



Office of Water

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Our ref : ER20860
Your ref: MP10_0014 & CP10_0033

Attention: Kane Winwood

Dear Mr Reed

**MP10_0014 & CP10_0033 – Badgerys Creek Quarry project - Environmental
Assessment – Liverpool Local Government Area**

Thank you for your letter of 29 October 2010 seeking comment from the NSW Office of Water (NOW) on the Environmental Assessment (EA) for the above major project proposal.

The NOW's key issues with the EA are outlined in Attachment A.

Contact Details

Should you have any queries in relation to this matter please contact Janne Grose on telephone (02) 4729 8262.

Yours sincerely

Mark Mignanelli
Manager Major Projects and Assessment

NSW Office of Water Comments

Badgerys Creek Quarry project Environmental Assessment

Riparian land

Clarification is required on the minimum riparian setbacks that are proposed to be established along Badgerys Creek, Badgerys Creek Tributary and South Creek as the EA documents include inconsistent references to the riparian setback widths, for example:

- Section 17.3.1 of the EA indicates a 50 m buffer around Badgerys Creek and South Creek would be maintained and rehabilitated as part of the proposal (page 124) but Section 2.1 of the Rehabilitation Plan (Appendix D, page 3) only refers to a 30 m creek buffer along Badgerys Creek and drainage lines instead of a minimum riparian area of 50 m, while Sections 8.7 and 8.8 of the Rehabilitation Plan indicate Boral would *"fence the eastern side of South Creek (50 m from the creek bed) to allow natural regeneration"* and the *"eastern boundary of Badgerys Creek for an area in the order of 30 m from the upper bank of the creek"* (pages 28 and 29).
- Section 17.4 of the EA includes a mitigation measure that a 50 m buffer area should be provided along Badgerys Creek and the Badgerys Creek tributary but does not include a 50 m buffer area along South Creek.
- Table 64 includes a mitigation measure under the issue of ecology for a 50 m buffer area along Badgerys Creek and the Badgerys Creek Tributary but does not refer to a 50 m buffer along South Creek (page 147).
- Table 65 includes a Statement of Commitment under the issue of ecology a commitment for a 50 m buffer area to be provided along Badgerys Creek and the Badgerys Creek Tributary but a commitment has not been included for the rehabilitation of a 50 m wide riparian zone along South Creek (page 151).

The NOW recommends a minimum 50 m wide riparian setback (measured from top of bank) is established along Badgerys Creek, Badgerys Creek tributary and South Creek. The riparian areas along these creeks should be rehabilitated with native riparian vegetation endemic to the local vegetation community.

Groundwater

Buffer setbacks

Section 11.6.1 of the EA states that *"a buffer zone would be implemented to ensure the alluvial aquifers are not disturbed by the development"* and *"the extent of the buffer zone would be established in consultation with the Director-General of the DoP and the NOW."* In accordance with this section of the EA the buffer zone extent should be determined in consultation with NOW.

The EA infers a 200 m wide buffer setback is to be established along South Creek and a 50 m wide buffer is to be established along Badgerys Creek to minimise the impacts upon the alluvial aquifer.

Section 11.1.3 of the EA outlines that groundwater within the alluvial sediments adjacent to South Creek has been identified up to 200 metres from the current alignment of South Creek.

Table 64 in the EA includes a mitigation measure for the establishment of a 50 m buffer zone adjacent to Badgerys Creek to minimise the impacts upon the alluvial aquifer (page 145) but this is not consistent with Section 3.2.5 of the Rehabilitation Plan (Appendix D, page 9) which outlines that *"the Pit 5 development in the west is to be no closer than 200 m to Badgerys Creek to ensure no disturbance of the creek and to allow room for safety bunding and fencing as part of the rehabilitation of the final void in this area"*. As the Rehabilitation Plan outlines that a 200 m wide setback should be established adjacent to Badgerys Creek and Table 64 only includes a 50 m buffer zone, the NOW recommends as a minimum a 100 m buffer should be established along Badgerys Creek.

Once the Alluvial Aquifer Assessment has been completed, the buffer setback distances along the creeks may need to be increased by NOW. The setbacks established by NOW can only be varied on demonstration to NOW's satisfaction that the proposal will not affect baseflows within the alluvium associated with either creek or groundwater dependent ecosystems.

Groundwater Monitoring Wells:

Section 11.6.1 of the EA indicates six groundwater monitoring wells would be installed within the alluvial sediments comprising four wells adjacent to South Creek and two wells adjacent to Badgerys Creek. The NOW recommends three wells are installed within the alluvial sediments adjacent to Badgerys Creek rather than only two wells.

Section 11.6.1 of the EA also indicates that two additional groundwater monitoring wells would be installed into the Bringelly Shale to a maximum depth of 35 metres. The NOW recommends three wells are installed into the Bringelly Shale – Bedrock Aquifer to a depth of 35 m rather than only two wells.

In addition to the above wells, the NOW recommends another three monitoring wells need to be installed as part of the groundwater monitoring program to a depth of 60 m.

Statement of Commitments

Statement of Commitment (12) needs to be amended (see page 150 of the EA). The NOW reiterates that the results of the Groundwater Monitoring program also need to be reported to the NOW.

The Alluvial Aquifer Assessment needs to commence within 12 months of the project proposal approval.

The Groundwater Monitoring needs to commence within 12 months of the project proposal approval.

Water Licence requirements

Section 5.2.3 of the EA indicates that the purpose of the on-site pits (dams) is solely for the capture, containment and reticulation of drainage to prevent contamination of

Badgerys Creek (page 37). However, once the quarry operations are completed, the applicant needs to be advised that if the water in the pits/dams is to be used in the brick making process or for reuse at other premises offsite etc, the NOW would require a licence to be obtained for the dams and the use of water.

End Attachment A
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