

Chris Simpson – Groundwater

Key Points for Hearing

- The nature of the geology and hydrogeology in the Waihi area means the potential for effects to develop in the near surface from dewatering the deep rockmass are self-limiting. This is because the shallow groundwater system is contained like a bathtub, perched in a former valley that overlies the deep groundwater system.
- Historic mining in the 1900's has previously been undertaken to a similar depth to that proposed by OGL and, as such, the effects of this dewatering have already been experienced in Waihi in the past.
- Since modern mining began in the 1989, dewatering of the deep rockmass has been ongoing and is presently controlled at around 725 mRL (i.e. some 275 m below ground level) and, similarly, the effects of deep dewatering on the shallow groundwater system has already occurred. 30 years of monitoring this dewatering has reinforced the limited effects that can develop in the shallow groundwater system from deep dewatering.
- My assessment of the effects of the proposed dewatering has indicated no significant changes compared to that already occurring due to current mine dewatering. This assessment has indicated a nominal broadening of the extent of dewatering in the deep rockmass with little consequential change in the shallow groundwater system. It is proposed that additional groundwater monitoring will be undertaken to encompass this broadening.
- Due to the containment of the shallow groundwater system, the potential effects on surface waters and shallow groundwater levels from the proposed dewatering are considered less than minor. Similarly, as most of the water bores in the area tap the shallow groundwater system, the potential for effects on those groundwater users is considered less than minor.
- A small extension to the monitoring/management plan would ensure ongoing close surveillance of groundwater response as mining advances.