

Date: 23 February 2021

Ref: 32505BMlet2Rev1

Forest Central Business Park Pty Ltd
C/- Ascot Project Management
Level 10, 420 George Street
Sydney 2000

Attention: Joanna Karamihas

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GEOTECHNICAL AND HYDROGEOLOGICAL OPINION

PROPOSED MEDICAL CENTRE

**LOT 7, DP1020015, FOREST CENTRAL BUSINESS PARK, 49 FRENCHS FOREST ROAD EAST,
FRENCHS FOREST, NSW**

Further to our previous hydrogeological investigation and analysis for the above proposed development as detailed in our report dated 3 August 2020 (Ref: 32505BMrpt2) below are our specific comments in relation to the WaterNSW General Terms of Approval (GTA) dated 1 April 2020 (Ref: IDAS1121680) which lists conditions relating to dewatering. We note that the GTA are dated prior to our hydrogeological investigation and analysis and so WaterNSW would not have taken into account the results of our analysis.

As part of our hydrogeological assessment we analysed several cases of varying groundwater levels, coefficients of permeability and ratios of vertical permeability to horizontal permeability and estimated Total inflows ranging from 0.04ML/year to 0.9ML/year (about 1100L/day to 2500 L/day). These results are well below the threshold of 3ML/year (about 8200 L/day) where an exemption applies for obtaining a Water Access Licence (WAL) as given in the attached published Water NSW Fact Sheet "Exemptions – Construction Dewatering".

Based on the results of our analysis the adoption of a drained basement is considered suitable for the proposed development and adoption of a watertight (i.e. tanked) basement is not required, or will not be of benefit.

Our specific comments for each of the relevant conditions of the GTA are as follows:

GT0062: This relates to temporary construction dewatering. We recommend that this condition be expanded to allow for the collection and disposal of seepage from inside the basement in the long term since the estimated seepage into the basement is less than the Water NSW limit of 3ML/year where an exemption is applicable (estimated to be between 0.04ML/year and 0.9ML/year). The seepage would be occurring through the sandstone bedrock and we would expect that the seepage would reduce following excavation of the basement and may



be negligible, particularly given the site location on the top of a hill. Drainage of basements excavated into sandstone is standard practice in the vast majority of basements in Sydney in the last many decades.

GT0063: We recommend that this condition does not apply as the analysis has shown that this development meets the WaterNSW criteria for exemption from needing a Water Access Licence (WAL)

GT0066: Again, we recommend that this condition does not apply as the analysis has shown that this development meets the WaterNSW criteria for exemption (3ML/year) and design of the basement to be watertight is not necessary. We consider that a conventional drained basement is appropriate for the geotechnical profile at this site and the minor seepage that is expected of 0.4mL/year to 0.9ML/year.

GT0067: Since we recommend that a watertight basement is not required, this condition is not applicable to a drained basement.

Should you require any further information regarding the above, please do not hesitate to contact the undersigned.

Yours faithfully
For and on behalf of
JK GEOTECHNICS



Matthew Pearce
Associate | Geotechnical Engineer

Reviewed by:



Daniel Bliss
Principal | Geotechnical Engineer

Appendix A- WaterNSW Fact sheet for Exemptions- Construction dewatering
WaterNSW Fact sheet for Construction dewatering- Information for councils and applicants

Exemptions

Construction dewatering



This fact sheet provides information to local authorities and applicants seeking development consent that may involve dewatering activities. It outlines exemptions from the need to obtain certain approvals/licences under the *Water Management Act 2000* (WMA). This fact sheet should be read in conjunction with the [Dewatering information for councils and applicants fact sheet](#).

If intending to rely on one of the exemptions below, it is necessary to understand requirements that may involve recording water extraction and the time limits that apply to the exemption. **It is important to obtain any further advice before commencing the development application process.**

Note that as part of dewatering works you may need other approvals included under the *Local Government Act 1993* or *Roads Act 1993* to dispose of the water into council drains, use any part of the public footpath or carriageway or undertake any work within the public road.

There are two exemptions that apply from 6 December 2019.

Exemption 1: For extraction of less than 3 ML of water per year

When water extraction is taken as part of approved development (or exempt development), up to 3 ML of water may be taken in any one year (commencing on 1 July each year) without the need for:

- a water access licence (WAL)
- a water use approval.

A water supply work approval will be required for any works that are to be constructed or used to drain or pump the water.

To rely on this exemption, certain requirements must be met to record the water extraction and ensure that less than 3 ML of water is taken.

These requirements are set out in clause 21(6) of the *Water Management (General) Regulation 2018* and include requirements to:

- record the water take within 24 hours in the approved form and manner (see the [Completion report fact sheet](#))
- keep the water take records for a period of five years
- provide the water take records to the Minister (or WaterNSW) by no later than 28 July for the year ending 1 July during which the water was taken.

Exemptions

Construction dewatering

Exemption 2: For construction activities that take water from the Botany Sands Groundwater Source only

When water extraction is taken as part of construction activities for a building, road or other infrastructure from the Botany Sands Groundwater Source, it may not require:

- a water access licence (WAL) or
- a water use approval

if a water supply work approval (e.g. for a pump) has already been obtained.

The water supply work approval is required to specify the maximum amount of water that can be taken during a year.

This exemption is only applicable until the earlier of:

- a controlled allocation of the water in the water source is opened by the Department of Industry, Planning and Environment (DPIE)
- 1 July 2021.

This exemption cannot be relied upon if construction activity is likely to continue beyond 1 July 2021 (unless the law changes).

In order to take water after 1 July 2021, the required water allocation must be purchased in the water market from that water source (or a transferable water source allocation).

To rely on the exemption, the conditions of the water supply work approval must be met and may require metering of the water take.

A water supply work approval will still need to be obtained for any works that are to be constructed or used to drain or pump the water.

Currently, the exemption only applies to the Botany Sands Groundwater Source, but other sources may be added and it is best to check with WaterNSW for the latest information.

More information

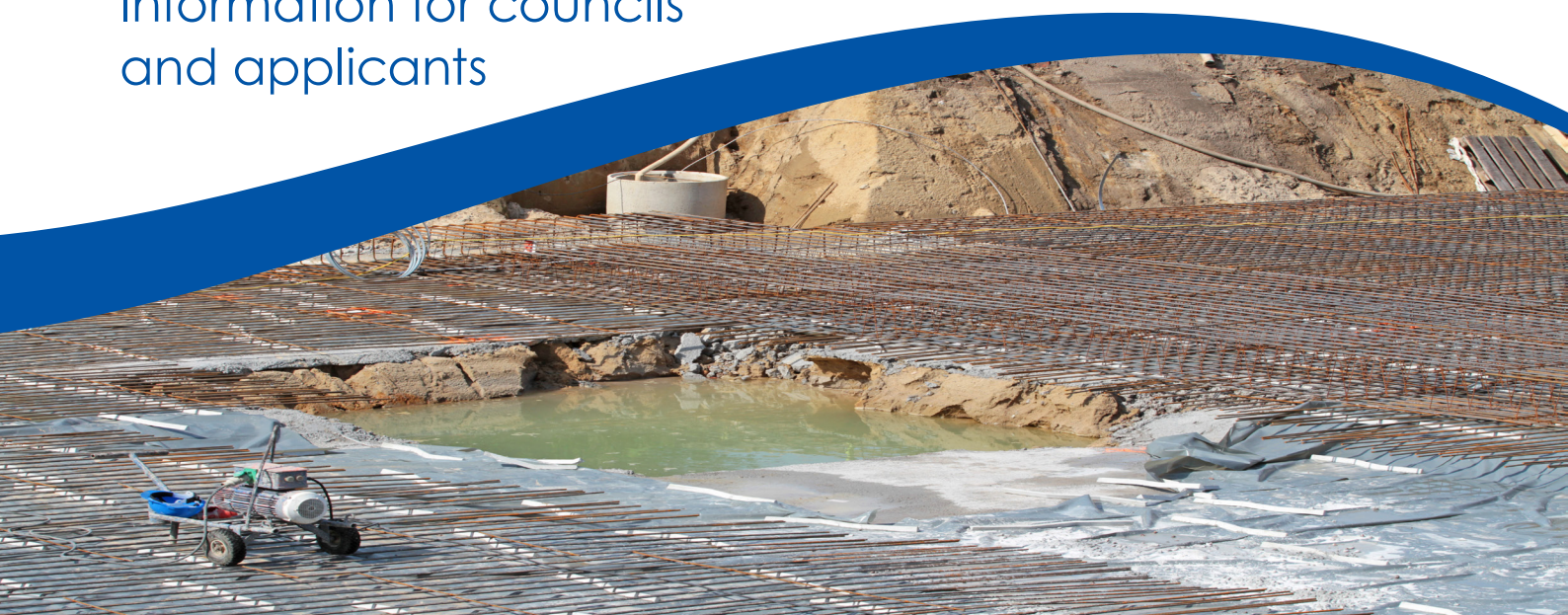
If you have any questions, please contact one of our friendly Customer Service team on **1300 662 077** or email Customer.Helpdesk@waternsw.com.au

Disclaimer:

This fact sheet is provided for general information purposes only and may not cover the precise circumstances of your development. It is only relevant to the particular matters identified in this fact sheet. There may be other processes and relevant fact sheets that are also relevant to your development. Links to all fact sheets related to construction dewatering may be found at waternsw.com.au/dewatering. This fact sheet is not legal advice and should not be relied upon as such. Interested persons should obtain their own advice. This fact sheet does not represent the views of any council or the Department of Planning, Industry and Environment or Natural Resources Access Regulator. This fact sheet represents an interim position and may be updated at any time. Please check the WaterNSW website for the current version. WaterNSW is not liable for consequences of actions taken in reliance of information provided or omitted from this document.

Construction dewatering

Information for councils and applicants



This fact sheet provides local government authorities and applicants with information about construction dewatering and which approvals may be required to authorise dewatering. It also helps those seeking development consent to determine whether a development application is an integrated development application because of the need to obtain approvals relating to dewatering.

What is construction dewatering?

Construction work that requires excavation (such as basements, tunnels and trenches) can often encounter groundwater, particularly where the groundwater table is high or the excavation is particularly deep. Where construction activities will interfere with groundwater aquifers, the groundwater will either build up on the construction site (and potentially adjoining land) or will need to be extracted from the water table. In either case, the groundwater will need to be removed (by bore, pump or other means) - this is referred to as **dewatering**.

The removal of the groundwater from its water source and the taking/using of water (even if the take and use is for disposal) may require approval under the *Water Management Act 2000* (WMA).

Where a development application is lodged for development which requires approvals under the WMA, the development will be an integrated development and local government authorities will typically manage the WMA approval process in conjunction with WaterNSW.

All construction activities that will impact on groundwater aquifers should be referred to WaterNSW as part of the integrated development process to streamline the assessment processes. From 1 January 2020, this should be done via the NSW Planning Portal at planningportal.nsw.gov.au.

If the need for WMA approvals only becomes apparent following development consent, applicants should be referred directly to WaterNSW.

What approvals/licences are likely to be required to dewater a construction site?

The following are likely required under the WMA:

1. **Water supply work approval** to construct and use the work(s) required to remove, transport, store, and dispose of the water from a groundwater source, e.g. pumps, bores drainage works.
2. **Water access licence (WAL)** which will authorise a licence holder to take water from a specific groundwater source. WALs usually have an allocation of water attached to them which determines the amount of water that can be taken. Usually, this is in the form of units. The Minister for Water determines annually the amount of water (in megalitres (ML)) which a unit represents for a year. Usually, 1 unit represents 1 ML.

Typically, a WAL has a NIL allocation when it is first issued. A WAL and/or units for a WAL, or the annual allocations referable to a particular unit, can be purchased in the market for the relevant water source. Importantly, a WAL is not an approval which is part of the integrated development process. It must be addressed separately. If no exemption applies to your application, then a WAL will need to be obtained prior to dewatering work commencing.
3. **Water use approval** to use or dispose of the water taken from the groundwater source. A water use approval is not required if the use of water is included in the development consent.

Construction dewatering

Information for councils and applicants

Both work approvals and water use approvals under the WMA trigger the integrated development process. When a development application (DA) requires either of these approvals, the DA must be referred to WaterNSW. This referral is done by using NSW Planning Portal at planningportal.nsw.gov.au/online-concurrence-and-referral.

Some particular dewatering activities may be exempt from the above requirements. There are certain requirements that the applicant must meet and comply with in order to take advantage of the exemptions. Refer to the [exemption for aquifer up to 3ML](#) or [exemption for excavation more than 3ML](#) fact sheets for more information.

Approvals under the WMA to construct and use work(s) to remove groundwater require a dewatering management plan and [recording of groundwater take under the exemption](#). Recording must be weekly and record of water taken submitted to WaterNSW within 28 days of the end of the water year.

What happens once an application is submitted to WaterNSW?

WaterNSW refers all construction dewatering applications to the Department of Planning, Industry and Environment (DPIE).

Once received, DPIE undertakes a hydrogeological assessment of the application and provides a hydrogeological report to WaterNSW.

WaterNSW considers the hydrogeological report as part of the assessment process to assist in determining whether the WMA approvals should be granted.

Information required for DPIE to undertake a hydrogeological assessment

- Geotechnical investigation report describing the results of intrusive investigations at the site
- Survey plan of the site
- Architectural plan illustrating accurate design dimensions of the proposed basement and sections (oriented approximately at right angles) illustrating the design depth of the proposed basement(s).
- Environmental site assessment report identifying the contamination status of the property and the general quality characteristics of the groundwater beneath the site.

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- Acid sulfate soils assessment and management report identifying the nature, extent and management of acid sulfate soils (where present)

If additional information is required, WaterNSW will contact the applicant directly.

General terms of approvals

Once WaterNSW has received the hydrogeological report for the application and considered all relevant matters, it will determine whether the WMA approvals can be granted.

If the approvals are granted for integrated development, WaterNSW will provide the local council with general terms of approval (GTAs). View the [General terms and conditions fact sheet](#) for more information.

If the local council proposes to grant development consent for the DA, then it must include the WaterNSW GTAs as conditions of the development consent.

The applicant must still separately apply to WaterNSW for

What if more time is needed to complete dewatering?

WaterNSW typically grants WMA approvals for dewatering activities for a period of two years. If there are issues completing dewatering within two years, the applicant may submit an application to extend the approval.

If an extension is warranted, WaterNSW will generally extend the approval for a further 12 months. The applicant will be required to submit an interim report to confirm the construction activity is underway. The interim report requires the same information as the completion report. Please refer to the [Completion report fact sheet](#) for more information.

Approvals must usually be extended before the expiry date of the original approval. Approvals which have expired without extension may be referred to NRAR for investigation.

More information

Contact our Customer Service team on **1300 662 077** or email Customer.Helpdesk@waternsw.com.au