



## Office of Water

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Our ref: ER20956  
File: 9053181  
Your ref: MP09\_0210

**Attention: Amy Watson**

Dear Mr Woodland

**Subject: MP09\_0210 – St Leonards Commerce Centre – 88 Christie Street, St Leonards -  
Environmental Assessment – Lane Cove local government area**

I refer to your letter of 1 August 2010 seeking comment from the NSW Office of Water (NOW) on the Environmental Assessment (EA) for the above major project.

NOW's key issues with the EA are in relation to groundwater and are outlined in Attachment A, recommended conditions of approval are provided at Attachment B.

**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

### St Leonards Commerce Centre – 88 Christie Street, St Leonards - Environmental Assessment

#### Groundwater

The Office of Water (NOW) notes the proposal will include a 7 level basement underground car park and it will penetrate the groundwater table. It is also noted:

- contaminants from adjacent land activities can potentially pose a risk (Section 2.1.4 of Appendix J).
- the proposed new development will require dewatering (Appendix J, page 3) and
- the quality of the groundwater is unknown at the time of writing the Geotechnical and Groundwater Desktop Study (Appendix K, page 6).

If the basement excavation intercepts or uses groundwater a licence under Part 5 of the *Water Act 1912* may be required from the NSW Office of Water (NOW), pending further information on the magnitude of groundwater inflows and the degree of contamination of the groundwater.

NOW's proposed 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 based on the information provided to date.

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

**End Attachment A**  
**3 August 2010**

**NSW Office of Water Recommended Conditions of Approval**  
**St Leonards Commerce Centre – 88 Christie Street, St Leonards**

**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 a fully completed licence application form, unambiguous documentation of 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), together with all other required supporting information, the NSW Office of Water will 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**  
**3 August 2010**