



OUT21/10825

James Groundwater
Planning and Assessment Group
NSW Department of Planning, Industry and Environment

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Dear Mr Groundwater

**Doran Drive Plaza (SSD 15882721) –
Environmental Impact Statement (EIS)**

I refer to your email of 10 August 2021 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

The proposed development application is seeking consent for the construction of a 20-storey mixed-use development, comprising retail, commercial and community spaces, 431 residential units and a public plaza.

Recommendations regarding water take/licencing and groundwater impact assessment and management are provided in **Attachment A**. In particular, the proponent must ensure sufficient water entitlement is held to account for the maximum predicted take prior to take occurring, and undertake a groundwater impact assessment in accordance with the NSW Aquifer Interference Policy.

Any further referrals to DPIE Water and NRAR can be sent by email to landuse.enquiries@dpie.nsw.gov.au or to the following coordinating officer within DPIE Water:

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Yours sincerely

Liz Rogers
Manager, Assessments, Knowledge Division
Department of Planning, Industry and Environment: Water
15 September 2021

Attachment A

Detailed advice to DPIE Planning & Assessment regarding the Doran Drive Plaza (SSD 15882721) – Environmental Impact Statement (EIS)

DPIE Water and NRAR provide the following recommendations.

1.0 Water Take and Licencing

1. Pre-approval Recommendation:

- a. Should no exemption apply, the proponent should demonstrate that adequate groundwater entitlements can be obtained for the project's expected water take.

Explanation

The EIS indicates that there will be de-watering required for the project in both construction and operational phases (EIS Section 2.5.4 & Geotechnical report section 4.4). However, there is no estimate of take provided. The proponent should determine and report the volume of groundwater to be extracted during the construction and operational phases. A Water Access Licence (WAL) should be obtained for this volume prior to any take (if an exemption does not apply), in line with that determined in the NSW Aquifer Interference Policy assessment. Exemptions to obtaining a water access licence can be found in Schedule 4 Part 1 of the Water Management (General) Regulation 2018.

NRAR notes that the NSW Water Register shows that 3929ML is held across 186 WALs in the Sydney Basin Central Groundwater Source. As this total holding amount is at a maximum level, then a trade is likely to be required from existing licences to account for the predicted groundwater take if an exemption does not apply.

2. Post-approval Recommendations:

- a. A consolidated site water balance should be provided for both construction and operation if groundwater interception and dewatering will occur.
- b. If groundwater is intercepted during construction or should ongoing dewatering be required, the proponent must ensure that any take is appropriately licenced (unless eligible for an exemption).

2.0 Groundwater Impact Assessment and Management

3. Pre-approval Recommendations:

The proponent should:

- a. Undertake a groundwater impact assessment in accordance with the NSW Aquifer Interference Policy. The impact assessment must address the impact of dewatering during construction and the ongoing impact of dewatering during operation.

DPIW Water recommends that the proponent consult the NSW DPIE Water *Minimum requirements for building site groundwater investigations and reporting* (https://www.industry.nsw.gov.au/_data/assets/pdf_file/0004/343291/minimum-requirements.pdf) to guide the site characterisation and the reporting that will support the groundwater impact assessment. While the guideline is aimed at the integrated development pathway, the requirements for information are consistent.

Explanation

The EIS presents numerous references to groundwater at the site including: water levels within 3 monitoring bores at the site, water levels with respect to the proposed excavation depth, site permeability, methodologies for dewatering the site both during construction and permanently on completion of the development. However, there is no impact assessment against the NSW Aquifer Interference Policy, or otherwise presented.

In summary, it is reported that:

- dewatering will be required during the construction and operational phases;
- water levels across the site are at 2.58 to 4.48 m below ground level;
- excavation depths across the site are to 19 to 26.6 m below ground level (see Figure 2);
- Existing site height levels range from 98.13 mAHD in the north east to 89.24 mAHD in the south west (Figure 2);
- The site hydraulic conductivity is reported as 5.2×10^{-7} – 5.2×10^{-8} m/s (determined through well recharge tests) which roughly equates to a transmissivity of 0.7 m²/day
- Groundwater seepage will need to be controlled by a “sump and dump” system, and that an “underfloor drainage is to be provided for the basement floor slab..... comprising ofaggregate”;
- “Tremie pumps may be required where high groundwater seepage inflows are present during the drilling of bored piles.”

It is noted that any groundwater extracted from the site will be discharged into the existing Council operated stormwater system which will require Council approval.

It is evident that there will be a degree of groundwater impact as a result of the proposed development. However, the level of impact has not been appropriately assessed. Further work should be undertaken to determine potential volumes of groundwater to be extracted during construction along with subsequent impacts, and this should include an assessment under the NSW Aquifer Interference Policy.

- b. Consider re-designing the basement to be a fully tanked system to reduce impacts and likelihood of ongoing water licence requirements. By default DPIE Water supports tanked basements. To propose a non-tank design, the Proponent must provide evidence that the impact of long term dewatering is acceptable and manageable and licences can be obtained.

Explanation

DPIE Water notes that it does not consider long term or permanent dewatering to be environmentally sustainable. Therefore, DPIE Water encourages such developments to investigate alternative strategies for managing potential long-term dewatering of water collected as a result of seepage to the basement or underfloor slab. Such strategies may include “tanking” the basement to exclude any ingress or groundwater therefore negating the need for continual dewatering.

End Attachment A