

Groundwater Clarification and Aquifer Interference

Hunter Indoor Sports Stadium

24002155

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Suite 3, 240-244 Pacific Highway,
Charlestown, NSW 2290
Phone: +61 2 4949 5200



APP Group
Level 2, 426 King Street
Newcastle
NSW 2300

Attention: Dain Greentree

Subject: Groundwater Clarification and Aquifer Interference
Hunter Indoor Sports Stadium

1 INTRODUCTION

As part of a State Significant Development Application APP have received comments from various agencies and have referred then to Kleinfelder for review. The table below provides the comments and Kleinfelder responses.

Section	Agency Comment	Kleinfelder Comment
1.1 Groundwater - information required Prior to determination	<p>Insufficient information is provided to confirm the maximum annual groundwater take due to aquifer interference activities required for the project. DCCEEW Water notes the site investigations documented in the Environmental Impact Statement (EIS) identified groundwater between 1 and 3 metres below ground level (mbgl) and the proposed excavation is to be up to 3mbgl and piling to 8mbgl. There is no analysis or quantification of the volumes of groundwater take due to these works.</p> <p>1.1 Recommendation - Prior to determination</p> <ul style="list-style-type: none"> The proponent must demonstrate they can obtain sufficient entitlement to account for the maximum potential groundwater take or clearly identify a relevant exemption. Quantify the maximum annual volume of water take due to aquifer interference activities required for the project. Demonstrate sufficient water entitlement can be acquired in the relevant water source unless an exemption applies. 	<p>There will be up to 1m of fill placed on site and only minor cutting. Excavation that reaches the water table will therefore be minimal for piles and underground services installation. Given that the majority of the site is underlain by low permeability clay soils it is considered likely that water take from excavations during construction will be a maximum of 5,000 liters. Piles to 8m depth will be approximately 600mm diameter and estimated water take will be less than 500 liters per pile.</p> <p>There will be zero water take after completion of construction.</p> <p>In addition:</p> <ul style="list-style-type: none"> The water will not be taken for consumption or supply; the project team will claim an exemption and keep a record of the water taken under the exemption and provide this to the Minister within 28 days of the end of the water year; and the records will be kept for 5 years. <p>Therefore, the annual water take will be less than 3ML per year and Clause 7 of Schedule 4 of the Water Management (General) Regulation 2018 applies.</p>



Section	Agency Comment	Kleinfelder Comment
Groundwater - Post Approval	<p>Under the Water Management Act 2000, if groundwater is intercepted, a WAL must be obtained prior to any water take occurring unless an exemption under Clause 7 of Schedule 4 of the Water Management (General) Regulation 2018 applies. An exemption may be available if water take is less than or equal to 3M L per water year, subject to the development meeting other exemption requirements, such as:</p> <ul style="list-style-type: none"> • the water is not taken for consumption or supply; • the person claiming the exemption keeps a record of the water taken under the exemption and provides this to the Minister within 28 days of the end of the water year; and • the records are kept for 5 years. <p>The proponent should ensure a water access license (WAL) is obtained to account for the maximum predicted water take for construction and operation activities unless an exemption applies under the Water Management (General) Regulation 2018.</p>	See above, the stated exemption applies and will be applied for by the project team..
2.1 Groundwater take - Pre Determination	<p>As per Recommendation 1.1 above, the EIS has not provided a volumetric quantification of groundwater take. Additionally, the EIS has not provided an assessment of impacts to groundwater due to construction or operation of the project. DCCEE Water notes that without groundwater take estimations it is difficult to assess the level of risk. Therefore, the proponent should determine the estimated take volume.</p> <p>2.1 Recommendation – pre - determination</p> <p>If the take of groundwater is found to be greater than 3 ML per year, the proponent must assess the impacts due to aquifer interference activities in accordance with the NSW Aquifer Interference Policy and framework (2012).</p>	See above, the stated exemption applies and will be applied for by the project team..

If you require additional information or clarification, please contact the undersigned at +61 0452 392692.



Sincerely,

Kleinfelder Australia Pty Ltd

Phil Band

Australia Lead
Geotechnical
pband@kleinfelder.com
Mobile: 0452 392692



ATTACHMENT 1 HEADING FORMAT

