



## Office of Water

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Date 11 March 2011

Mr Michael Woodland  
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Our ref : ER21003  
Your ref: MP09\_0216 and MP09\_0219

**Attention: Andrew Smith**

Dear Mr Woodland

**MP09\_0216 & MP09\_0219 – Concept Plan and Stage 1 Project Application for a Residential, Commercial and Retail Development – Meadowbank Employment Area, Meadowbank and Ryde – Environmental Assessment - Ryde LGA**

I refer to your letter of 21 January 2011 seeking comment from the NSW Office of Water (NOW) on the Environmental Assessment (EA) for the above project proposal. I apologise for the delay in responding.

The NOW's comments on the EA are provided in Attachment A. The NOW's issues with the proposal are in relation to:

- the protection and enhancement of riparian land along the Parramatta River; and
- groundwater.

**Contact Details:**

If you require further information please contact Janne Grose on (02) 4729 8262 at the Penrith office.

Yours sincerely

**Mark Mignanelli**  
Manager Major Projects and Assessment

**NSW Office of Water Comments**  
**Concept Plan and Stage 1 Project Application**  
**Residential, Commercial & Retail Development – Meadowbank**  
**Employment Area - Environmental Assessment**

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**Riparian Land**

The Director General Requirements issued on 20 May 2010 included the Environmental Assessment (EA) is to *"provide details of the protection and rehabilitation of riparian land along the Parramatta River including wider riparian setbacks in key locations to enhance the local foreshore connectivity value and public access"*.

The EA does not adequately address the protection and enhancement of riparian land along the Parramatta River at the project site. While aerial photography shows the riparian land along this section of the Parramatta River is compromised by Rothesay Road and an existing pathway, Figure 1 in Annexure 18 shows further encroachment into the riparian/aquatic environment is proposed by a foreshore boardwalk. Section 6.1 (page 11) of Annexure 18 notes that due to the *"general lack of any native vegetation along the alignment of the proposed boardwalk it is not considered that any native species would require clearing etc"*. Figure 45 in the EA appears to show the proposed boardwalk would be located amongst existing vegetation. Even if the boardwalk does not remove existing native vegetation, the locating of the boardwalk in riparian land further reduces the opportunity to improve riparian outcomes along this section of river, as the pathway would prevent the rehabilitation of riparian vegetation at this location. The NOW questions the need for a boardwalk when there is already an existing pathway that is located in the riparian area. The riparian land should be protected and rehabilitated with native plant species endemic to the vegetation community.

Volume 5 the EA (Annexure 11, page 26) makes reference to the Department of Planning's "Planning Guidelines for Walking and Cycling". It should be noted this planning guideline includes environmental design principles for paths along creeks and the first principle is to *"identify and protect with zoning continuous riparian zones of a minimum width 40 m"* (see page 56 of the guidelines).

It should be noted that the NOW Guidelines for controlled activities outline that all ancillary infrastructure such as asset protection zones (APZ), utility easements, detention basins and water quality control structures, roads, paths/cycle ways etc. should be located outside of any riparian zone (ie the CRZ plus the VB). NOW requests the DoP give similar regard to the protection and enhancement of riparian land for this project.

Volume 6 (Annexure 13) includes the design intent for a Riparian Entry Park and the Riparian Foreshore Link (pages 6 and 7). The plans show a "riparian waterbody" but the waterbodies are not connected to each other and do not form a naturalised creek system. The plans also locate pedestrian pathways, open lawn areas and childrens play areas

within and along the 'riparian areas' which is not consistent with the second principle listed on page 7 for "natural creek-like water features and plantings".

### **Groundwater**

Section 7.1.1 of Annexure 19 indicates the precise location and depth of features such as basement car parking over the greater area are unknown at this stage but Section 55 in the EA notes that three level basement car parking is proposed for the Stage 1 works (page 67).

If the proposal is likely to intercept or use groundwater a Licence under Part 5 of the *Water Act 1912* is required in relation to this development. All proposed groundwater works including bores for the purpose of investigation, extraction, dewatering, testing or monitoring must be identified and approval obtained from NOW prior to their installation.

The NOW's recommended conditions of approval with respect to temporary groundwater dewatering are attached (please note this is not the actual licence). They are the conditions under which the NOW would, in principle, accept the proposed development activity.

The NOW will not allow any proposal that requires permanent or semi-permanent pumping/extraction of the groundwater to protect the buildings. Therefore the proposal must ensure it will not require this style of facility or activity.

Section 7.6.2 of Annexure 19 notes that where high groundwater flows may be anticipated or where dewatering is undesirable tanking may be used. The construction of any structure that may be impacted by groundwater, will require a water proof retention system (i.e. a fully tanked structure) with an adequate provision for future fluctuations of the watertable level.

The technical documentation required by the conditions of approval must be provided to the NOW at the time of application for a Water Licence for temporary construction dewatering.

Section 7.3.3 of Annexure 19 indicates a specific regional groundwater monitoring program will be required to provide more information on the depth of groundwater and the direction of flow. The NOW supports this proposed monitoring.

**End Attachment A  
11 March 2011**

**NSW Office of Water Recommended Conditions of Approval**  
**Residential, Commercial & Retail Development – Meadowbank**  
**Employment Area**

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**Groundwater:**

Licences under Part V of the *Water Act 1912* are required for the works for purposes of temporary dewatering as part of proposed construction.

**General and Administrative Issues**

1. Groundwater shall not be pumped or extracted for any purpose other than temporary construction dewatering.
2. Pumped water (tailwater) shall not be allowed to discharge off-site (e.g. adjoining roads, stormwater system, sewerage system, etc) without the controlling authorities approval and/or owners consent.
3. The licensee shall allow (subject to Occupational Health and Safety Provisions) the NSW Office of Water or any person authorised by it, full and free access to the works (excavation or bore/bore field), either during or after construction, for the purpose of carrying out inspection or test of the works and its fittings and shall carry out any work or alterations deemed necessary by the NSW Office of Water for the protection and proper maintenance of the works, or the control of the water extracted to prevent wastage and for the protection of the quality and prevention from pollution or contamination of the groundwater.
4. If a work is abandoned at any time the licensee shall notify the NSW Office of Water that the work has been abandoned and seal off the aquifer by such methods as agreed to or directed by the NSW Office of Water.
5. Suitable documents are to be supplied to the NSW Office of Water of the following:
  - a) A report of prediction of the impacts of pumping on any licensed groundwater users or groundwater dependent ecosystems in the vicinity of the site. Any adverse impacts will not be allowed and the project will need to be modified.
  - b) A report of assessment of the potential for salt water intrusion to occur as a result of the dewatering. This report is only required for sites within 250m of any marine or estuarine foreshore area. The generation of conditions leading to salt water intrusion will not be allowed, and the proposal will need to be modified.
  - c) Descriptions of the methods used and actual volume of groundwater to be pumped (kilolitres/megalitres) from the dewatering works, the works locations, the discharge rate (litres per second), duration of pumping (number of days/weeks), the amount of lowering of the water table and the anticipated quality of the pumped water.
  - d) Descriptions of the actual volume of pumped water (tailwater) to be reinjected (kilolitres/megalitres), the reinjection locations, the disposal rate

(litres per second), duration of operation (number of days/weeks) and anticipated quality of treated water to be reinjected.

- e) Monitoring of groundwater levels (minimum of 3 weekly measurements of depth to water at a minimum of 3 locations broadly distributed across the site) beneath the proposed development site prior to construction. This requirement is only for sites where the proposed structure shall extend greater than one floor level into the existing ground level.

### **Specific Conditions**

1. The design and construction of the structure must preclude the need for permanent dewatering.
2. The design and construction of the structure that may be impacted by any watertable must include a water proof retention system (i.e. a fully tanked structure) with adequate provision for future fluctuations of water table levels. (It is recommended that a minimum allowance for a water table variation of at least +/-1.0 metre beyond any expected fluctuation be provided). The actual water table fluctuation and fluctuation safety margin must be determined by a suitably qualified professional.
3. Construction methods and material used in and for construction are not to cause pollution of the groundwater.
4. Monitoring of groundwater levels is to be continued at least weekly during the construction stage and at least weekly over a period of at least 2 months following cessation of dewatering, with all records being provided to the NSW Office of Water on expiration of the licence. This requirement is only for sites where the proposed structure shall extend greater than one floor level into the existing ground level.
5. Groundwater quality testing must be conducted (and report supplied to the NSW Office of Water). Samples must be taken prior to the commencement of dewatering, (and ongoing to the satisfaction of the NSW Office of Water for any extraction and reinjection activities). Collection and testing and interpretation of results must be done by suitably qualified persons and NATA certified laboratory identifying the presence of any contaminants and comparison of the data against accepted water quality objectives or criteria.
6. Discharge of any contaminated pumped water (tailwater) that is not to be reinjected, must comply with the provisions of the *Protection of the Environment Operations Act 1997* and any requirements of the relevant controlling authority. The method of disposal of pumped water (i.e. street drainage to the stormwater system or discharge to sewer) and written permission from the relevant controlling authority must be presented to the NSW Office of Water in support of the licence application.
7. Discharge of any contaminated pumped water (tailwater) that is to be reinjected, must comply with the provisions of the *Protection of the Environment Operations Act 1997*. The quality of any pumped water (tailwater) that is to be reinjected must be compatible with, or improve the intrinsic or ambient groundwater in the vicinity of the reinjection site. Contaminated groundwater is not to be reinjected into any aquifer. The following must be demonstrated in writing:
  - a) The treatment to be applied to the pumped water (tailwater) to remove any contamination.

- b) The measures to be adopted to prevent redistribution of any contamination in the groundwater system. Any reinjection proposal that is likely to further spread contamination within the groundwater system will not be allowed and the project will need to be modified.
  - c) The means to avoid degrading impacts on the identified beneficial use of the groundwater. Any reinjection proposal that is likely to lower the identified beneficial use of a groundwater system will not be allowed and the project will need to be modified.
8. Written advice be provided from the Certifying Authority to the NSW Office of Water to certify that the following ground settlement issues have been addressed in reports submitted by the proponent:
- a) Assessment by a suitably qualified geotechnical professional that the proposed dewatering activity does not pose an unacceptable risk of off-site impacts such as damage to surrounding buildings or infrastructure as a result of differential sediment compaction and surface settlement during and following pumping of groundwater.
  - b) Settlement monitoring activities to be undertaken prior to, during and for the required period of time following the dewatering pumping to confirm the impact predictions.
  - c) Locations of settlement monitoring points, and schedules of measurement.

#### **Formal Application Issues**

- 9. An application must be completed on the prescribed form for the specific purpose of temporary construction dewatering and a licence obtained from the NSW Office of Water prior to the installation of the groundwater extraction works. A plan drawn to scale will be required with the application clearly identifying the location of the dewatering installations.
- 10. Upon receipt of a Consent from the Department of Planning and prior to commencement of work, a fully completed licence application form is to be formally lodged with the Office of Water (accompanied by documentation clearly explaining the means by which the below-ground areas of the development will be designed and constructed to prevent any groundwater seepage inflows; and therefore preclude any need for permanent or semi-permanent pumping). Based on the licence application assessment meeting the Office of waters statutory requirements, the NSW Office of Water will then be in a position to issue a Water Licence under Part 5 of the *Water Act 1912*.
- 11. A licence application under Part 5 of the *Water Act 1912* must be accompanied by a \$151.00 fee and must specify the proposed volume of groundwater to be pumped in total (megalitres). The licence is also subject to administrative charges as determined from time to time by the Independent Pricing and Regulatory Tribunal (IPART).

**End Attachment B**  
**11 March 2011**