Lachlan Valley Water Inc
ABN 38 597 032 631
Sustainable, productive and efficient water use in the Lachlan Valley

Submission on

Cowal Gold Operations Open Pit Continuation SSD-42917792

July 2023

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Cowal Gold Operations Open Pit Continuation

Submission on Development Consent

Introduction

Lachlan Valley Water (LVW) is the valley-based industry organisation representing surface water and groundwater users in the Lachlan and Belubula valleys. Our members include irrigators, stock and domestic water users, other industries including mining, landholders exercising basic land rights and all categories of licences except for those held by environmental water managers.

This submission is lodged following a meeting with the Bland Creek Paleochannel landholders, who attended a presentation from EMM Consulting in March 2023 in relation to the Open Pit Continuation Process and have recently met again to review the Environmental Impact Statement and assess the impacts that the project may have on their properties and groundwater reliability.
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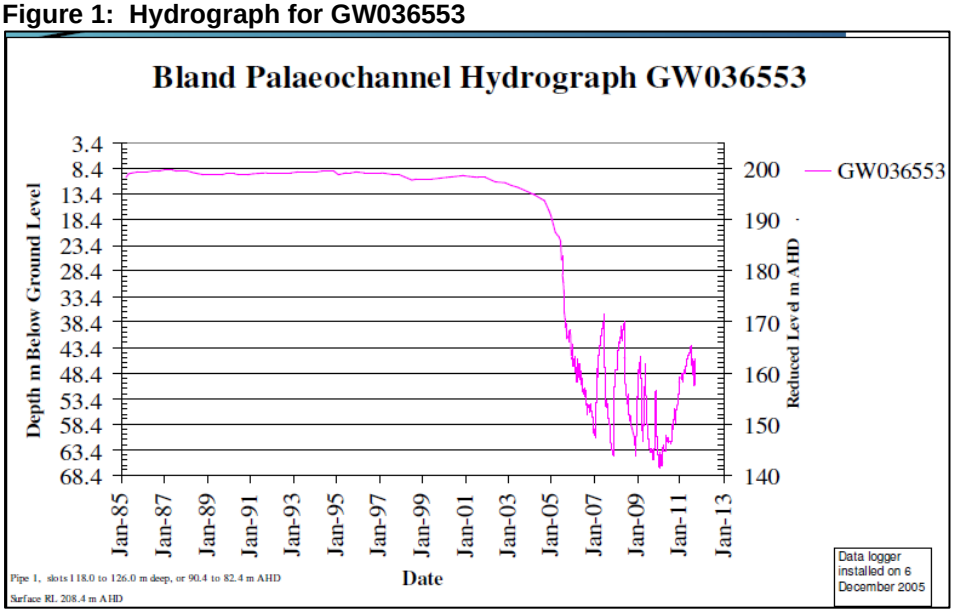
Impact on groundwater access

The Cowal Gold Mine is seen as a project of regional importance, but a primary concern for local licence holders, who also access water from the Bland Creek Palaeochannel (BPC) is that there should be no increased impact on their access to groundwater from the BPC as a result of the extended operation of the mine, so this is the priority of this submission.

<u>Background</u>
The mine (then owned by Barrick Gold) started operating in 2005 and the groundwater pumping had a rapid impact on the water level within the Bland Creek Palaeochannel, when water levels dropped steeply, as illustrated in Figure 1 below. The Appendix H: Groundwater Impact Assessment of the EIS, Figure 3.7 shows that the volume abstracted by Cowal Gold from the BPC increased to 4.3 ML/day in 2005 and just under 9 ML/day in 2006.

Figure 1: Hydrograph for GW036553



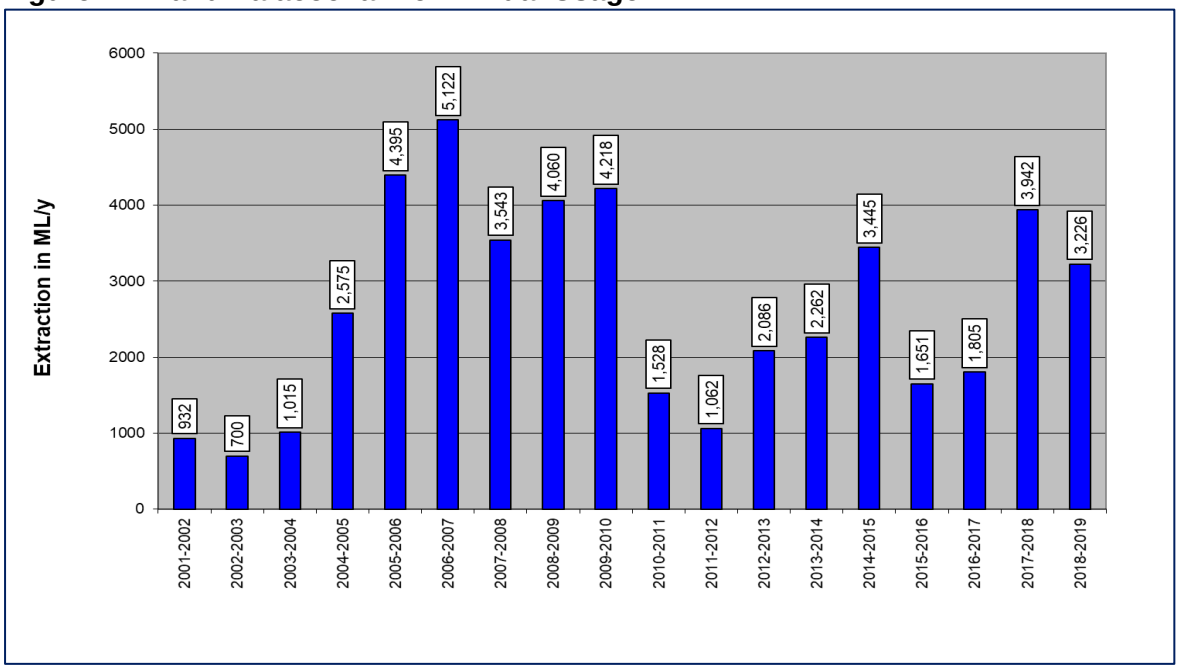
This drawdown and the impact on water availability led to engagement during 2006 and 2007 between local landholders, Barrick Gold and the Department of Water and Energy, which resulted in the establishment of trigger levels for the monitoring bores GW036553, GW036597 and GW036611. These trigger levels have since been complied with by landholders and Evolution Mining, and LVW acknowledges that the groundwater levels in monitoring bore GW036553 remain above the investigation and trigger levels.

However, the NSW Department of Planning and Environment has also implemented a Departmental policy that the maximum allowable drawdown should be 40% of Total Available Drawdown (TAD) in order to manage sustainable groundwater availability. The actual trigger levels in monitoring bores GW036553, GW036597 and GW036611 are between 50% - 60% of TAD, and were negotiated between licence holders and the Department. This indicates that there may be additional impacts on groundwater sustainability as a result of more drawdown.

Possible Impact

While Appendix H, ES4 notes that there will be continued review of groundwater levels at the trigger monitoring bores and continued model validation by comparison with actual groundwater level data and measured drawdown, it should also be acknowledged that with the Bureau of Meteorology and CSIRO forecasting longer, drier weather sequences, and also severe rain events, there is the potential for increased demand for groundwater in very dry years. The Lachlan experienced severe drought from 2003 – 2010, and again from 2017/18 to 2019/20 with an increased demand for groundwater peaking at 97,036 ML in 2019/20 (refer Upper Lachlan usage).

Figure 2. Bland Palaeochannel Annual Usage



The total licenced entitlement for the Upper Lachlan Alluvial Groundwater area (Zones 1 – 8) is 175,605 ML, plus there are 6,280 ML of basic landholder rights, which do not require a licence. While the usage limit is 94,168 ML, (p13, Appendix H), this includes the 6,280 ML of basic landholder rights, which are assumed to be used every year, therefore the usage limit for licensed entitlement is 87,888 ML, or 50% of the actual licence entitlement. While the Evolution Mining licence WAL 31864 currently allows 3350 ML/year to be pumped from Upper Lachlan Zone 7, and in conjunction with other licences, WAL 36569 and WAL 36615 which are linked to saline groundwater, this allows extraction of 4016 ML, the reality is that in severe dry conditions if there is a consistent increase in usage across the entire Upper Lachlan Alluvial Groundwater, the allowable access could be reduced to less than 1 ML/share in order to manage compliance with the usage limit.

Like any licence holder, Evolution is entitled to use their licenced entitlement in accordance with the licence conditions, however, we note that a daily demand for water is likely to have a different impact on groundwater levels and on neighbouring bores, than the more seasonal type of demand that is typical of agriculture, and that this should be taken into account in managing pumping schedules.

Consequently, other local licence holders have asked that the *Water Management Plan* for Evolution Mining be reviewed to prioritise access to surface water over access to the Bland Creek Palaeochannel.

Recommendation 1

a. We request that Evolution Mining Limited be required to prioritise access to saline ground water and surface water ahead of Bland Creek Palaeochannel water.

b. We also note that 300 ML of the original 3650 ML groundwater licence has been converted to an Eastern Saline Borefield licence. It is therefore important to ensure that there cannot be trades which allow the conversion of a saline groundwater supply to a freshwater palaeochannel licence.

Groundwater monitoring

The EIS notes that it is unlikely there will be more than 2m drawdown on neighbouring third-party bores. However, the response of groundwater levels to pumping is generally more uncertain than surface water, and the EIS acknowledges there is uncertainty within the system, and notes that the groundwater model will be reviewed in the second year of mining and recalibrated if necessary.

Recommendation 2

We request that the groundwater monitoring information should be made publicly available, to help identify any unforeseen impacts which may affect neighbouring landowners.

Lake Cowal Bund

Some landowners have also expressed concern that the Lake Protection Bund will displace about 4,000 ML of water in Lake Cowal, and effectively increase the lake level by around 15mm. While this may not be considered a significant increase, when combined with heavy rainfall and severe flooding as experienced in the Lachlan in 2022, there can be an impact on neighbouring properties and additional flooding that may not previously have occurred. Farmers in the Lake Cowal region are concerned about the potential impacts on their properties and seek further discussion with Evolution Mining about how this could be managed.

Recommendation 3

We request that neighbouring landowners.be consulted by Evolution Mining about the potential impacts of the lake protection bund and what can be undertaken to mitigate this.

Please do not hesitate to contact me if you require any further information on this submission.

Mary Ewing
Policy Officer, Lachlan Valley Water