



Office of Water

Date 9 February 2011

Mr Simon Bennett
Major Development Assessments
Department of Planning
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Our ref : ER21081
Your ref: MP10_0075 & MP10_0078

Attention: Ruth Allen

Dear Mr Bennett

**MP10_0075 & MP10_0078 – North Penrith Defence Site – State Significant Site
Concept Plan and Stage 1 project – - Environmental Assessment – Penrith LGA**

I refer to your letter of 10 December 2010 seeking comments from the NSW Office of Water (NOW) on the Environmental Assessment (EA) for the above major project proposal.

The NOW would like to meet with the Department of Planning to discuss water quantity, water quality and water management issues associated with this proposal prior to project approval being granted.

The Environmental Assessment (EA) does not provide sufficient details on the water balance for the site, proposed water use and water supply options for filling and topping up the proposed central canal. It is not clear if the proposal intends to use surface water or groundwater as a water supply option. Given there are surface water and groundwater embargoes in place (there is an embargo on the Hawkesbury-Nepean surface water system and the site is located within the Hawkesbury Alluvials Groundwater Source embargo area which prevents any further applications for licences being made under Part 5 of the Water Act 1912), the NOW has major concerns with the proposed water features associated with the North Penrith development.

Attachment A provides the NOW's detailed comments on the project proposal.

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

North Penrith Defence Site – State Significant Site Concept Plan and Stage 1 project – - Environmental Assessment

The NSW Office of Water (NOW) would like to meet with the Department of Planning to discuss water quantity, water quality and water management issues associated with this proposal prior to project approval being granted.

The NOW has major concerns with the proposed water features (the central canal and wetland) associated with the North Penrith Defence development. The Environmental Assessment (EA) does not provide sufficient details on the water balance, proposed water use and water supply options at the site and the NOW requires further details.

The proposed canal is a concern, given it would have a storage capacity of approximately 18 ML; it is not clear if the proposal intends to use groundwater or surface water as a water supply option to assist in filling and topping up the canal; and there are current embargoes in place for both surface water and groundwater use:

- The site is located within the Hawkesbury Alluvials Groundwater Source embargo area and the embargo prevents any further applications for licences being made under Part 5 of the Water Act 1912 (note there are some exemptions under the embargo);
- the Hawkesbury-Nepean surface water system is embargoed and no additional entitlement is permitted within this catchment. The proposed development would be unable to obtain any new water entitlements directly and will have to enter the water trading market to seek additional water. Therefore, there can be no guarantees of obtaining additional water via this mechanism.

Under the Farm Dams Policy a water licence would be required to be obtained from the NOW for the proposed central canal and wetland.

Sections 8 the Drainage, Stormwater and Groundwater Report indicates that even during more extended dry periods it is intended to provide a minimum depth of water of 0.9 m to maintain the aesthetic appeal of the canal. The report outlines "*the preferred source for supply water for re-circulation and topping up of the canal is the deep water zone of the constructed wetland*" (page 41). The report indicates "*the daily water balance established that a water level of 0.9 m within the canal could be maintained approximately 80 % of the time for the modelled period (ie 1998-2005)*" and recommends additional water balance modelling be undertaken during detailed design. The report also recommends that the revised water balance modelling consider the potential to use alternative water supplies during dry times to top up the canal but the report does not identify if these "alternative water supplies" are intending to use surface water or groundwater supplies (see page 41). NOW recommends additional water balance modelling is undertaken.

It is not clear if groundwater is proposed to be used as part of the development proposal, for example:

- Section 8.11.2 of the EA indicates that *"in the event that groundwater is to be extracted and used on the site, a further groundwater assessment will need to be undertaken to verify the suitability of the water for use"*. This statement implies groundwater could potentially be used as part of the development.
- The Concept Plan Statement of Commitments includes commitment No. 40 which states *"in the event groundwater extraction is envisaged for any purpose, then further groundwater assessment will be undertaken to verify the suitability of the groundwater for the specific use"*. This statement also implies groundwater could potentially be intended to be used as part of the development.
- Section 2 of the Geotechnique Geotechnical and Groundwater Assessment report states *"the development has no requirement for extraction of groundwater"*. This statement implies the development is not intending to use groundwater as a water supply.

If there is any possibility of the development using groundwater, the applicant needs to advise the NOW before project approval is granted because of the Hawkesbury Alluvials Groundwater Source embargo. This also applies if the applicant is proposing to use surface water as a water supply source (ie sourcing water from Boundary Creek etc), due to the Hawkesbury-Nepean surface water embargo.

In addition to the water supply and use issues associated with the proposal, the development should not impact on the Nepean River system or Boundary Creek. The Nepean River is a river system under stress and the development should not prevent natural runoff from the site from entering the river system. Generally, urban development trebles runoff so a third of runoff should still enter the river system.

The Drainage, Stormwater and Groundwater Report indicates the constructed wetland will control outflows from the development to two existing drainage outlets that link the site with Boundary Creek. Boundary Creek is already unstable and outflows from the development should not adversely impact the stability of this creek.

The NOW recommends maintaining a freeboard between the invert of the canal and the groundwater level of 2 metres.

**End Attachment A
9 February 2011**