

WRC Consents – S42A Questions of Clarification

- 1) Dr Jenny Webster-Brown critiques section 4.2 of Appendix S to the AEE. The matter addressed is the potential leaching from overburden used to backfill underground workings and voids. Given the depth of these workings I presume the only issue of concern is the potential effect on groundwater that may find its way into the pit once refilling commences. Is that correct?

The potential effects on groundwater do certainly include trace elements leached from the backfill finding their way into the future pit lake, but these trace elements would also enter the surrounding groundwater, i.e. the lower and upper aquifers. The quality of the groundwater aquifers is a key consideration for future use of the groundwater and because this groundwater will ultimately feed into streams and rivers of this area.

- 2) What are the worst case implications of Dr Webster-Brown's concerns on pit lake water quality?

The worst case scenario is that trace elements from backfill leach first into the groundwater and then into the pit-lake, during the filling of this lake. This will degrade the water quality of the lake, limiting what this lake can be used for, and its ability to support a healthy ecosystem. Additionally if the lake is near full then any discharge from the lake may also impact on the water quality of the Mangatoeotoe Stream, although this scenario is considered to be less likely.

The applicant has provided information on how it will address the mobility of trace elements under acidic conditions (i.e., with the addition of lime). However, the issue that also needs to be considered is the mobility of some trace elements under neutral conditions, and how this will be monitored and assessed. Following on from this, if leaching is detected, how this will be effectively addressed?

These concerns relate to ensuring that the consent conditions are sufficiently robust to identify any mobility of trace elements at an early stage. If found, a process to address this and limit further mobility needs to be implemented to protect the groundwater aquifers.

3) Was a review report provided by Dr Ngaire Phipps of Streamlined Environmental Ltd, and if so may we have a copy of it?

No final review document was provided by Dr Philips. However, Dr Philip is in the process of considering the applicant's and submitter's evidence and she will provide this at the hearing.

4) Does Appendix E contain all of the new and amended conditions discussed and recommended in the body of the WRC S42A report?

No. The body of the S42A report recommended some additional consent conditions e.g. A Riparian Plan condition was recommended but no suggested wording was provided in the recommended consent conditions.

A set of amended conditions taking into account the applicants comments will be provided to the Committee at the start of the hearing.