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WSce Pty Ltd

ACN 668 655 141  
ABN 75 668 655 141

Level 20  
66 Goulburn Street  
Sydney, NSW 2000

Level 7, Suite 7.03  
365 Little Collins Street  
Melbourne 3000 VIC

Level 7  
123 Eagle Street  
Brisbane City QLD 4000

Level 3, Unit 27  
490 Northbourne Avenue  
Dickson ACT 2602

info@wsce.com.au  
wsce.com.au

Infrastructure NSW  
Level 27, 201 Kent Street  
264 George Street  
SYDNEY NSW 2000

**RE: AQUALAND CENTRAL BARANGAROO CONCEPT PLAN MODIFICATION  
(MP06\_0162 MOD 9) CIVIL SERVICES RESPONSE COMMENTS**

Warren Smith Consulting Engineers (WSce) has been engaged to conduct a review of the amended concept plan building envelopes and supporting information prepared by SJB Architects.

An amended MP06\_0162 MOD 9 Concept Plan (Amended MOD 9 Concept Plan) has been prepared in response to submissions. The purpose of this letter is to respond to the key issues raised relating to the exhibited MOD 9 concept plan and the Infrastructure Report 2021 by ADP and CJ Arms. Refer to the below table of the items raised by the City of Sydney Council, Sydney Water and Department of Primary Industries Water.

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**Response to Submissions**

Authority Item	Response
<p><b>City of Sydney Council submission dated the 8th of August 2022 (Ref: R/2008/16/I File Number 2022/403674)</b></p>	
<ul style="list-style-type: none"> <li>• Item 6.9 – Stormwater and Flooding               <ul style="list-style-type: none"> <li>○ Significant stormwater infrastructure is to be provided under Hickson Road in conjunction with the Metro Station and the Metron Group. No reference is made in the submitted documents about the impact and coordination of services.</li> <li>○ Planning for the provision of stormwater infrastructure, impact of any flooding on building and underground thresholds, coordinated with the works underway in Hickson Road must be shown.</li> </ul> </li> </ul>	<p>All existing and proposed stormwater utilities will be assessed using a 3D model to ensure that there are no clashes with all other existing and future Hickson Road services as part of detailed design development and coordination of a future SSDA submission for Barangaroo Central. The specified utility clearance requirements will be achieved. Coordinated integrated documentation will be approved by all relevant authorities and stakeholders in a timely manner in accordance with master program and staging plan as per DA requirements. The utilities model will include the stormwater infrastructure that has been recently designed and installed within Hickson Road North as well as the future assets being designed by third parties to the South in partnership with INSW.</p>
<p><b>Sydney Water letter dated the 6th of September 2022 (Ref 201476)</b></p>	
<ul style="list-style-type: none"> <li>• Item 1 – Water Servicing               <ul style="list-style-type: none"> <li>○ Due to the significance of the proposed development, a servicing strategy is required to be carried out including the following steps:                   <ul style="list-style-type: none"> <li>- Indicate a breakdown of the flow demands, and its implication to Sydney Water’s system,</li> <li>- Develop servicing options,</li> <li>- Identify potential asset requirements, and</li> <li>- Select a preferred servicing option to service the proposed development</li> </ul> </li> </ul> </li> </ul>	<p>Warren Smith Consulting Engineers has been engaged to undertake the Civil &amp; Hydraulic engineering as well as the Sydney Water Coordinator services for Central Barangaroo Precinct. A review of the existing system capacity will be undertaken, and servicing the Masterplan for the Central Barangaroo Precinct will be developed during the SSDA phase. The potable water and wastewater demand requirements will form part of the Sydney Water Section 73 application for the precinct. Upon receipt of the Sydney Water Notice of Requirements, the potable water and wastewater requirements to service the precinct will be reviewed and any modifications/amplifications will be designed in accordance with the Sydney Water requirements. A pressure and flow enquiry will also be lodged with Sydney Water as per BAU requirements to ascertain the capacity of the existing utility network and determine whether any additional infrastructure will be required to service the precinct. As part of the sustainability initiatives for the precinct, provision of future connections for recycled water will be tabled with the relevant stakeholders and the outcome of these discussions will be incorporated into the site-wide services master planning for the precinct. Detailed coordination of Transport for NSW, INSW, and development partners is ongoing in line with contracted interface requirements.</p>
<ul style="list-style-type: none"> <li>• Item 2 - Wastewater servicing:               <ul style="list-style-type: none"> <li>○ To understand the implication of the proposed development to Sydney Water sewer system, the proponent should engage a hydraulic consultant to identify a feasible servicing option in consultation with Sydney Water.</li> </ul> </li> </ul>	
<ul style="list-style-type: none"> <li>• Item 3 – Recycled Water:               <ul style="list-style-type: none"> <li>○ Due to the size and scope of the rezoning proposal, it is recommended that the proponent consider recycled water initiatives.</li> <li>○ Consideration should be given to rainwater</li> </ul> </li> </ul>	<p>All authority requirements, licences, and approvals will be submitted in a timely manner at the appropriate time, in accordance with master program and staging plan as per DA requirements.</p>

<p>capture and stormwater runoff reduction.</p> <ul style="list-style-type: none"> <li>○ The proponent is advised to contact their Sydney Water Account Manager to investigate the potential for a commercial arrangement to supply recycled water to the development</li> </ul>	
<ul style="list-style-type: none"> <li>● Item 4: Feasibility <ul style="list-style-type: none"> <li>○ The proposal presents potentially large servicing demands and as such, further investigation will be required to determine the servicing requirements for this site. It is recommended that a Water Servicing Coordinator is engaged as soon as possible, and a feasibility application is lodged with Sydney Water prior to subsequent development occurring.</li> <li>○ It is recommended that a Water Servicing Coordinator is engaged as soon as possible, and a feasibility application is lodged with Sydney Water prior to subsequent development occurring.</li> </ul> </li> </ul>	<p>All authority requirements, licences, and approvals will be submitted in a timely manner at the appropriate time, in accordance with master program and staging plan as per DA requirements.</p>
<ul style="list-style-type: none"> <li>● Item 5: Building Plan Approval <ul style="list-style-type: none"> <li>○ Due to the proximity of the proposed development to Sydney Water’s critical assets, the approved plans must be submitted to the Sydney Water Tap in™ online service as early as possible if the proponent has not done so already. This is to determine whether the development will affect any of Sydney Water’s water mains, wastewater mains, stormwater drains and/or easement and if further requirements need to be met prior to the commencement of any construction work.</li> </ul> </li> </ul>	<p>All authority requirements, licences, and approvals will be submitted in a timely manner at the appropriate time, in accordance with master program and staging plan as per DA requirements.</p>
<ul style="list-style-type: none"> <li>● Item 6: Growth Data <ul style="list-style-type: none"> <li>○ To do fully support all growth and developments in Barangaroo and to fully assess proposed developments, we require the ultimate and annual growth data for this development as noted in the appendix, be fully populated and returned to Sydney Water.</li> </ul> </li> </ul>	<p>All authority requirements, licences, and approvals will be submitted in a timely manner at the appropriate time, in accordance with master program and staging plan as per DA requirements.</p>
<ul style="list-style-type: none"> <li>● Item 7: Trade wastewater requirement <ul style="list-style-type: none"> <li>○ If this proposed development is going to generate trade wastewater, the developer must submit an application requesting permission to discharge trade wastewater to Sydney Water’s wastewater system. Applicant must wait for approval and issue of a permit before any business activities can commence.</li> </ul> </li> </ul>	<p>All authority requirements, licences, and approvals will be submitted in a timely manner at the appropriate time, in accordance with master program and staging plan as per DA requirements.</p>
<p><b>Department of Primary Industries Water dated the 6th September 2022 (Ref: OUT22/12590)</b></p>	
<ul style="list-style-type: none"> <li>● To clarify the proposed basement design to manage groundwater interactions.</li> <li>● To calculate the volumes of groundwater take during construction and operation, and to demonstrate the requirements of the water regulatory framework can be met.</li> </ul>	<p>At this stage it is envisaged that the NSW Aquifer Interference policy requirements will be applicable as management of ground water will be required during construction but not end state operation. A Water Access License will be required to facilitate the abstraction and discharge of groundwater. The rate of groundwater abstraction will be determined following</p>

<ul style="list-style-type: none"> <li>To clarify triggers and mitigating measures to determine the need for additional waterproofing.</li> </ul>	<p>a detailed groundwater investigation, monitoring, and analysis assessment. It should be noted as well that the management of the ground water during the construction phase of the project will form part of the contractor's construction management plan, DA requirements, and depending on the rate of ground water abstraction and discharge, the necessary permits will be obtained from the relevant authorities. Additionally, any ground water treatment prior to discharge will also be determined and the extent of treatment will largely depend on the receiving environment and adhering to the relevant authority requirements.</p> <p>It is envisaged that the management of the ground water during construction will not require any additional waterproofing of the basements during construction as the basements have been designed as a membraned tanked basement.</p>
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This will be coordinated with INSW, TfNSW, development partners and Sydney Metro in line with contracted requirements within the MIA, PDA, and CENDA.

In brief, all authority requirements, licences, and approvals will be submitted in a timely manner at the appropriate time, in accordance with master program and staging plan as per DA requirements.

Should you have any questions, please do not hesitate in contacting the undersigned.

Regards.



Preneshin Govender

**Technical Manager – Civil & Water Engineering**

Tel: 0424 634 529

Email: [preneshin@warrensmith.com.au](mailto:preneshin@warrensmith.com.au)