lend Lease showed most areas adjacent to the harbour were less than a P3 rating. A P3 rating has been nominated for the waterfront boulevard and the lux levels can be increased with dimmers to a rating of P2 if required.</p> <p>The waterfront lighting has a combination of both blue and warm white light to create a unique waterfront atmosphere and visual experience. The blue lights are aimed downwards through trees to reduce light trespass in accordance with AS4282. Warm white lights on seats and the waterfront edge are used for perimeter lighting. Together this can achieve a P2 rating.</p> <p>The outreach arm of the 7.2m Smartpole will be 2m and full cut-off luminaires with zero upcast complying with the requirements of Sydney Lights Design Code will be used.</p> |
| 11 | <p>Transport and Access Issues</p> <p><u>Future traffic modelling</u></p> <p>It is noted that traffic signals at the corner of Hickson Road and Napoleon Street are being configured in collaboration with Roads and Maritime Services. The configuration will ultimately dictate pedestrian, motorist and cyclist priorities and safety. It is also understood that the future design of Napoleon Street is subject to ongoing traffic modelling.</p> <p>Globe Street will intersect with Hickson Rd to create a T-intersection. Priority will be given to vehicles on Hickson Rd. It has not been discussed in the Traffic Report whether southbound vehicles travelling along Hickson Rd will be significantly affected by vehicles waiting to turn right to access Globe Street. However, the proposed signals at the Napoleon St/Hickson Rd intersection may assist in relieving the strain by providing breaks in traffic flow along Hickson Rd. These issues were raised with Concept Plan Modification 6 (which altered the alignment of Globe Street) and the approval of that modification includes a requirement for further traffic modelling to demonstrate the impact. The City looks forward to reviewing the modelling and notes that a timeframe of 3 months from the date of approval of Mod 6 was specified for the modelling to be provided.</p> | <p>Noted. The future traffic modelling relates to the road layout as contemplated by Concept Plan (Mod 6) and not the Stage 1A Public Domain Application. Modelling to accommodate the works proposed as part of the Stage 1A Public Domain Application has already occurred.</p> |
| 12 | <p><u>Shelley Street traffic closure</u></p> <p>The Traffic Report proposes that the northern section of Shelley Street be closed off to vehicular traffic subject to approval of the roads authority and subject to the conditions relating to the use of Lime Street and Globe Street. The reasoning is to improve the pedestrian environment. However, thorough assessment needs to be carried out to review the conditions and determine whether or not the request will be plausible. In principle such treatments are supported.</p> | <p>Council's in principle support is noted. The permanent closure of Shelley Street will be the subject of a separate application. This application will consider the transport impacts arising from the proposed closure.</p> |

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| 13 | <u>Crossings</u> It is proposed to install zebra crossings along Lime Street in two locations as shown in the Traffic Report at page 18. The proposed locations appear satisfactory and appear to cater for sight lines. | Noted. |
| 14 | <u>Speed Limitations</u> The proposition to have Lime Street and Globe Street treated as High Pedestrian Activity Areas with a 40km/h speed limit is supported and encouraged as it addresses the City's objectives to promote pedestrian activity through implementation of safety measures such as reduced speeds. Such treatment would also serve for cyclist safety and amenity, given the 'tight' nature of the street. | Noted. |
| 15 | <u>Bike parking</u> Twenty-five bike parking spaces for visitors of the commercial buildings are considered satisfactory. It has been stated that most visitors will be attending meetings and are more likely to utilise other methods of transportation such as walking or public transport. A total of 118 visitor bike parking spaces are proposed for remaining uses (p20). | Noted. |
| 16 | <u>Heavy vehicles</u> Submitted turning paths indicate that the largest vehicle expected to access the Stage 1A area is 10m in length. It has been indicated that vehicle length restrictions will be enforced. This is to ensure that vehicles will be able to pass each other safely and is supported by the City. | Noted. |