

23 July 2020

DBL Property Pty Limited  
**Attention: Mr Jeff Lord**  
Suite 2, Upper Ground Floor  
437 Kent Street  
SYDNEY NSW 2000

Dear Sir,

**Re: Lot 9, 28 McPherson Street, Banksmeadow (SSD 9691)  
Response to Submissions**

Further to your request we are pleased to provide our response to the civil, stormwater and flooding items raised by Department of Planning, Infrastructure and Environment, Randwick City Council and Bayside City Council in their respective emails and associated information request letters.

We provide this letter and updated drawings, and confirmation of specific responses to the engineering items in the Council letter as follows.

| <b><i>Department of Planning Industry and Environment</i></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
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| <b><i>Stormwater</i></b>                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b><i>Item 1)</i></b>                                         | <p><i>The Department notes the concerns raised by Bayside Council regarding the stormwater management system and requests further details on which surrounding lands discharge to the site, discharge points from the site and clarification whether owner's consent is required to discharge into Springvale Drain.</i></p> <p><u>Response</u></p> <p>Refer to below responses to items raised by Bayside Council.</p>           |
| <b><i>Item 2)</i></b>                                         | <p><i>Further details are required on whether the proposed barrier/capping layer will impact the natural permeability of the site and details are required on the potential for the ponding of water below the suspended slab.</i></p> <p><u>Response</u></p> <p>A barrier layer is proposed as a working platform for piling machinery during construction phase and then as a barrier for asbestos management on an ongoing</p> |

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|                                    | <p>basis. Refer to <i>Site Preparation Notes</i> included on drawing <b>Co9349.12-DA30</b> for specification of the capping layer.</p> <p>The specification is based on a single graded durable aggregate that will allow water to permeate at greater rates than the natural underlying sands. This will ensure the potential for ponding water below the slab is minimal.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Biodiversity/Landscaping</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Item 3)</b>                     | <p><i>The Office of Environment and Heritage requested a green roof, cool roof or green wall be incorporated into the Development as part of its comments provided on the Secretary's Environmental Assessment Requirements. The Department and Bayside Council note this has not been addressed.</i></p> <p><u>Response</u></p> <p>The stormwater design for the proposed development incorporates best practice measures for the Water Sensitive Urban Design (WSUD) including the provision of water quality improvement devices to meet water quality objectives.</p> <p>Additional requirements for green roof, cool roof or green wall is addressed in the Response to Submissions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Randwick City Council</b>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Other Design Considerations</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Item 4)</b>                     | <p><i>Design of development above existing vegetated flood detention basin area should ensure no adverse impacts on stormwater quality through incorporation of appropriate stormwater quality control measures during construction and following construction.</i></p> <p><u>Response</u></p> <p>Stormwater quality measures during construction shall be in accordance with the requirements of the 'Blue Book', Managing Urban Stormwater, Soils and Construction (1998).</p> <p>A draft construction stormwater management plan has been included in <b>Section 8</b> of our report. An erosion and sediment control plan, consistent with the requirements of the Landcom Blue Book has been included in the submission and shown on drawing <b>CO9349.12-DA20</b>.</p> <p>Operational stormwater quality measures (following construction and during operation of the facility), which meet councils water quality pollution reduction targets, are proposed and described in <b>Section 7</b> of our report. The specified measures, which include primary collection of gross pollutants, sediments and some nutrients, and tertiary treatment of fine sediment and nutrients and hydrocarbons have been documented on the stormwater drainage plans include in <b>Appendix A</b> and shown on drawing <b>CO9349.12-DA41</b> and <b>DA42</b>.</p> |

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| <b>Item 5)</b>                    | <p><i>The design for the warehouses should also include the use of recycled water on site for non-potable uses from storm water harvesting and onsite rainwater tanks to reduce loads on existing stormwater systems.</i></p> <p><u>Response</u></p> <p>Rainwater harvesting is proposed as part of the stormwater design for the proposed facility as described in <b>Section 7.4</b> of our report.</p> <p>Refer to revised drawings showing the location and sizes of the proposed rainwater tanks.</p>                                                                                                                                                                                                                                                                                                                      |
| <b>Bayside Council Submission</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Flooding and Stormwater</b>    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Item 6)</b>                    | <p><i>The applicant is to liaise with Council and the SES to install flood water depth signs on McPherson Street, both at Springvale Drains and at Floodvale Drains, and in front of the property, to warn road users;</i></p> <p><u>Response</u></p> <p>Refer to updated drawing <b>Co9349.12-DA41</b> showing indicative location of flood water depth sign proposed on the property fronting McPherson Street.</p> <p>Signage requirement to Springvale Drains and Floodvale Drain remains the responsibility of Council and the SES.</p>                                                                                                                                                                                                                                                                                    |
| <b>Item 7)</b>                    | <p><i>The flood storage area under the building will be flooded frequently even in a minor rain event. Access to the undercroft area access must be restricted to avoid risk of drowning. Signage is to be provided to warn the employees and visitors.</i></p> <p><u>Response</u></p> <p>Access to the undercroft area is restricted to unauthorized personnel and confined space requirements. The undercroft area will include a mesh steel fence around the perimeter of the underside of the suspended deck to ensure restricted access and allow flood water to enter and exit unimpeded.</p> <p>Signage will be provided to warn employees and visitors at the access gates that the area is prone to flooding. Refer to updated drawing <b>Co9349.12-DA41</b> and <b>DA42</b> showing location of proposed signage.</p> |
| <b>Stormwater Water Quality</b>   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Item 8)</b>                    | <p><i>An infiltration system is not suitable for water quality treatment in the same manner that an infiltration system is not a suitable method of stormwater management for an industrial site. It cannot be confirmed that the various industrial activities (historical) at any point in time conducted on the site will not result in unacceptable levels of ground pollution. Also there is a high likelihood that a significant quantity of stormwater will not be treated by the system (including stormwater runoff from upstream sites). Hence, the ground floor slab</i></p>                                                                                                                                                                                                                                         |

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|                 | <p><i>and roof drainage system is to be designed to entirely treat run-off and meet pollutant reduction targets prior to discharging into the basin below.</i></p> <p><u>Response</u></p> <p>Groundwater beneath the basin is impacted with chlorinated hydrocarbons and as a result stormwater from hard surfaces of the proposed development is of significantly better quality. As the basin has no outlet pipe the majority of stormwater entering the basin will infiltrate to groundwater. Due to groundwater contamination currently present beneath the basin a series of extraction wells located along McPherson Street operate to prevent it from migrating from the site. As a result, infiltration of stormwater from the development into the basin is not considered to pose an environmental risk and it is likely to improve groundwater quality over time.</p> <p>In addition to the above, the proposed water quality treatment is generally in line with the previously approved (Stage 1) Southlands Estate stormwater strategy. The water quality treatment for the proposed development will include utilisation of rainwater harvesting tanks at ground level to minimize water demand. It is also proposed to provide 200um 'pit insert' treatment devices at ground level stormwater collection points to remove gross pollutants (GP's) and total suspended solids (TSS) prior to discharge into the storage basin where final filtration will be performed. This method of disposal is consistent with the overall precinct strategy, and approved adjoining developments.</p> <p>We also make reference to the recent adjoining development at 28A McPherson Street approved by Bayside Council (DA-2017/1071). The water quality strategy for the adjoining development consisted of enviropods at the surface inlet stormwater collection pit prior to discharge into the existing storage basin via dedicated drainage easements. This is consistent to the strategy which is proposed for this development, noting the proposed treatment train has demonstrated compliance with Councils load based pollution reduction targets through MUSIC modelling.</p> |
| <b>Item 9)</b>  | <p><i>The locations and specifications of water quality treatment devices need to be shown on the civil engineering plans; and</i></p> <p><u>Response</u></p> <p>Refer to revised drawing <b>Co9349.12-DA41</b> and <b>DA42</b> for the proposed water quality treatment devices which include rainwater harvesting tanks.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Item 10)</b> | <p><i>The MUSIC model should use the latest available rainfall data. Section 7.3.2 of the Civil Engineering Report states the MUSIC modelling has relied on the rainfall data from the 1962 to 1966 period.</i></p> <p><u>Response</u></p> <p>The MUSIC model has been prepared in line with the <i>Draft NSW MUSIC Modelling Guidelines</i> (Sydney Metro CMA) and rainfall data noted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

| <b>Stormwater Management</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Item 11)</b>              | <p><i>More details are needed for the ground floor slab drainage. An even distribution of drainage flow across the site into the storage basin below is required. Concentrated discharges are not supported from the ground floor slab into the basin.</i></p> <p><u>Response</u></p> <p>Proposed location of stormwater discharge from the ground floor slab drainage into the storage basin below are shown on drawing <b>Co9349.12-DA41</b> and <b>DA42</b>.</p> <p>Stormwater discharge is proposed to be distributed through the existing basin storage with the provision 11 discharge locations spaced regularly over the site.</p> <p>We also note that the recent development at 28A McPherson Street has been constructed with two concentrated piped discharge location into the existing storage basin. As part of this development it is proposed to provide energy dissipators per the NSW Office of Water Guidelines for discharge to natural waterways.</p> |
| <b>Item 12)</b>              | <p><i>Further information is required on the connection detail for discharge from the site. It appears that Nant Street operates like a weir/part of the basin and hence stormwater discharge from the site is through Nant Street into the open Springvale Drain. This needs to be confirmed by the applicant, as Council does not wish to see piped discharge from this site into the catchment.</i></p> <p><u>Response</u></p> <p>Piped discharge from the development is not proposed, and no change to the inlet and outlet of the approved and constructed detention basin are proposed. Refer Item 11) response relating to drainage outlets to the basin being dispersed throughout the site.</p>                                                                                                                                                                                                                                                                   |
| <b>Item 13)</b>              | <p><i>Further details are needed regarding the remediation required for the site:</i></p> <p><i>What are the materials of the capping layer? Will this impact the natural permeability of the basin?</i></p> <p><u>Response</u></p> <p>Remediation on the site is covered in the EIS with a Remediation Action Plan attached at Appendix G and a Site Audit Statement B2 issued by the NSW EPA Accredited Site Auditor attached at Appendix G1.</p> <p>Refer to Item 2) response above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Item 14)</b>              | <p><i>What is the purpose of the road base — is it just temporary during construction? How will the basin area be maintained?</i></p> <p><u>Response</u></p> <p>Refer to Item 2) response above.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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| <b>Item 15)</b>                     | <p><i>How will the basin area be maintained?</i></p> <p><u>Response</u></p> <p>Refer to Item 2) response above.</p>                                                                                       |
| <b>Item 16)</b>                     | <p><i>A copy of the music model, hydraulic and flood assessment model shall be provided to Council for record.</i></p> <p><u>Response</u></p> <p>Refer to provided MUSIC model.</p>                       |
| <b>Urban Design and Landscaping</b> |                                                                                                                                                                                                           |
| <b>Item 17)</b>                     | <p><i>The following should be included in the proposal:</i></p> <p><i>Rainwater harvesting for reuse in irrigation and other uses;</i></p> <p><u>Response</u></p> <p>Refer to Item 5) response above.</p> |

This letter is provided by Costin Roe Consulting Pty Ltd. Please contact the undersigned if clarification of any of the above items are required.

Yours faithfully,

**COSTIN ROE CONSULTING PTY LTD**



**XAVIER CURE**

Associate Director