

MP 10_0023 BASEMENT CAR PARKING PROJECT APPLICATION (MOD 3) RESPONSE TO SUBMISSIONS

Key Issues Raised		Lend Lease Response	City of Sydney Response
Sydney Water			
1	<p>Stormwater Sydney Water owns the storm water channel located within the development area. Sydney Water is currently working with the developer to address the impacts that the proposed development will have on the storm water channel.</p> <p>The developer is required to install a temporary channel deviation, and will need to carry out a permanent deviation of the channel as the development progresses. The developer is required to continuously liaise with Sydney Water's Storm water group until the permanent deviation of the channel is completed to Sydney Water's requirements</p>	Noted and agreed	
2	<p>Waste and wastewater servicing The developer has recently submitted its proposed water related servicing strategy for the Barangaroo South development to Sydney Water for review. Once finalised, the servicing strategy will identify the water, waste water and non drinking water infrastructure required to service the site.</p> <p>All developments impacting on Sydney Water's assets are required to obtain a Section 73 Certificate. The developer has not yet obtained a Section 73 application for the Basement Car Parking.</p> <p>The Developer must fund any adjustments needed to Sydney Water infrastructure as a result of the development.</p>	Noted and agreed	
NSW EPA			
1	<p>Noise and Vibration The Environmental Assessment (EA) for the proposed modification to the Bulk Excavation and Basement Car Park states that the excavation work will still be undertaken in accordance with the construction noise impact assessment undertaken by Wilkinson Murray for the proposed works. No additional noise impact associated with the modification is anticipated.</p>	Noted and agreed	
2	<p>Water EPA considers that providing the works are done in accordance with the Water and Storm water Management Sub-Plan and in compliance with the conditions attached to Environmental Protection License</p>	Noted and agreed	

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	number 13336, impacts on receiving waters can be adequately managed.		
3	<p>Waste</p> <p>EPA considers that the providing the works are done in accordance with the Revised Waste Management Plan and in compliance with the conditions attached to the Environmental Protection License number 13336, waste management impacts can be adequately managed.</p>	Noted and agreed	
NSW Finance & Services, Housing & Property Group (Housing NSW Assets Division)			
1	<p>Construction generated noise may exceed noise standards in the residential areas of High Street during some phases of construction, which would have an impact on local residents including social housing tenants located there. It is important that the Noise Mitigation Strategies identified in the Environmental, Construction and Site Management Plan (ECSMP) prepared for each project, if approved, are included in the conditions of project approval to ensure that all Environmental Impact Mitigation Measures are adhered to. It is noted that other approvals for works on the Barangaroo site have been conditioned to require specific noise mitigation treatments to be implemented and / or additional measures such as provision of respite from noisy, vibration intensive activities. Previous approvals have also been conditioned to include the implementation of a Construction Complaints Management System prior to the commencement of construction and the maintenance of the System for the duration of construction. It is requested that similar conditions of approval are applied to the Modification Application for the Bulk Excavation and Basement Car Parking.</p>	<p>Condition C3 of MP 10_0023 requires the preparation of a Construction Noise and Vibration Management Plan to be submitted to DECCW (EPA) for review and comment prior to the issue of a relevant Construction Certificate.</p> <p>Statement of Commitment 1.1.8 also requires that construction works generally in accordance with the findings, recommendations and mitigative strategies of the Supplementary Excavation and Construction Noise and Vibration Assessment prepared by Wilkinson Murray (September 2010) and the Bulk Excavation and Basement Carparking PA1 – S75W1 (MP10_0023) Excavation and Construction Noise and Vibration Assessment Report No.10232 Version C prepared by Wilkinson Murray dated November 2010.</p> <p>Each of the particular matters of concern raised by NSW Finance & Services in relation to potential noise and vibration impacts is required to be addressed in the Construction Noise & Vibration Management Plan by specific condition of approval and is also required to be reviewed and subject to comment by EPA prior to implementation.</p> <p>An updated Construction Noise and Vibration Management Sub-Plan has been prepared (as part of the overall Environmental Construction & Site Management Plan for the project) and has been signed off by both the Department of Planning and</p>	

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	<p>Infrastructure and the EPA in December 2011.</p> <p>It is considered that Condition C3 and Statement of Commitment 1.1.8 in its current form is sufficient to ensure that the noise mitigation strategies identified in the ECSMP are appropriately adhered to.</p>	
2	<p>It is very important that a dilapidation survey, identified in each ECSMP to be carried out prior to the commencement of works, be included in the conditions of approval and carried out accordingly. A post construction dilapidation report to determine whether construction works have caused any damage to surrounding LHC properties should also be included as a condition of approval. LHC properties surrounding the Barangaroo site have heritage significance and the long term preservation of these properties is of great importance.</p>	<p>Existing Condition B17 of the approved project requires Lend Lease to prepare a Pre-Construction Dilapidation Report detailing the current structural condition of all existing and adjoining buildings, infrastructure and roads prior to the issue of the relevant Construction Certificate. A copy of the report is to be forwarded to the Director General and Council. Statement of Commitment 1.1.8 also requires that prior to commencement of works, Lend Lease will undertake a dilapidation survey of a selected number of dwellings within the Millers Point area that Lend Lease believes are representative of the overall building stock and offer an appropriate benchmark of the condition of all properties.</p> <p>Conditions relating to other approved projects also require Lend Lease to prepare a post-construction dilapidation report at the completion of the construction works. The report is to be submitted to the PCA, and is to ascertain whether the construction works created any structural damage to adjoining buildings, infrastructure or roads.</p> <p>Existing Condition B17 and Statement of Commitments 1.1.8 and 1.1.17 satisfy the request made by NSW Finance & Services for inclusion of a requirement to prepare pre and post construction dilapidation reports as conditions of approval.</p> <p>Notwithstanding the above, Lend Lease recognises that it is likely all future project approvals at Barangaroo South will require the submission of post- construction dilapidation reports at the completion of the relevant</p>

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	<p>construction works.</p> <p>Given the staging, duration and timing of commencement and completion of various components of construction works, which will overlap and extend over a relatively long timeframe, it is considered appropriate that rather than preparing a series of individual dilapidation reports at the completion of each component of construction works (which would be very inconvenient for owners, tenants / residents who would be required to provide access to their properties) a site wide strategy be undertaken with respect to the preparation of dilapidation reports.</p> <p>It is proposed that the preparation of dilapidation reports relating to the works proposed as part of the basement project be coordinated with the dilapidation reports relating to the works proposed as part of the future Commercial Building C4, C3 and C5 in the following manner:</p> <ul style="list-style-type: none"> a single dilapidation report at the completion of all excavation and piling works associated with the combined Bulk Excavation and Basement Car Parking Project Application, Commercial Building C3, C4 and C5 Project Applications; and a single dilapidation report at the completion of all construction works associated with the combined basement car park, and Buildings C3, C4 and C5 that may give rise to vibration impacts to adjoining properties, infrastructure or roads are complete. <p>In order to effect a site wide strategy with respect to the preparation of dilapidation reports, it is proposed that rather than imposing requirements through Conditions of approval imposed on individual project applications, the requirements be imposed through the ECSMP, which is a site wide document.</p>	

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		<p>It is therefore proposed that the existing Statement of Commitment 1.1.8 relating to Dilapidation Reports be modified to require Lend Lease to prepare dilapidation reports in relation to the basement car park project as above. Land Lease will proposed a similar Statement of Commitment in relation to the project approvals for Commercial Building C3 and Commercial Building C5. This approach is also consistent with the C4 S75W application (Mod 1) that is being considered by the Department.</p>	
3	<p>Although the subject application does not relate to residential development, the lack of a Housing Strategy for the Barangaroo Site is of ongoing concern. Previous submissions have consistently requested that the Barangaroo Housing Strategy be prepared prior to the submission of project applications to ensure an appropriate mix of housing types and affordable housing options are incorporated in the Barangaroo development. Considering that a number of buildings proposed for the site are to be residential, and the DP&I has already accepted a number of preliminary applications for residential buildings at Barangaroo South, the importance of finalising a Housing Strategy is reiterated.</p>	<p>A Housing Strategy for Barangaroo is to be submitted to the Barangaroo Planning Reference Group prior to the lodgement of any relevant project application within the B4 Mixed Use Zone.</p> <p>As the Bulk Excavation and Basement Car parking is not a residential development, submission of the Housing Strategy is not required at this stage. The Housing Strategy is being developed and will be submitted at the appropriate time.</p>	
Sydney Ports			
1	<p>Pedestrian management Given pedestrian access to the CPT will be via the eastern footpath of Hickson Road, Sydney Ports requests that a safe pedestrian crossing path be considered and implemented prior to the western side of Hickson Road being restricted to pedestrians. Consideration should also be given to providing a pedestrian crossing across Hickson Road in close proximity to the CPT facility should pedestrian access on the western side of Hickson Road not be permitted during construction.</p>	<p>As identified by Sydney Ports, the Construction Traffic Management Plan proposes to allow for redirection of pedestrians accessing the CPT to the eastern footpath of Hickson Road for the duration of the proposed works, reducing potential conflicts with vehicles.</p> <p>To address the issue raised by Sydney Ports, Lend Lease will provide a temporary pedestrian crossing across Hickson Road in close proximity to the CPT facility to allow for pedestrians to cross safely to the eastern side of Hickson Road. A modification to Condition D4 of the Approved</p>	<p>The City would support additional safe pedestrian crossings in the area.</p>

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<p>2</p> <p>Traffic Impacts The Construction Traffic Management Plan prepared by ARUP included traffic counts from an intersection survey conducted on 27 April 2010 to establish the existing peak hour traffic conditions and traffic operations at these intersections. Sydney Ports requests confirmation that the construction traffic impact assessment and modeling included traffic counts from the vehicle movements associated with the CPT terminal in addition to these counts given as there was no cruise ship berthed at Barangaroo on 27 April 2010.</p>	<p>Project is proposed.</p> <p>The Construction Traffic Management Plan submitted with the Mod 3 Application (refer to Appendix V of the EAR) identifies that the Cruise Passenger Terminal at Wharf 5 was surveyed for vehicular traffic and pedestrian movements on Friday 3 September and Monday 6 September 2010 when the Dawn Princess and the Pacific Jewel respectively docked in the morning and departed in the afternoon. These two ships are representative of the larger ships scheduled to dock at Wharf 5 between July 2010 and December 2011. The full 18 month schedule has been reviewed which indicates that the 164 ships visiting Wharf 5 over this period will result in 182 days when a ship is docked at Wharf 5. The vehicular traffic movements associated with each of the larger cruise ship visits represent a total of approximately 2300 to 3000 vehicle movements occurring over a 10 hour day, from 6.30am to 4.30pm, by a combination of car, taxi, bus/coach and truck movements. The traffic movements surveyed for the Dawn Princess and the Pacific Jewel are summarised in full in the CTMP submitted with the Mod 3 Application.</p> <p>Lend Lease confirms that the construction traffic impact assessment and modelling included traffic counts from the vehicle movements associated with the CPT in addition to the counts given relating to 27 April 2010.</p>	
<p>3</p> <p>Barging of soil It is noted that consideration is being given to removing spoil from the site via water routes to minimise construction traffic impacts. Sydney Ports in principle is supportive of this proposal however consideration of barge related impacts will be required. Should Lend Lease progress with this option, Sydney Ports requests that the Proponent liaise with the Harbour Master prior to material being loaded for transport via the water from the site, particularly in</p>	<p>Lend Lease wishes to allow for the option of removing spoil from the site via water routes i.e. barging of soil.</p> <p>In the event that barging of material is chosen as the most appropriate strategy, Lend Lease will liaise with the Harbour Master prior to material being loaded for transport via the water from the site, particularly in</p>	<p>The City supports barging.</p>

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<p>relation to vessel movements.</p> <p>Sydney Ports is the agency responsible for vessel related spills in Sydney Harbour and Botany Bay. Should barging of spoil material be proposed, the Construction Environmental Management Plan should, as a minimum, address the following:</p> <ul style="list-style-type: none"> ▪ Spillage of spoil during loading / movement of barges; ▪ Procedures in the event of an incident (such as a fuel spill or collision with structures / vessels on the water); and ▪ Provide details regarding reporting of any incidents on the water. 	<p>relation to vessel movements.</p> <p>As requested by Sydney Ports, the ECSMP will be updated to address the environmental management matters identified by Sydney Ports. A new Statement of Commitment 1.1.17 is proposed to reflect this requirement.</p>	
City of Sydney		
<p>1 Finished levels, overland flows and stormwater</p> <p>In response to the original project application and also Mod 1, the City previously made the submission stating that the design of the basement must ensure the following provisions within the public domain are allowed for:</p> <ul style="list-style-type: none"> ▪ Desired finished level of the public domain – grading of streets and footways, at grade planting, drainage; ▪ Integration between the new public domain and existing public domain infrastructure including junction with Hickson Road, Margaret Road and Lime street – proposed new road levels must marry into existing road network; ▪ Adequate drainage of future public domain areas and overland flow provision; and ▪ Maintain / improved storm water drainage of surrounding areas including maintaining adequate overland flow from Hickson Road to the harbour. <p>The DoPI granted consent to the basement with a finished level cresting at RL 3.8 and extending the full width and length with no exclusions zones for services and overland drainage.</p> <p>This has caused the proponent to approach the City with a proposal to raise the portion of Hickson Road by up to 1.6m so that overland flows of flood water are directed south down Hickson Road to the intersection with Sussex Street, with a proposal to lower a portion of</p>	<p>The Application is focused on reducing excavation and amending entry locations. It does not propose to alter the approved ground surface level, or the Statement of Commitments and conditions contained within it that pertain to this issue (see existing approval documents). In this regard, the current consent and its supporting material documents in detail the nature of existing infrastructure deficiencies and the requirements for the site resulting from the need to respond to climate change. These issues continue to apply in respect of the current Mod 3 application.</p> <p>Lend Lease is currently liaising with the City of Sydney in relation to storm water infrastructure and is discussing design solutions that meet the requirements of Sydney Water, Council and the NSW Government's proposals for the Wynyard Walk pedestrian bridge connection, within the context of the current approval. The description provided by Council is not a true reflection of the scope of the proposals, nor their potential implications.</p> <p>Lend Lease's objective is that final surface levels will be designed with consideration to:</p> <ul style="list-style-type: none"> • ensuring public amenity and suitable access to and from Barangaroo along Hickson Road and from 	<p>Lend Lease (LL) and the Barangaroo Delivery Authority (BDA) met with the Council on 7 March 2012 in order to brief the City regarding this PPR. These issues can be resolved through further refinement of the proposed reshaping of Hickson Road. The Council is satisfied with the undertaking that LL provided at the meeting that the ultimate Hickson Road footpath levels will align with the basement slab. This means that the need for stairs or ramps will be eliminated and LL indicated that there will be no need for any. This will provide a good outcome. The reshaping of Hickson Road will take into consideration many aspects such as public transport, parking, trees, services and pedestrians. The Council is liaising with LL in relation to stormwater infrastructure. LL's storm water designs are in principle generally supported subject to final negotiation.</p> <p>Therefore the Council is satisfied that these issues have been addressed for the purposes of this PPR.</p> <p>Consultation should be a condition of any</p>

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<p>Margaret Street West by almost 1.4m so that the water then travels west to the Harbour though what is being discussed in recent design meetings as 'transport place'. The elevating of Hickson Road and the lowering of Margaret Street West will ensure there is no overland flow in Barangaroo South via the new street network, but rather pushes all flows to outside the site's Boundary.</p> <p>The ongoing design documentation process will consider where relevant the following City of Sydney Council policies as relevant to the scope of the Project Application:</p> <ul style="list-style-type: none"> ▪ Sydney Streets Design Code; ▪ Public Domain Manual; ▪ Exterior Lighting Strategy; ▪ Sydney Lights Design Code; and ▪ Development Specification for Civil Works – Design and Construction. <p>Adequate depths over the basement will be provided for deep soil planting within a continuous trench in the order of 1000-1200m m along Globe and Napoleon Streets.</p> <p>The Project Application Approval includes various conditions that seek to address the road design and flooding issue created solely by the approval. The City has been liaising with Lend Lease in an attempt to address the requirements of these conditions. The solutions are not simple; however the City is committed to affording the resources required to the project to ensure a satisfactory outcome. It is considered that this time and effort being afforded to what will be a poor solution could be saved with a simpler (and more cost effective) redesign of the basement and its RLs, with changes that are far less extensive than the ones proposed by the proponent in the subject application.</p> <p>Recommendation 1: <i>The height of the structure and the impact upon the surrounding infrastructure is a fundamental issue that requires resolution prior to the modification being considered by</i></p>	<p>Wynyard Walk;</p> <ul style="list-style-type: none"> • rectifying existing storm water infrastructure deficiencies including the existing trapped low point in Hickson Road; • incorporating adequate overland flow paths to prevent flooding; <p>and</p> <ul style="list-style-type: none"> • planning for climate change and making provision for sea level rise. <p>The Mod 3 application does not seek to change this approach. It is not considered that the indicative height of the structure and the potential impact upon the surrounding infrastructure is a fundamental issue that requires resolution prior to the modification being considered by the Department of Planning and Infrastructure. Accordingly, the Mod 3 application is considered to be adequate and can be approved in its current form.</p>	<p>approval.</p> <p>A discussion about developing Hickson Road as a Boulevard is below.</p>

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<p><i>the DoPI and in its current form cannot be approved.</i></p>		
2		
<p>Traffic and Transport</p>		
2.1	<p>Traffic and Transport - Drive way location</p>	
<p>The proposal seeks amendments to the location of the driveways into the basement. The approved scheme has 2 separate driveways, one for the all loading and servicing, and the other for all car parking. The two driveways are on opposite sides of the basement. The new proposal provides for 3 driveways, the third being a new, and secondary car park access adjacent to the loading access. The explanation for the new secondary access is that the new car park layout requires it; however the car park layout is described elsewhere in the report as indicative only. The information appears unresolved. While it is considered that the additional access may be required, the information provided makes it hard to assess and to make a well-considered response.</p> <p>The proposed location for the driveway from Lime Street appears to be very close to the proposed realignment of the Margaret Street extension. The driveway must be a minimum of 10m from that future intersection given that this is the primary driveway to a major basement car park. An overlay of the future street network should have been provided with the application to show whether this would be an issue to resolve or not, without the overlay, it is hard to make a fully considered response.</p> <p>The car park driveway from Hickson Road is described as a secondary driveway. There appears to be no rationale as to why this would be the case or how the proponent would ensure this was the case. The concerns are that the driveway will have a closer proximity to the main road network and therefore more likely to be the one most drivers gravitate towards.</p> <p>It is difficult to understand the final form of this driveway once the temporary road is removed. Unanswered questions arise such as - Will this driveway have to be extended north and at what level? Will</p>	<p>As noted in section 1.1 of the Environmental Assessment, as with previous applications, the current application seeks approval for the following:</p> <ul style="list-style-type: none"> • structural works, comprising the construction of: <ul style="list-style-type: none"> - foundations (piling, caps and footings); - basement levels; - perimeter retention system to basement walls; and - all associated elements and structures; • indicative parking layout, loading, plant location, bicycle parking and associated amenities; <p>The car park entries are part of the structural works and hence are critical for this application. An indicative internal layout has been provided to add context to the application. The applications for each of the buildings will confirm the internal layout of the basement elements.</p> <p>Current applications that provide some of this information include:</p> <ul style="list-style-type: none"> - MP10_0025 Commercial Building C4 - MP10_0227 Commercial Building C5 - MP10_0044 Commercial Building C3 <p>All proposed entries are required. Refer to the above mentioned Project Applications for the proposed road layouts.</p>	<p>These issues have been satisfactorily addressed.</p> <p>It should be noted that the realigned Shelley Street between Hickson Road and Shelley Street will be closed to all vehicular traffic after completion of the Wynyard Walk bridge. During construction, a single eastbound lane will remain.</p>

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<p>it be parallel to Shelley Lane, deactivating the lane?</p>	<p>It is noted that adequate distance should be provided between the Lime Street entry/exit and any nearby road intersections. Existing condition B11 requires “<i>detailed design and construction documentation of the roads and footway...to be submitted and approved by the relevant road authority prior to the relevant Construction Certificate being issued.</i>”</p> <p>The temporary road from Hickson Road forms part of the original approval. Apart from providing an additional entry/exit from this temporary road, there are no proposed changes to its alignment as part of this application. As shown on drawing BB1_PA1_S75W-3_A005, a ‘temporary entry/exit’ for trucks and vehicles has been provided due to staging issues associated with the adjacent OEH declaration area. The location and alignment for the proposed future road network is also shown on this drawing in dotted line. The basement and associated entries have been designed to accommodate the temporary and future road network configurations. The temporary road will not be required once the new road configuration is in place.</p>	
<p>2.2.1 Traffic and Transport - Management Plans 2.2.1 Construction Managements Plans - being Appendix G to the Environmental Assessment Report (EAR).</p> <p>Section 1.7 The City has previously recommended that trucks transferring materials from the south to the north of the site remain on site. However this CTMP recommends that the trucks use Hickson Road. While the City recognises that this section of Hickson Road is currently under the control of the Barangaroo Delivery Authority (BDA), the City is concerned over additional truck movements along Hickson Road.</p>	<p>Section 1.7 As noted in the CTMP, the quantity of material that will be transferred to Headland Park has reduced significantly from the quantity considered in the original Project Application. Consequently the number of truck movements required along this section of Hickson Road is lower than previously proposed at 4 return truck movements per hour. Should design requirements of spoil to the Headland Park increase significantly, Lend Lease will consult with Sydney Ports and the BDA in accordance with Statement of</p>	<p>These issues have been satisfactorily addressed.</p>

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<p>Recommendation 2 - That trucks transferring materials from the south to the north of the site only travel on internal routes. In addition, to further minimise the number of trucks accessing and departing the site, the City also recommends that the trucks are stored overnight on site. (This has also been recommended previously).</p> <p>Section 1.9 Based on the City's observations and previous studies, the City questions the validity of the existing intersection results, particularly at the intersection of Sussex Street and Erskine Street. Queues at this intersection are significant, particularly in the PM peak period.</p> <p>Recommendation 3 - That the data relating to existing intersection traffic results is confirmed and that the assumptions for this analysis are included in the ARUP report.</p> <p>Section 2.2.3 If possible, the City would prefer to remove the spoil from the site via water routes rather than via roads.</p> <p>Section 5.5 The CTMP suggests an alternative truck route for trucks from the north during the AM peak period. The City does not support this alternative route as the Wynyard precinct from Grosvenor Street to King Street is heavily congested during the AM peak period. No additional truck traffic should be using York Street until after 9:30AM when the current restriction is removed. In addition the City has concerns over whether the trucks can navigate the right turn movement from Grosvenor Street to Lang Road. Turning movement diagrams will need to be provided.</p> <p>Section 5.6 The proposed truck holding areas should be clearly identified along with the existing parking restrictions that will need to be</p>	<p>Commitment 1.2.</p> <p>It is anticipated that trucks will typically be retained on-site overnight for continuing works for the duration of the bulk excavation works, however this will be subject to future contracting arrangements. In addition, a holding area will be implemented on-site while alternatively the construction loading zone may also be used for short-term delays.</p> <p>Section 1.9 Following feedback from various agencies for the Commercial Building C4 Project Application, a cumulative analysis of truck movements resulting from the Barangaroo South Basement, the C3, C4 and C5 Commercial Buildings and the Headland Park Main Works project has been conducted using the LINSIG analysis program. The LINSIG traffic modelling indicates the Sussex Street / Erskine Street intersection to be operating with a Degree of Saturation (DOS) of 0.88 in the PM peak hour. This is approaching but does not exceed the theoretical operating capacity for a signalised intersection and reflects existing operating conditions for the intersection. LINSIG traffic modelling has specifically been requested by RMS and it is considered to be appropriate for this application.</p> <p>Section 2.2.3 Noted. The CTMP notes that there is potential opportunity for the use of water transport for excavated spoil transport from the site. Soil transport by water is being investigated and may be used in order to mitigate any potential traffic implications on the local road network. A new Statement of Commitment 1.1.17 has also been included regarding the barging of soil.</p>	

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<p>changed. There is significant competition for the limited amount of kerb space in the City Centre. The City would prefer trucks to be stored on-site as much as possible.</p> <p>Section 6.1 The City is concerned that not all trucks will be able to use the roundabout on Hickson Road at Walsh Bay. Truck turning movements should be provided.</p> <p>Recommendation 4 - <i>Truck turning movements should be provided for the roundabout on Hickson Road at Walsh Bay and for the right turn movement from Grosvenor Street to Lang Road.</i></p> <p>Section 6.2 The City has concerns over pedestrian safety along Hickson Road. The City would like further information on how pedestrians will be redirected to the eastern side of the road during the construction periods as there are no pedestrian crossing opportunities in the area.</p>	<p>Section 5.5 In addition to MP10_0023 – D4(e), which restricts trucks using York Street between 2pm and 8pm, trucks are also not able to use York Street in the AM peak between 6am and 10am due to existing restrictions. The alternate route to be used is to be via the Western Distributor and Harbour Street, not via Grosvenor Street and York Street.</p> <p>Section 5.6 Construction vehicles will approach the site from areas outside the CBD using major arterial routes such as the M4, M5 etc. Appropriate holding areas which can be accessed easily from these routes will be identified off-site outside the CBD area, with trucks to be called up when needed via an on-site central logistics centre. Once called, there will be room for trucks to be queued on-site, with no queuing on CBD roads to occur as a result of the construction of the Barangaroo Development.</p> <p>Section 6.1 Trucks departing the construction and loading zone on Hickson Road will enter the Barangaroo site to turn around and depart the precinct, turning right onto Hickson Road. As noted in the report, the roundabout on Hickson Road at Walsh Bay is to be used infrequently when it is impractical for trucks to enter the Barangaroo site to turn around. The subject roundabout is suitable for medium-rigid trucks. Any larger trucks will be instructed to follow an alternate path via Towns Place-Dalgety Road-Kent Street-Windmill Street and back down Dalgety Road to Hickson Road. Swept paths for the subject roundabout can be provided if required.</p>	

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	<p>Section 6.2 Following consultation with the City of Sydney, Lend Lease have received conditional approval to install a zebra crossing on Hickson Road approximately 20m south of the proposed site access. This crossing will facilitate pedestrian crossings to the eastern side of Hickson Road, including appropriate signage. The design for the crossing is in accordance with Australian Standards and has been approved by the BDA as the Roads Authority, as well as the City of Sydney Traffic Committee.</p>	
<p>2.2.2</p>	<p>Traffic and Transport - Management Plans 2.2.2 Transport Management and Accessibility Plan - being Appendix F to the EAR. Section 3.2.1</p> <p>In general, the recommended walking distance to a railway station is approximately 800m. With the exception of Wynyard all other stations are more than 800m from Barangaroo South. It would be useful if the approximate distances from each of these stations were provided.</p> <p>Section 4.2 The City understands that there is a proposal for the closure of Shelley Street to accommodate the Wynyard Walk Bridge over Hickson Road. This has not been included in the diagram. Additional options should be provided in order to consider the following two scenarios: full closure of Shelley Street; and a partial closure of Shelley Street with one eastbound lane remaining. Ideally, the City would prefer Globe Street to connect directly to Napoleon Street rather than the creation of a new intersection at this location.</p> <p>Section 5.2 The proposal to reduce the number of bicycle parking spaces</p>	<p>This is not relevant to this application.</p> <p>Section 4.2 This matter is not relevant to this application. Separate traffic modelling considering the impact of the closure of Shelley Street is currently being undertaken. This modelling would consider the effects of the additional traffic generated by the Barangaroo South precinct. Any confirmed changes in the road network configuration would be complemented by traffic modelling at an appropriate stage, and is considered to be outside the scope of this project application.</p> <p>Section 5.2 The current application includes spatial provision for bicycle parking and associated facilities for 5%</p> <p>These issues have been satisfactorily addressed.</p> <p>See previous comment on Shelley Street closure.</p>

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<p>within the basement and relocate the balance to ground level has some merit. The ground level spaces will be more appropriate for visitors to the site. However, the Department needs to ensure that the applicant is providing the required number of bicycle parking spaces.</p> <p>The applicant is proposing to remove half of the spaces from the basement and move them above ground. The City recognises that high levels of bike parking will be provided on the site. However the actual number of bike parking spaces should be identified.</p> <p>Recommendation 4 - <i>The applicant must undertake a review of this proposal against the NSW Planning Guidelines for Walking and Cycling to ensure the number kept below ground do still meet the minimum requirements for non visitors within the sites.</i></p> <p>Section 5.3</p> <p>The City supports the inclusion of car-share facilities on-site. The proposed number of spaces should be provided. The City has recently updated the Car- Share policy which may provide some guidance on this number.</p> <p>Section 5.7</p> <p>To date the proposed light rail route has not been formally announced. While it is expected that it will travel along Hickson Road and Sussex Street, further clarification should be made on the extent of this route.</p> <p>Recommendation 6 - <i>The following issues should be resolved as conditions of consent:</i></p> <ul style="list-style-type: none"> ▪ <i>A route for construction vehicles is to be formulated and adopted for the entire Barangaroo development in conjunction with the City (Traffic Operations and Transport Strategy) and the Roads and Traffic Authority (RTA).</i> 	<p>of all commercial employees in accordance with GreenStar requirements. This complies with the required provision under the Concept Plan. This is also in line with and supports the State Plan which targets the share of short trips by bike in Greater Sydney for all travel purposes at 5% by 2016.</p> <p>As noted in the Environmental Assessment, although there is a commitment to the provision of bike parking and facilities for 5% of all commercial employees (i.e. approximately 1100), Lend Lease is targeting the provision of the facilities for 10% of all commercial employees subject to spatial considerations. This additional provision will be considered in the next stage of the basement (i.e. to the north of the current basement) or alternatively in an above ground location and will be the subject of future project applications.</p> <p>The actual number of bike spaces to be provided will be confirmed in future project applications. This has already occurred as with the Commercial Building C3, C4, and C5 Project Applications which each specify numbers of basement and ground level bike parking spaces in accordance with the above.</p> <p>Section 5.3 Noted.</p> <p>Section 5.7 The Government is considering Light Rail within the context of the Long Term Transport Master Plan. The TMAP notes that the NSW Government is currently considering light rail extensions as part</p>	

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Key Issues Raised	Lend Lease Response	City of Sydney Response	
<ul style="list-style-type: none"> ▪ <i>All construction staff should be encouraged to use public transport to access the area. Secure provision for storage of tools on-site should be recommended in order to further limit the need to drive to the area by construction staff. Any parking for required vehicles should be catered for on-site.</i> 	<p>of a wider integrated light rail network, including an extension through the CBD and to the University of New South Wales. The report notes that Light Rail has the potential to influence the mode of choice to Barangaroo in the future.</p> <p>Construction workers will generally arrive at the site before 7 am and depart between 4-5 pm on weekdays with some work extending through to 6 pm in busy periods. On-site car parking will not be provided for workers and hence there will be minimal traffic impact arising from personal parking use. The majority of the workforce will travel by train and bus outside the morning and afternoon commuter peak periods, i.e. 8am-9am and 5pm -6pm. Lend Lease has implemented a Green Travel Plan for the construction phase which includes encouragement to use public transport.</p> <p>Provision for the storage of tools on-site will be provided.</p>		
2.3	<p>Loss of Parking The staged reduction (reallocation) of on-site parking spaces is noted.</p>	Noted	No further comment is necessary.
2.4	<p>Road Layout The plans submitted showing the proposed road layout are indicative only and don't show enough detail for the City to make any detailed comments. The City must be consulted with over the final design of the road alignment and design. The majority of public domain works are indicated as being 'temporary'.</p> <p>Recommendation 7 - That the Department of Planning request the following information be submitted to the City for comment:</p> <ul style="list-style-type: none"> ▪ <i>Detailed plan of the road network including the future</i> 	<p>Details in relation to the road network above the Basement will be provided as part of the future Project Applications relating to the buildings.</p> <p>Current applications that provide some of this information include:</p> <ul style="list-style-type: none"> - MP10_0025 Commercial Building C4 - MP10_0227 Commercial Building C5 - MP10_0044 Commercial Building C3 	This response including the explanation provided to the City on 7 March 2012 by LL satisfies this issue.

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Key Issues Raised	Lend Lease Response	City of Sydney Response	
<p><i>alignment with the connection to Globe Street;</i></p> <ul style="list-style-type: none"> ▪ <i>Information on priorities and traffic management at intersections; and</i> ▪ <i>Details to show existing and proposed pedestrian crossings. All proposed crossings must include information relating to the compliance with the RTA warrants for the crossing type.</i> 			
3	Public Domain Issues		
3.1	<p>Provision for Public Domain over basement slab</p> <p>The approved Concept Master Plan (Mod 4) shows a number of proposed public domain areas located at ground level in this Stage 1 development area over the proposed basement.</p> <p>These elements include the proposed Margaret Street extension, Napoleon Street extension, Globe Street and possibly parts of the Foreshore Park and second east west road.</p> <p>It is understood that this application does not seek consent for the design of the public domain areas; however the approval of a basement car park below the public domain will significantly affect the future design, and therefore the approval of the spaces above. It is essential that the design of the basement must consider and allow for the future public domain. The design of the basement must ensure the following provisions within the public domain are allowed for:</p> <ul style="list-style-type: none"> ▪ adequate soil depth for street trees and other soft landscaping – at grade ▪ adequate soil depth for the provision of public domain services and structures including laying of conduits for street lighting, free standing footings for street lights, flag poles, bus stops, retaining walls, seating and similar elements. ▪ desired finished level of the public domain – grading of streets and footways, at grade planting, drainage. ▪ integration between the new public domain and existing public domain infrastructure including junction with Hickson Road, Margaret Road and Lime Street – proposed new road levels 	<p>The final design of the public domain areas within Barangaroo South is being developed on a whole-of-precinct basis and is the subject of ongoing discussions and consultation with relevant parties. The final design of the Public Domain will be subject to a separate application. However, the approved Concept Plan (Mod 4) contains a number of principles and guidelines that have been developed to guide the future detailed design phase.</p> <p>While the final design of the public domain areas will be the subject of future project applications, the works that are proposed as part of the current application have been designed so that the eventual design of the public domain above is not compromised and so that the approved landscape principles can be complied with.</p> <p>In particular, provision has been made in the basement design for appropriate deep soil planting and services zones.</p>	<p>At it's meeting with the Council, LL indicated that prior to lodging the separate application for the final design of the Public Domain; consultation with the City will occur. This advice satisfies the Council in this regard. Consultation should be a condition of any approval.</p>

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Key Issues Raised	Lend Lease Response	City of Sydney Response
<p>must marry into existing road network.</p> <ul style="list-style-type: none"> ▪ adequate drainage of future public domain areas and overland flow provision. ▪ maintain / improved storm water drainage of surrounding areas including ▪ maintaining adequate OFP from Hickson Road to the harbour. <p>Insufficient detail has been provided about the public domain and proposed inclusions to consider if heights are sufficient, though it is noted that FFL of building are proposed to be 3.50m. Top of slab is 3.3m allowing for 200m m of build-up for paving, which is insufficient for services and drainage runs.</p> <p>A section has been provided indicating the revised design of the basement to include a recess to accommodate a deep soil zone within the Globe Street footway alignment for the future public domain above. This recess will allow for some provision of tree planting, street furniture, lighting and other items which, though not included in this submission will be implemented in the final design.</p> <p>The information provided in the submission indicates that Globe Street and Napoleon Street are to have areas recessed into the slab where soil depths will allow for services and tree or shrub planting. The City understands that tree planting and vegetation is likely to be limited to Globe Street and the Foreshore Walk only. The Applicant should reconsider the benefits of providing additional soft landscaping in the privately owned publicly accessible pedestrian areas and adjust the design of the slab to facilitate additional soft landscaping as well as allow for furnishings as noted above.</p> <p>Recommendation 8 - <i>The Applicant should be requested to provide the appropriate detail to assess the likelihood that the design of the slab over the car park will provide sufficient flexibility to accommodate a public domain that has yet to be designed and include information detailing how this will be accommodated in future project applications.</i></p>		

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<p>3.2 Public Domain future ownership It is noted in the EAR that covenants or easements are proposed to cover drainage and other service infrastructure and the public domain above. This seems to indicate that access is to be granted for maintenance to the City and service providers. It is concluded from this that the end owner responsible for the proposed new public domain areas including the new streets, parks and the foreshore promenade is to be the Applicant, though planned ownership and dedication boundaries have not been explicitly stated. In the event that that the City will inherit care, management or ownership of any of these public domain assets, then the City standards for design and construction of public domain elements over basement slabs must be adhered to including:</p> <ul style="list-style-type: none"> ▪ minimum soil depth between top of slab and finished level of public domain and soft landscaping ▪ private owner to remain responsible for waterproof membrane to the basement slabs ▪ drainage easements and covenants may be required to cover public ▪ domain storm water infrastructure and other service infrastructure. ▪ materials, surface finishes, furnishings, lighting, etc are all to be selected from the City of Sydney’s standard palette found the in the Street Design Code <p>Note: it would be preferable for the public domain to be clear of any below ground structures, rather than be managed via a strata arrangement.</p> <p>Note: the waterproof membrane associated with the basement must be retained in private ownership and must not be dedicated to the City. Any future strata subdivision plans must consider this requirement. The applicant has not committed to adhering to the City’s polices and standards for areas to be dedicated to the City (only noting consideration to be given). It is noted that the Barangaroo Delivery Authority is developing a set of Guidelines</p>	<p>Maintenance and service access to infrastructure and public domain elements will be covered and outlined by agreements made with appropriate government agencies and service providers. These agreements will result from extensive consultation with the relevant parties. The nature of the ownership and ongoing management of the public domain areas, including roads, is yet to be determined and the details will be provided in relevant future applications.</p> <p>Standards for design and construction for infrastructure (and public domain) need to be both relevant and applicable to the approved scheme (e.g. large scale shared basements servicing the needs multiple large buildings, large scale shared infrastructure and extensive public domain which includes both on site and a variety of adjoining interfaces).</p> <p>All issues relating to the final design and construction of the public domain, including materials, drainage and infrastructure will be covered in future project</p>	<p>The City’s comments are relevant in that the construction of the basement will set the parameters for what Public Domain can occur later when the final design is considered. The City reiterates its suggestion that more of these future parameters be resolved up front – the appropriate time being concurrent with this application.</p> <p>The response otherwise generally satisfies the Council’s concerns regarding this matter.</p>

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<p>for the Public Domain in consultation with the City of Sydney that may include approved variations to the standard palette.</p> <p>In addition, the design level of the proposed basement structure would require substantial amendment (lowering) to allow the City's standards and policies to be adhered to. The current level of the slab is set too high to allow the standard City details to be installed above.</p> <p>Recommendation 9 - <i>The applicant must commit to adhering to the City's policies and standards especially for areas to be dedicated to the City. Works proposed to the existing public domain including the Margaret Street extension, Shelly Street connection, and Lime Street extension are to be designed and constructed in accordance with the City Standards, including standards for road, drainage, street lighting, footways, alignment levels and similar. Relevant City Policies must be adhered to including:</i></p> <ul style="list-style-type: none"> ▪ Sydney Streets Design Code ▪ Public Domain Manual ▪ Exterior Lighting Strategy ▪ Sydney Lights Design Code 			
<p>3.3</p>	<p>Limited accessible access from Hickson Road to the private development</p> <p>The proposed basement slab extends to the property boundary along the Hickson Road frontage of the site. The top of the basement slab is shown approximately 400mm higher than the existing footway along Hickson Road. This excludes additional build up to the final level of the public domain, expected to be an additional 200mm minimum.</p> <p>Concern is raised that the level change from the existing footway to the top of the basement slab will limit the provision of accessible access from the street to the private development areas and will require construction of this provision outside of the property</p>	<p>The Application is focused on reducing excavation and amending entry locations. It does not propose to alter the approved ground surface level, or the statements of commitment and conditions contained within it that pertain to this issue (see existing approval documents).</p> <p>The current application does not proposed to amend the approved level of the top of the basement slab. Design solutions for dealing with the differences in levels between the Barangaroo South site and the surrounding areas (including Margaret Street West and Hickson Road) and interfaces of existing public domain</p>	<p>Lend Lease (LL) and the Barangaroo Delivery Authority) BDA met with the Council on 7 March 2012 in order to brief the City regarding this PPR. These issues can be resolved though further refinement of the proposed reshaping of Hickson Road. The Council is satisfied with the undertaking that LL provided at the meeting indicating that the ultimate Hickson Road footpath levels will align with the basement slab meaning that the need for stairs or ramps will be eliminated and LL indicated that there will be no need for any. This will provide a good outcome. The</p>

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<p>boundary on public land.</p> <p>The Applicant should be reminded that all ramps, stairs, tactile paving, handrails and other supporting accessories for accessible access are to be contained wholly within the property boundary.</p>	<p>with new public domain will be the subject of future project applications.</p> <p>The issue of the need to provide appropriate interfaces with existing public domain areas has however, been considered in the development of the modified design of the basement that is the subject of this application.</p> <p>The applicant is aware of the need for compliance with relevant and applicable legislation covering access and this compliance will be demonstrated with the appropriate applications.</p>	<p>reshaping of Hickson Road will take into consideration many aspects such as public transport, parking, trees, services and pedestrians. The Council is liaising with LL in relation to stormwater infrastructure. LL's storm water designs are in principle generally supported subject to final negotiation.</p> <p>Therefore the Council is satisfied that these issues have been addressed for the purposes of this PPR.</p>
<p>3.4 Poor design outcome for Hickson Road</p> <p>The proposed location and level (+400mm) of the basement slab in relation to the existing Hickson Road will restrict building / entry setbacks, at grade soft landscaping at the street edge, possible footway widening or similar pedestrian friendly design treatments for the ground level building and landscape design along this street frontage. It is suggested that the current basement design does not allow for the pedestrian friendly tree lined boulevard that was envisaged for Hickson Road in the approved Concept Master Plan – Governing Principles for Public Domain.</p> <p><i>Recommendation 10 - It is suggested a basement setback of 4m, a set down or reduction in the level of the top of slab is required to allow flexibility in providing accessible access and a pedestrian friendly design outcome for Hickson Road as a boulevard given the uncertainty of the future treatment of Hickson Road and the location of the light railway.</i></p> <p>It is noted from discussions about the OFP that current options for drainage in the road reserve include, among the various options, one scenario for an extensive drainage system to be built along the western side of Hickson Road, adding pressure to the Applicant's ability to deliver a quality public domain along Hickson Road.</p> <p>Although such a proposal would not limit provision of access to the</p>	<p>The current application does not seek to amend the approved location of the eastern wall of the basement structure (adjacent to Hickson Road). Nor does it propose to amend the approved level of the top of the basement slab. The recommendations as proposed are therefore not relevant to this application.</p>	<p>The City considers that the current proposed changes to excavation depth represent an ideal opportunity to go further with those changes and create a 4m setback. LL has indicated that it will be able to create a tree lined boulevard after buildings C8, C2 and C6 are completed. The City has requested evidence that the trees and their canopies can be realised if the Hickson Road buildings are built to the street boundaries. Section views are to be provided by Lend Lease. This will satisfy the Council in this regard.</p>

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<p>podium, it may impact on the ability to provide soft landscaping at the street edge as noted above.</p> <p>The constraints posed by the need to accommodate various infrastructure for the wider development of Barangaroo, along with the Applicants proposal to build the basement up to the site boundary limit the ability and tests the commitment to deliver an acceptable streetscape along Hickson Road.</p> <p>Recommendation 11 -The Applicant should consider a 4m setback or other alternatives to provide flexible opportunities for an improved design outcome along Hickson Road.</p>		
<p>3.5 Limited Accessible Access from Shelley Street to the private development</p> <p>The proposed basement slab extends to the property boundary along the Shelley Street frontage of the site. The top of the basement slab varies in height above the existing footway along Shelley Street by approx. 400mm near Hickson Road, 200mm near the Macquarie Bank Building and 900mm near Lime Street. This excludes additional build up to the final level of the public domain, expected to be an additional 200mm minimum. It is noted that the OFP for storm water is also proposed to be along Shelley Street which will lower levels near the Macquarie Bank building by as much as 250mm.</p> <p>It is expected that this will be one of the main pedestrian routes along Margaret Street West from Hickson Road to the Foreshore Walk during peak periods and major events.</p> <p>Any height change including ramps or stairs will have significant impacts to access for the large volumes of people that will use this route.</p> <p>Concern is raised that the level change from the existing footway to the top of the basement slab will limit the provision of accessible access from the street to the private development areas.</p> <p>Recommendation 12 - It is suggested that the Applicant considers lowering the slab level along the Shelley Street frontage as far north as the Margaret Street extension to facilitate public access across a</p>	<p>The current application does not propose to amend the approved level of the top of the basement slab. Design solutions for dealing with the differences in levels between the Barangaroo South site and the surrounding areas (including Margaret Street West and Hickson Road) and interfaces of existing public domain with new public domain will be the subject of future applications.</p> <p>The issue of the need to provide appropriate interfaces with existing public domain areas has however, been considered in the development of the modified design of the basement that is the subject of this application.</p> <p>The final levels of roadways and footpaths within the site as well as changes in levels and interfaces of existing public domain with new public domain are the subject of detailed future applications.</p>	<p>LL advised the City that it will resolve this issue. This appears to be causing some repercussions with the required storm water overland flows at Shelly Street. CoS and Sydney Water will continue to liaise with LL in this regard. Therefore the City is generally satisfied by this response.</p>

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	<p><i>level grade and to allow the Overland Flow Path to pass through the site rather than down Shelley Street.</i></p>		
3.6	<p>Vehicular and Pedestrian Access to Globe Street from the Lime Street extension</p> <p>It is expected that the height difference between Lime Street and Globe Street will be up to 1100m m. The distance from the property boundary at Lime Street to the entrance of the proposed residential car park entry appears to be only slightly more than 12.0m. While the grade of the ramp up onto the podium may be sufficient for vehicle access the pedestrian footway would be unlikely to meet AS 1428.</p> <p>Recommendation 13 - <i>The Applicant is requested to ensure that accessible access is considered in designing the footways beside the Lime Street extension towards Globe Street.</i></p>	<p>The interface of existing public domain with new public domain is the subject of detailed future applications.</p> <p>Compliance with the relevant Access provisions will be demonstrated as part of these applications.</p>	This issue has been satisfactorily addressed.
3.7	<p>Development Specification for Civil Works – Design and Construction</p> <p>City standard minimum (or greater) footway, and road widths are to be provided to the Margaret Street extension, Shelly Street connection, and Lime Street extension. No detail is given as to the proposed widths of the new roads and road realignment works or footway works. These critical dimensions should be addressed in the application to ensure compliance with City standards.</p>	<p>Details in relation to the road network above the Basement will be provided as part of the future Project Applications relating to the buildings.</p> <p>Current applications that provide some of this information include:</p> <ul style="list-style-type: none"> - MP10_0025 Commercial Building C4 - MP10_0227 Commercial Building C5 - MP10_0044 Commercial Building C3 	This issue has been satisfactorily addressed.
3.8	<p>Public access to new road network must be provided (area currently in private ownership)</p> <p>The proposed works to Margaret Street, Shelly Street and Lime Street, realigns the existing public road network to land which is currently in private ownership.</p> <p>Recommendation 14 - <i>The City needs assurance that public access will be provided over the land currently in private ownership (which shows the Margaret Street extension and associated works) before the current</i></p>	<p>This application consists of land that is wholly within land owned by the Barangaroo Delivery Authority. The land is not, and will not be, privately owned. Any requests for Rights of Public Access or Dedications should be directed to the Barangaroo Delivery Authority.</p>	Noted.

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<p><i>Shelley Street / Margaret Street road connection is approved for modification. Right of Public Access, or Dedication may be required prior to acceptance of the works by the City or OC whichever is earlier.</i></p>		
<p>3.9 Development Conditions In the event the Department wishes to determine the current application without addressing the outstanding issues above, the following conditions of consent are recommended.</p> <p>(1) ASSOCIATED ROADWAY COSTS</p> <p><i>All costs associated with the construction of any new road works including kerb and gutter, road pavement, drainage system and footway shall be borne by the developer. The new road works must be designed and constructed in accordance with the City's "Development Specification for Civil Works Design and Construction".</i></p> <p>(2) PUBLIC DOMAIN PLAN - MARGARET STREET EXTENTION, SHELLY STREET REALIGNMENT AND LIME STREET EXTENTION</p> <p><i>Three copies of a detailed Public Domain Plan must be prepared by an architect, urban designer or landscape architect and must be lodged with Council's Public Domain Section and approved by Council prior to a Construction Certificate being issued for any new building work excluding approved preparatory, demolition or shoring work. It is recommended that draft plans should be submitted for comment prior to formal submission for approval.</i></p> <p><i>The Public Domain Plan must be prepared in accordance with the City of Sydney's Public Domain Manual. The works to the public domain are to be completed in accordance with the approved plan and the Public Domain Manual before any Occupation Certificate is issued in respect of the development or before the use commences, whichever is earlier.</i></p>	<p>(1) ASSOCIATED ROADWAY COSTS</p> <p>This is already covered by existing conditions of the current consent. Refer to conditions B11 and D11.</p> <p>(2) PUBLIC DOMAIN PLAN – MARGARET STREET EXTENSION, SHELLEY STREET REALIGNMENT AND LIME STREET EXTENSION</p> <p>The public domain located above the subject application does not form part of this application.</p> <p>MP 10_0025 (Commercial Building C4) provides for the creation of the temporary public domain. The current applications for Commercial Buildings C3 and C5 also seek approval of similar temporary public domain areas. Together, these facilitate the construction and delivery of three major commercial towers in partnership with an appropriate relationship to the surrounding public domain. An application for permanent public domain will be lodged at a later date, timed to allow implementation with the delivery of the Barangaroo South precinct.</p> <p>(3) ALIGNMENT LEVELS – MAREGARET STREET EXTENSION, SHELLEY STREET REALIGNMENT AND LIME STREET EXTENSION</p> <p>There is already covered by an existing condition of consent. Refer to condition B12.</p>	<p>The City is satisfied with LL's commitment to consult with the City regarding its future application for permanent public domain.</p>

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<p><i>Note: A security deposit will be required for the public domain works, in accordance with the City of Sydney's adopted fees and charges. You should contact Council to determine deposit amount prior to payment.</i></p> <p>(3) ALIGNMENT LEVELS - MARGARET STREET EXTENTION, SHELLY STREET REALIGNMENT AND LIME STREET EXTENTION</p> <p>(a) <i>Prior to a Construction Certificate being issued, footpath alignment levels for the development must be submitted to Council for approval. This submission must be accompanied by a plan prepared by a Registered Surveyor showing the existing location, size and levels (AHD) of all service covers, trees, poles and street furniture, kerb, gutter and alignment levels of 10m cross sections, the depth and width of the Emergency Overland Flow Path and indicative extent of 1:20year and 1:100 year flood depths, alignment levels at proposed and existing vehicular and/or pedestrian entrances within the footway adjacent to and extending 20 metres past either side of the site and up to and including the building facades of building on the south side of Shelley Street.</i></p> <p>(b) <i>These alignment levels, as approved by Council, are then to be incorporated into the plans submitted with the application for a Construction Certificate, excluding a Construction Certificate for approved preparatory, demolition or shoring work.</i></p> <p>(4) DESIGN PROVISIONS FOR FUTURE PUBLIC DOMAIN AND SITE LANDSCAPING</p> <p><i>Prior to a Construction Certificate being issued, detailed design documentation demonstrating how the future public domain areas located within the Stage 1 site including Globe Street,</i></p>	<p>(4) DESIGN PROVISIONS FOR FUTURE PUBLIC DOMAIN AND SITE LANDSCAPING</p> <p>The public domain located above the subject application does not form part of this application.</p> <p>MP 10_0025 (Commercial Building C4) provides for the creation of the temporary public domain. The current applications for Commercial Buildings C3 and C5 also seek approval of similar temporary public domain areas. Together, these facilitate the construction and delivery of three major commercial towers in partnership with an appropriate relationship to the surrounding public domain. An application for permanent public domain will be lodged at a later date, timed to allow implementation with the delivery of the Barangaroo South precinct.</p>	

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<p><i>Napoleon Street and the Foreshore Park have been considered and designed for. Detailed documentation to be submitted and approved by Council prior to issue of Construction Certificate. The detailed submission must illustrate the following:</i></p> <ul style="list-style-type: none"> <i>(a) How the new public domain roads marry into the existing public domain of Hickson Street and Lime Street</i> <i>(b) Detail how accessible access from Hickson Road in to the private development area will be achieved</i> <i>(c) Adequate provision for soft landscaping including street trees – at grade. (d) Detail street tree locations and numbers</i> <i>(e) Adequate provision for public domain services and streetscape elements including laying of conduits, free standing footings for street lighting, flag poles, bus stops, traffic signage, retaining walls seating and similar.</i> <i>(f) Details of the proposed finished level within the public domain – grading of streets, footways, drainage lines</i> <i>(g) Details of earthworks including mounding and retaining walls and planter boxes (if applicable);</i> <i>(h) Details of drainage and overland flow requirements</i> 		
<p>4 Health</p> <p>AECOM have reviewed the proposed changes to the stage 1 basement designs and have concluded within the submitted advisory letter (19 October 2011) that the amended RAP does not require revision and that it is appropriate in managing the changed excavation works.</p> <p>Recommendation 15 - <i>This view, that the amended RAP does not require revision and that it is appropriate in managing the changed excavation works, should be endorsed by the Site Auditor and to ensure that no amendments to the approved RAP are considered necessary.</i></p>	<p>The Site Auditor has provided a letter dated 24 January 2012 that confirms the view that revision of the RAP is not required in relation to the Mod 3 application and that the Site Audit Report and Site Audit Statement dated 14 July 2011 can be relied upon as being relevant to the modified basement.</p>	<p>This issue has been satisfactorily addressed.</p>

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Key Issues Raised		Lend Lease Response	City of Sydney Response
5	Tree Management		
5.1	<p>Vehicle Access – Hickson Road</p> <p>A street tree located adjacent to the site is proposed for removal to allow for a new vehicle crossing. A second street tree is also likely to be removed due to its proximity to the new crossing.</p> <p>The Barangaroo Development Authority (BDA) is currently the Roads Authority for Hickson Road and therefore owner of the street trees; consent from Council is not required.</p> <p>It should be noted however that a ‘Statement of Commitments’ made by Lend Lease (Schedule 3 of the Minister’s Project Approval) to manage and minimise potential impacts arising from the development includes the following:</p> <p>Lend Lease commits to the implementation of an Arborist monitoring programme for the duration of the works to monitor the health and stability of the adjacent Hickson Road street trees. Should the works result in either a significant impact on the health of the trees or compromise their structural integrity to the point where they represent a risk to public safety, they will be replaced with suitably advanced specimen of the same species.</p> <p><i>Recommendation 16 - Replacement tree planting must be carried out to comply with the above Statement. The planting details must be provided and include details of tree species, size location and timing of when the tree will be planted.</i></p>	Noted	No further comment is necessary.
5.2	<p>Construction Methodology and Environmental Management – Tree Management Plan Immediate impact to existing trees</p> <p>A review of this proposal notes that there are no modifications to the construction methodology. However, an addendum to the Tree Management Plan dated November 2011 was submitted to Council (for review) to support the current approved bulk excavation works.</p> <p>The Bulk Excavation includes excavation to the site perimeter for the Basement Car Parking for Stage 1 of the Barangaroo</p>	<p>It is noted that the City of Sydney form ally advised the BDA in a letter dated 2 December 2011 that, as the Roads Authority, the BDA are the owner and caretaker of the relevant street trees.</p> <p>The treatment and management of all trees will be carried out in accordance with the relevant conditions of approval and statement of commitments. The specific issues raised are noted. These and other related issues will continue to be addressed with the BDA in</p>	Noted.

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Key Issues Raised	Lend Lease Response	City of Sydney Response	
<p>development. This process involves construction techniques such as trenching down to rock with drilling rigs and the installing a waterproof concrete perimeter.</p> <p>Approximately 20 street trees are located along the boundary of the development site and the roots and canopy of the trees extend into the site.</p> <p>The TMP Addendum includes tree protection measures and also recommends pruning to the canopy of ten (10) street trees, with extensive canopy reduction (up to 50-70% canopy loss) proposed to five (5) street trees.</p> <p>The TMP Addendum has also identified a number of potential issues relating to the proposed pruning; importantly it notes that 'the removal of the branches can lead to an uneven weight distribution with the remaining tree canopy', but has not provided recommendations on how the risk should be managed and tree removal has not been proposed. A letter from the City to the BDA and Lend Lease has been sent to address these issues. The City's latest response to Lend Lease form s Attachment 2.</p> <p>The City considers that the amount of pruning proposed to five street trees will have a significant impact on the health and vigour of the trees and significantly alter the trees form. The pruning is limited to the western side of the canopy and this is likely to adversely effect the weight distribution and load of the canopy on the trees and could result in them becoming unstable.</p> <p>Recommendation 17 - <i>If the basement is constructed to the eastern boundary, the BDA should undertake measures to avoid the risk to public safety.</i></p>	<p>accordance with the current approval.</p>		
5.4	<p>Construction Methodology and Environmental Management – Tree Management Plan</p> <p>Management of the Street Tree Avenue – existing and future</p> <p>The Council's Tree Management unit have been involved with the</p>	<p>This application does not propose to modify the approved alignment and construction of the basement, construction of which is currently proceeding under the existing approval.</p>	<p>This issue has been satisfactorily addressed however the City is very concerned that the Tree Management Plan has not yet been finalised and meanwhile the Hickson Road street trees are not being managed in</p>

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Key Issues Raised	Lend Lease Response	City of Sydney Response
<p>Barangaroo development proposal since July 2010 and have repeatedly raised concerns that undertaking construction works to the boundary line of the site could significantly affect the health and stability of the Hill's Fig trees and may ultimately require their removal.</p> <p>The City is concerned that construction will proceed as per the current design, and will leave no choice but the forced and somewhat ad hoc removal of public trees to enable the construction of the development. This reactive removal does not consider the long term appropriate streetscape design.</p> <p>There is also a perception by Lend Lease that it will be an easy task to replace the existing trees. The above and below ground requirements for establishing a large avenue of trees requires careful planning, to ensure there is sufficient soil volume, and to minimise impacts from the usual urban infrastructure including underground utilities.</p> <p>Replacing trees in the middle of an avenue increases the difficulty in healthy tree establishment. This lack of overall vision for either retaining the existing or establishing a new tree boulevard within Hickson Road is hampered by the unknown design outcomes for other assets within the street.</p> <p>The possibility of light rail, changes to road heights, stormwater design, location of existing or new utilities and changes to parking all have large impacts on the existing avenue, and the placement of a new avenue. Further, the alignment of the new buildings and the location of the basement car parking will adversely impact the existing and the new tree's ability to grow (above and below ground).</p> <p>Therefore, at this stage, the most conservative option is to ensure that the existing alignment is maintained. This provides flexibility in regards to the retention of healthy trees, allowing poor trees or those that are a risk to safety being removed, and new trees to be planted within the same alignment. Further, it mitigates the increasing risk of</p>	<p>The subject application does not seek to amend the existing Statement of Commitment 1.11 which states that:</p> <p>1.11 Public Domain and Landscaping</p> <ul style="list-style-type: none"> <i>A Tree Management Plan will be prepared to the Department of Planning's satisfaction with the relevant tree protection measures to minimise any potential impacts on the trees proposed to be retained. The Tree Management Plan will be prepared prior to commencement of any works that impact upon trees.</i> <p><i>The City of Sydney Council's standards for the design and construction of public domain elements over basement slabs will be considered where appropriate during the ongoing design documentation process, particularly in relation to:</i></p> <ul style="list-style-type: none"> <i>minimum soil depths between top of slab and finished levels of public domain and soft landscaping;</i> <i>the ongoing management and maintenance of any waterproof membranes to the basement slabs; and</i> <i>the need for drainage easements and covenants to cover public domain stormwater infrastructure and other service infrastructure.</i> <ul style="list-style-type: none"> <i>Lend Lease commits to the implementation of an Arborist monitoring programme for the duration of the works to monitor the health and stability of the adjacent Hickson Road street</i> 	<p>accordance with industry best practice, or Australian Standards. (as at mid February 2012).</p>

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<p>replacement trees not being able to be planted due to high competition for streetscape space.</p> <p>The best method to achieve this is to provide a setback of the proposed buildings that would be required along the length of Hickson Road. The setback includes the above and below ground components. This provides existing and future tree canopies the required space to grow, and the below ground setback allows a sufficient root zone to support tree stability and long term health. This is consistent with Tree Management unit comments to date.</p> <p>Recommendation 18 - <i>To enable the adequate protection of the existing trees and ensure the successful establishment of future replacement tree plantings, the City supports a minimum setback be created of three - four (3-4) metres from the Hickson Road property boundary.</i></p>	<p><i>trees. Should the works result in either a significant impact on the health of the trees or compromise their structural integrity to the point where they represent a risk to public safety, they will be replaced with suitably advanced specimen of the same species.</i></p> <ul style="list-style-type: none"> <i>Adequate depths over the basement will be provided for deep soil planting within a continuous trench in the order of 1 000-1200mm along Globe and Napoleon Streets.</i> <p>It should also be noted that the subject application does not seek to amend the existing condition of consent for the Bulk Excavation and Basement Car Parking which states the following:</p> <p>D6 PROTECTION OF STREET TREES DURING CONSTRUCTION</p> <p><i>All relevant street trees adjacent to the site not approved for removal must be protected at all times during demolition and construction, in accordance with Council's Tree Preservation Order. Details of the methods of protection must be submitted to and be approved by Council prior to the issue of the relevant Construction Certificate and such approval should be forwarded to the Certifying Authority. All approved protection measures must be maintained for the duration of construction and any tree on the footpath which is damaged or removed during construction must be replaced.</i></p>		
Transport for NSW			
1	Need to clarify title and landowners consent for land identified as NSW Maritime land (South Eastern corner of site).	The application is wholly contained within land owned by the Barangaroo Delivery Authority for which	

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<p>2</p> <p>The building design and basement vehicle access point must be integrated with the wider public domain. Importantly, the design of the basement access points need to take into account plans for Wynyard walk, Margaret Street West, and the future Ferry Wharves.</p> <p>There is a need for these projects to interface with surrounding projects, including Wynyard Walk. This should include design and construction coordination as a minimum.</p>	<p>landowners consent has been provided.</p> <p>Noted</p>	
<p>3</p> <p>Note that there is no Government commitment to Sydney Light Rail on Hickson Road. The Government is considering Light Rail within the context of the Long Term Transport MasterPlan.</p>	<p>Noted</p>	
<p>4</p> <p>Overall the strategy and commitment to bicycle parking needs to be resolved. The proposal removes bicycle spaces from the basement (1100) and re-locates them to the surface/DECCW declared area. TfNSW is concerned that the allocation of bicycle parking within the basement will not provide for long term requirements for all users. The loss of 1,100 bicycle spaces from the basement area without providing a commitment to accommodation elsewhere in site could result in the final allocation of bicycle spaces being in inconvenient places for large users. Furthermore the allocation to DECCW area may discourage use by commercial building users.</p> <p>The documents need to provide clear information on the allocation and provision of long term solution for bicycle parking and facilities within the basement area.</p> <p>Cycle lane linkages and signage should be provided between the basement bicycle access points and the local street network. Details need to be provided.</p>	<p>The current application includes spatial provision for bicycle parking and associated facilities for 5% of all commercial employees in accordance with GreenStar requirements. This complies with the required provision under the Concept Plan. This is also in line with and supports the State Plan which targets the share of short trips by bike in Greater Sydney for all travel purposes at 5% by 2016.</p> <p>As noted in the Environmental Assessment, although there is a commitment to the provision of bike parking and facilities for 5% of all commercial employees (i.e. approximately 1100), Lend Lease is targeting the provision of the facilities for 10% of all commercial employees subject to spatial considerations. This additional provision will be considered in the next stage of the basement (i.e. to the north of the current basement) or alternatively in an above ground location and will be the subject of future project applications.</p> <p>Signage and linkages to the future bicycle parking and facilities may be provided in future applications.</p>	
<p>5</p> <p>The CTMP needs to consider the construction impacts of Wynyard Walk, particularly in relation to the reduction in road capacity on</p>	<p>The Wynyard Walk construction is not expected to have a major impact on the construction works for the</p>	

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<p>both Napoleon and Margaret Streets and its implications on truck movements and impacts. This should include consideration of the interface with the construction of the Wynyard Walk and Footpath Works, whereby Margaret Street will be restricted to one lane each direction.</p>	<p>basement. While the number of forecast construction vehicle trips per day has not been specified by TNSW, these are expected to be low – in the order of 8-10 trucks per day. It is expected the majority of these movements would occur outside of peak hours. It is expected the two project team s would coordinate with each other to mitigate construction impacts on the local road network.</p> <p>Trucks approaching the site are not to use the York Street/ Margaret Street/ Napoleon Street route to access the precinct between 6am – 10am and 2pm – 8pm Monday to Friday. Given that any use of Napoleon Street and Margaret Street by Barangaroo trucks will occur outside of the commuter peak periods, and most trucks are expected to arrive from the south and west (using alternate routes), the impact of the roadworks associated with the Wynyard Walk construction is considered to be low.</p>		
6	<p>Generally support the revised entry for the car park. However there is no assessment of the impact on the intersection arising from the re- distribution of traffic routes on each of the access points. The change in location of basement access for vehicles will have an impact on the intersections, public domain and pedestrian and cyclists. The proponent should acknowledge this issue (note: it is deferred to individual project applications, with this application only seeking quarantine parking for future allocation).</p>	<p>Traffic modelling, including traffic modelling of all relevant intersections, has considering the revised entry for the car park has been conducted as a component of the individual project applications for Commercial Buildings C3, C4 and C5.</p>	