BROKEN HILL OPERATIONS PTY LTD ABN 58 054 920 893

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24 November 2021

Mr. Steve O'Donoghue
Director Resource Assessments
Department of Planning Industry and Environment
GPO Box 39
Sydney NSW 2001

Re: 07_0018-Mod 09 Rasp Mine Modification 9 - Submissions Report

Dear Steve,

1. Introduction

I refer to your letter to CBH Resources (Broken Hill Operations – or BHO) dated 27 September 2021 requesting responses to issues raised in advice from NSW Government agencies. Notably there was also one specific request for further information from the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR). This letter summarises the issues raised and provides responses from BHO.

This report summarises the issues raised, provides a commensurate response and has been prepared in accordance with State significant development guidelines – preparing a submissions report (DPIE 2021).

2. Summary of MOD9 proposal

On 24 June 2021 BHO submitted a modification application 07_0018 MOD9 under Section 4.55(1A) of the Environmental Planning & Assessment Act 1979. The proposed modification involves;

- extending underground exploration and development in the Main Lode Blocks 13 to 15 areas, located within the project's CML7 Mining Lease; and
- installing an emergency egress ladder way from the project's Stockpile 1 (SP1) underground to the surface.

3. Submission analysis

Advice was received from four NSW Government agencies and one local government authority. Notably there was one request for further information from the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR)

The advice and submissions received have been placed on the DPIE Major Projects Portal at: http://mpweb.planningportal.nsw.gov.au/major-projects/project/42236

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4. Summary of submissions and responses

4.1. Mining, Exploration and Geoscience

Comment: MEG has reviewed the information supplied and raises no issues regarding the Modification.

Response: BHO notes no issues raised.

4.2. Resources Regulator

Comment: There are limited implications with regards to mine rehabilitation, and as such has no comment with its role in relation to the regulation of matters under the Mining Act 1992. However, the Resources Regulator requests an opportunity to review any amended or additional documentation lodged by the proponent that affects rehabilitation outcomes.

Regulatory requirements if approved:

The proponent will be required to comply with rehabilitation requirements under the mining authorisations prior to the commencement of the works associated with the proposal.

Response: BHO agrees there are limited implications regarding mine rehabilitation and will comply with rehabilitation requirements.

4.3. NSW EPA

Comment: Based on the information provided there are no predicted additional environmental impacts from the proposed modification activities and the proposal will not require a variation to Environment Protection Licence.

Response: BHO notes that no variation to the EPL is required.

4.4. Broken Hill City Council

Comment: Council supports this proposed management of waste rock. Council has no objection to Modification 9.

Response: BHO acknowledges and appreciates the support from BHCC.

4.5. Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR)

Prior to project determination

Issue 1: Confirm the predicted maximum annual groundwater take from aquifer interference due to construction and operation of the proposed activities or provide justification that no groundwater is to be intercepted.

Response: The Broken Hill Operations Rasp mine Technical Services Department conducted a review of this matter and concluded the following;

No appreciable groundwater constituting a major aquifer is likely to be intersected by the MOD 9 development proposal. There are two main lines of evidence indicating

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that the area has been dewatered. Both observations are qualitative in nature and will be reassessed during development and reported if conditions change. These are:

- Observations of water inflow along the 1480 drive and
- Evidence of dewatered areas from recent Resource Diamond Drilling of the Blackwood's orebody.

Both of these lines of evidence are discussed below:

The Blackwood's development area is located above the 1480 historical drive. The 1480 historical drive represents 4.1Km and was completed in 1962. The 1480 drive is important because it forms one continuous drive from the North to the South of the lease and is located under and offset (240 to 400m) from the proposed development. The 1480 drive and the proposed development are linked through historic workings and Thompsons shaft to the 1480. The 1480 drive (where all water reports to), is linked to the Shaft 7 whereby it is pumped to surface. Water ingress into the Shaft 7 has been in decline for the last 4 years and less than 2l/s is currently making its way to shaft 7. The evidence of the lack of water within the 1480 drive indicates that the Blackwood's proposed development lies within an overall cone of depression and is dewatered.

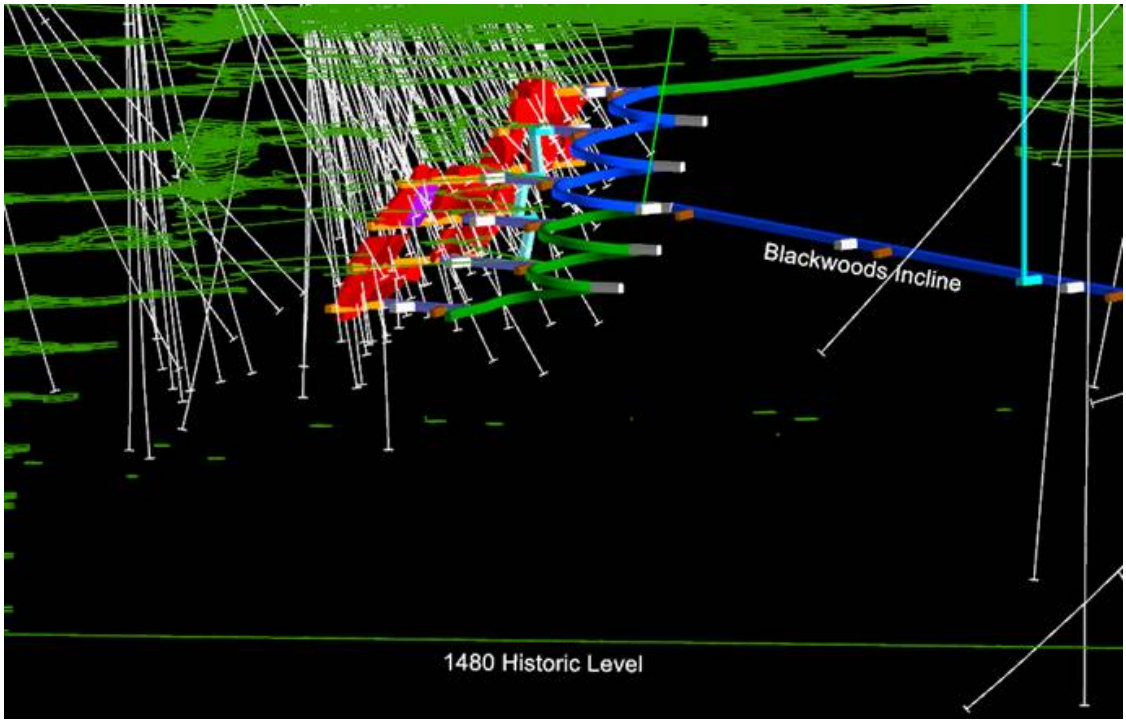

Figure 1: Section view of Blackwood's orebody and proximity to historic 1480 drive.

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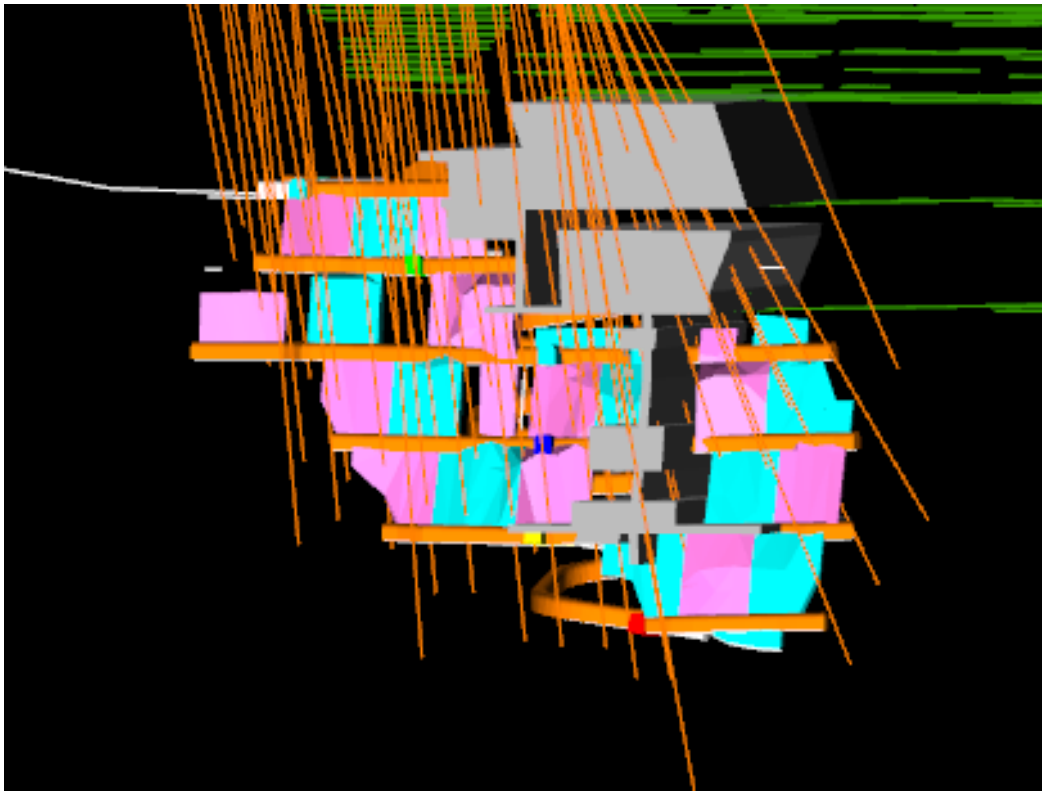

Figure 2: Diamond drilling of Blackwood's orebody

Diamond drilling within the Blackwood's deposit area indicated dry conditions due to the lack of water return noted by the Drillers. If the area was water saturated the drillers would be able to maintain water return whilst diamond drilling instead of being forced to continually replenish water stocks to assist the drilling process. The lack of water return also indicates that at least in the production area of Blackwood's that no aquifer exists. If no aquifer exists within the orebody then by it stands to reason that the development will also be predominantly dry.

There is very low likelihood of intercepting groundwater during raiseboring activities associated with the ladder way installation. The ladder way location is approximately 30m from the existing (400m) primary vent and egress shaft and there are no signs of any water in this or at the base of this shaft throughout its 10 year existence.

Issue 2: Confirm the maximum water supply demands for construction and operation.

Response:

- Raisebore water usage

Raisebore 43R Rig specifications are 500L/minute of water or 720,000L per day.

10 days of piloting 10 x 720,000L = 7,200,000L or 7.2ML. It is envisaged that approximately 50% of this water would be recirculated (conservative estimate) reducing this to ~3.6ML

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There would be no ongoing water usage for this activity following completion of the project.

- Dust suppression water spray system underground usage

30L per minute, 43,200L per day for approximately 10 days = 432,000L or 0.432ML

This would only be required for a period of drilling the pilot hole and not ongoing.

- Jumbo Development water usage

Twin Boom Jumbo uses between 1l/s and 1.5l/s per drifter (use 1.5 l/s to max out x 2 Drifters = 3.0l/s)

It takes approximately 7hrs for a Jumbo to 'drill out' a development face underground to then charge it with explosives and fire it. At 7hrs per 4m cut of development advance this (3.0l/s x 60s x 60min x7hr) = 75,600 litres per 4m cut.

Number of cuts in 1200m of development = 1200 / 4 = 300

Water usage for 300 development cuts = 300 x 75,600L = 22.68ML

This is utilising existing equipment and forms part of existing and ongoing water usage.

- Total water use for the project

Raisebore 3.6ML + Development 22.68ML + Water sprays 0.43ML = 26.71ML.

- Total water use for ongoing operations

0ML. The ladder way requires no water once installed. The development in ML Blocks 13, 14 and 15 is in addition to normal operations and hence once the project is complete there should be no additional water usage required.

Issue 3: Demonstrate the water take can be accounted for within existing water entitlements held for the project in consideration of all water take at the site. If any additional entitlement is required, an assessment of the ability to acquire this entitlement is requested.

Response: EMM consulting was engaged to conduct an independent review of the Rasp mine water balance, the results of which are detailed in Appendix A.

The independent review of the site water balance included investigation into flow meter data records and descriptions of day to day water movements provided by site operators. This review revealed that it is likely that one or more flow meters on the site are recording flows incorrectly. BHO has subsequently engaged a Duly Qualified Person to install and verify pattern approved flow meters. These installations will comply with the DPIE Non-urban water metering in NSW framework, and are expected to resolve metering errors from early 2022

The groundwater take at Rasp Mine is estimated using the water balance as:

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Groundwater take = Dewatering (pumping from underground to surface) minus Underground supply (pumping water underground for use in the mining process)

During a consultation session between BHO, EMM and DPIE Water held on 15 November 2021, this methodology was discussed and endorsed by DPIE Water representatives as appropriate given the nature of the operation and associated water balance.

In 2020, approximately half of the water removed from the underground workings via dewatering pumps was directly attributable to water taken underground for the purposes of operating underground machinery and ancillary uses such as fire water. This water was used in mining activities, collected in sumps within the excavated shafts and drives, and returned to the surface for settling in pond S22 before being recycled. The remainder of the water removed from the underground workings is attributed to groundwater inflows.

Using this methodology and factoring in potential flow meter errors, the 'best estimate' for water extraction in 2020 is approximately 260ML (with 297ML being the 'maximum' estimate).

If this utilisation was to be continued for the 2020/2021 licensing year (which it is expected to) and the works required in the proposed in Modification 9 were included, the estimated water extraction for the 202/2021 period would be approximately 287ML as a 'best estimate' or 324ML as a 'maximum estimate' which are both well within the 370ML licence limit (WAL31065).

If for some unforeseen reason and as a mitigating measure, BHO has engaged Brian Gardoll of EMM to lodge a Registration of Interest (RoI) to acquire water from the 2021 Controlled Allocation order for the Adelaide Fold Belt MDB Groundwater Source. The Order states there are 100 unit shares being made available and Rasp mine will enter a RoI for 75 units.

Post project determination

- Comment: The Water Management Plan should be updated to reflect additional water management infrastructure, monitoring, metering and management measures to report on water take and potential impacts to water sources due to the development.

  Response: The Site Water Management Plan will be updated to reflect additional water management infrastructure and reporting requirements.

- Comment: The proponent should update the water balance to measure actual water take from groundwater sources and this should include accurate metering where possible. The water balance should be used in ongoing reviews of actual versus modelled water take and impact predictions. This will be a key component to confirm impact predictions, the adequacy of mitigating measures and compliance for water take.

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Response: The water balance has been updated with assistance from EMM consultants. The water balance will be reviewed and updated again when the installation of pattern approved flow meters are installed by a Duly Qualified Person (expected December 2021). The revised and accurately monitored flow rates will be tracked against license requirements and predicted project water use.

- Comment: The proponent must report on water take at the site each year (direct and indirect) in the Annual Review. This is to include water take where a water licence is required and where an exemption applies. Where a water licence is required the water take needs to be reviewed against existing water licences.

  Response: The mine will report on water take against license requirements each year in the Annual Review.

- Comment The proponent must ensure sufficient water entitlement is held in a Water Access Licence/s (WAL) allocation account to account for the maximum predicted take for each water source prior to take occurring.

  Response: The mine will regularly review its water extraction rates in line with its Water Access Licence and where required take necessary steps to ensure sufficient water entitlement is held. This may (if required) include increasing its water allocation through purchasing another licence holders allocation on the water market.

If you have any questions or would like to discuss the matter further, please contact Joel Sulicich HSET Manager on 0427 610 774 or joelsulicich@cbhresources.com.au.

Yours sincerely

Giorgio Dall'Armi

General Manager

Broken Hill Operations Pty. Ltd.

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Appendix A – EMM Consulting review of Rasp Mine Water Balance.

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23 November 2021

Joel Sulicich
Health Safety Environment and Training Manager
CBH Resources - Rasp Mine
130 Eyre St
Broken Hill NSW
2880

Re: J210513 - Rasp Mine water balance

Dear Joel

In October 2021, Broken Hill Operations Pty Ltd (BHO) engaged EMM Consulting Pty Ltd (EMM) to independently review the Rasp Mine site water balance. The engagement took place in the context of the proposed Mine Modification 9 submission and requests from the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) for further information regarding predicted groundwater take.

This letter describes the water balance review and findings.

1 Overview of water movements

Rasp mine is located within the township Broken Hill, currently operating as an underground mine. Previous operations at the site included open cut mining, with pits now used for storing tails.

The main uses for water on site are ore processing, and operation of underground machinery. Minor uses of water include dust suppression, fire water, contractor facilities, evaporation, and vehicle washing.

Fresh water is supplied to the site from Broken Hill town water supply.

Saline groundwater is intercepted by the underground workings and pumped to the surface. This water is then used on site for ore processing, and operation of underground machinery.

Water is recycled on site. Notably, water used for the operation of underground machinery is collected in sumps, pumped to the surface, stored temporarily in ponds (primarily in 'Lochness', also known as pond S22), and then pumped back underground for operation of underground machinery.

The mine site has no external surface water catchments. Rainfall runoff within the site boundaries is captured in storm water management ponds, or in unlined depressions. Typically rainfall runoff evaporates, but it may be pumped into the mine water storage ponds when quantities are significant.

2 Data reviewed

The data described in Table 2.1 were provided to EMM for review.

Table 2.1 Data reviewed by EMM

File name	File type	Description
Rasp Water Schematic	PDF	Diagram of water storages and water movements. Included in Appendix A.
Rasp Mine Site Water Management Plan V2 June 2019	PDF	Site Water Management Plan June 2019 BHO-PLN-ENV-004
Ore Milled	Excel workbook	Daily milled tonnes from 1/1/2018 to 20/10/2021
Rasp concentrate water	Excel workbook	Tonnes of concentrate produced, and concentrate moisture content, in 2018, 2019, 2020, and first half of 2021, as totals for those periods.
Rasp site water balance v3	Excel workbook	Flow meter record summaries, including records of the actual flow meter readings, summed over the periods: 2015, 2016, 2018, 2019, 2020 first half, 2020 second half, 2021 first half
Site water flows	Excel workbook	Flow meter records, typically with daily frequency though in some cases weekly or monthly frequency for flow paths with low flow rates, for the period 2013-2021 for current and decommissioned flow paths. Records include notes describing meter maintenance, meter changes, observations to corroborate or explain the recorded data, and decommissioning dates of meters on currently unused flow paths.

3 Review process

EMM reviewed the supplied data by:

- Confirming that the recorded daily flows in the "Site water flows" workbook aligned with the flow summaries presented in "Rasp site water balance v3";
- Obtaining rainfall and evaporation data from SILO[1] for Broken Hill, to confirm the presented estimates of evaporation loss and potential rainfall runoff volumes;
- Developing a conceptual water balance diagram referencing the supplied summary data at each flow location, and using this new conceptual water balance diagram to:
  - confirm EMM's understanding of site processes with BHO staff;
  - identify balances and imbalances at storages;
  - estimate likely flow rates of unmetered flow paths by referencing upstream and downstream flows;
  - test the sensitivity of the water balance to tails seepage vs entrainment assumptions;
  - test the sensitivity of the water balance to evaporation from tails assumptions;

The conceptual water balance diagram developed during the review is presented in Appendix B with 2020 flow rates (in ML/year) recorded against each metered flow path.

[1] https://www.longpaddock.qld.gov.au/silo/

4 Water balance

4.1 Summary

A summary of the best estimate site water balance for 2020 is presented in Table 4.1. This best estimate is subject to uncertainty in some flows due to metering errors, discussed in section 4.3.

Table 4.1 Rasp mine 2020 water balance summary (ML)

Component	Source	Volume	Demand	Volume
Raw (town) water	Town water	98 (metered) *	Workshops and vehicle wash	96 (calculated from balance)
			Site services	2 (assumed)
		98		98
Process water	Town water	224 (metered) *	Entrainment - product	5 (measured)
	Groundwater	260 (calculated from balance)	Seepage and entrainment - tails	273 (calculated from balance)
	Rainfall – process ponds	0 (negligible volume)	Evaporation – process ponds	5 (calculated from climate records
	Rainfall - tails	16 (calculated from rainfall records)	Evaporation - tails	148 (calculated from climate records
			Dust suppression	69 (calculated from records of truck movements)
		500		500
Total In/Out		598		598
Underground supply recycling	Process water → S22 → Underground	236 (metered)		

Note: The total town water supply volume has been split across the process and non-process parts of this table based on meter records. The total town water supply take in 2020 was 322 ML.

4.2 Groundwater take

The groundwater take at Rasp Mine is estimated using the water balance as:

Groundwater take = Dewatering – Underground supply

In 2020, approximately half of the water removed from the underground workings via dewatering pumps was directly attributable to water taken underground for the purposes of operating underground machinery and ancillary uses such as fire water. This water was used in mining activities, collected in sumps within the excavated shafts and drives, and returned to the surface for settling in pond S22 before being recycled (Figure 4.1). The remainder of the water removed from the underground workings is attributed to groundwater inflows.

To allow the calculation of groundwater inflows, both the dewatering and underground supply pipes are metered.

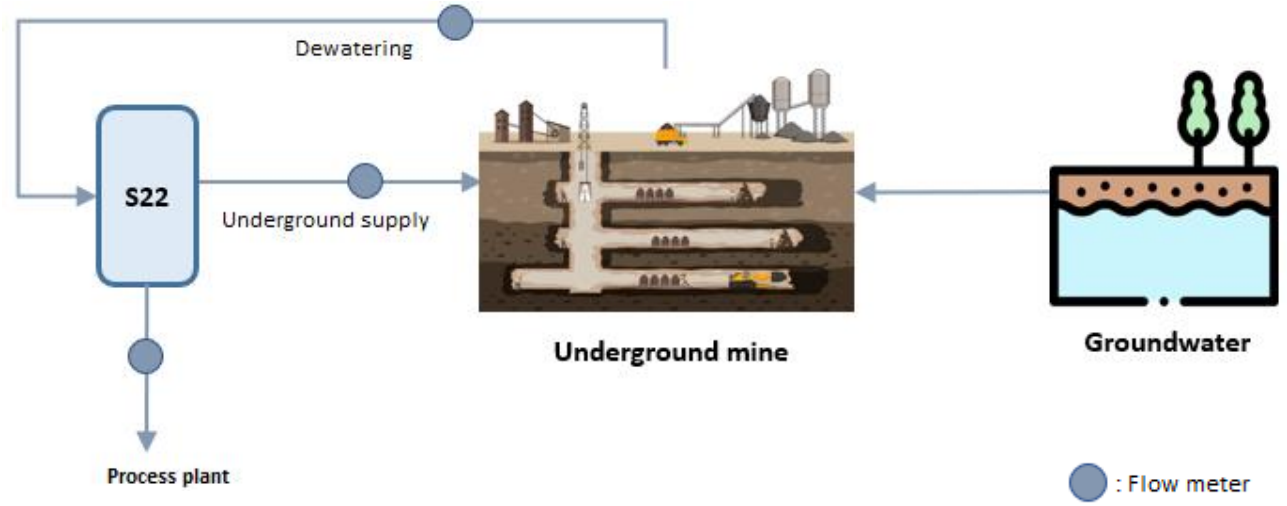


Figure 4.1 Schematic of underground water balance

The groundwater take has been trending down over the period of record analysed (2018-2021) (Figure 4.2), with volumes of water supply to underground workings and groundwater interception both reducing in proportion to the mining rate. Approximately 0.45 ML of water is supplied to the underground workings per 1 kt of ore extracted, and approximately 0.5 ML of groundwater is intercepted (Figure 4.3).

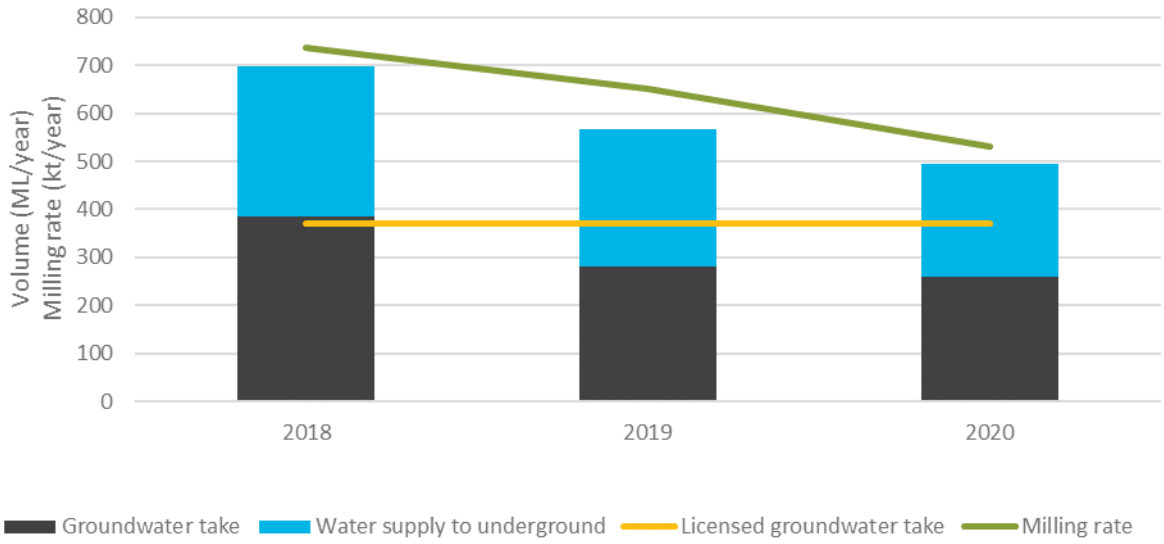


Figure 4.2 Underground dewatering

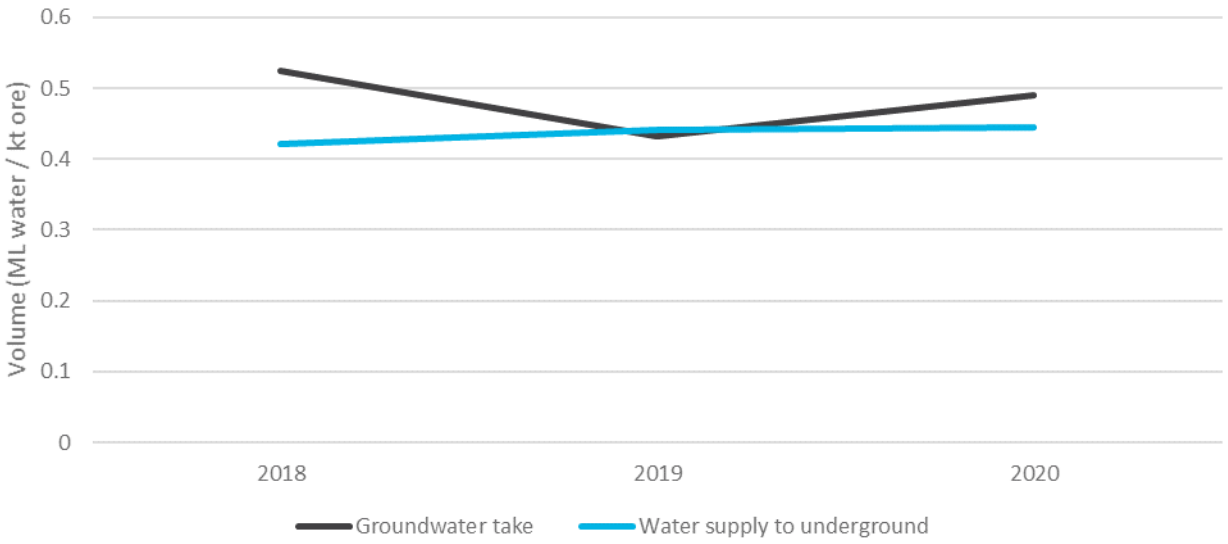


Figure 4.3 Dewatering relationship to mining rate

Data from the first half of 2021 indicate a continued trend of decreasing mining rate and reduced groundwater take. Data for 2021 were not presented in Figure 4.2 and Figure 4.3 as this review was published prior to the end of 2021, and because review of the flow in and flow out records for pond S22 revealed a volume imbalance signifying a significant metering error in the January – June 2021 data, discussed in section 4.3.1.

The proportionality of inferred groundwater inflow to mining rate could be due to interception of water-containing fractures during excavation, or due to seepage from tails which are stored in the completed Blackwoods pit which overlies the underground workings as these mechanisms for groundwater interception are each related to mining activity. Determining the exact mechanisms of groundwater inflows to the underground workings was not possible through review of site water movement records, but from the reviewed data it appears reasonable to assume that the total groundwater take will remain within the current groundwater take license limit of 370 ML/year if the mining rate remains at or below 700 kt/year.

4.3 Metering errors

Two periods with inconsistent flow data records were identified, likely caused by metering errors:

- First half of 2021: over estimation of dewatering volumes via the underground to S22 pipeline; and
- 2018 – 2021: over estimation of process water supply from S22.

Rasp mine has engaged Chris Clark of Millewa Pumping Company as a Duly Qualified Person to install and verify pattern approved flow meters. These installations will comply with the DPIE Non-urban water metering in NSW framework, and are expected to resolve metering errors from early 2022.

The identified metering errors and effects on the presented water balance data are discussed below.

4.3.1 Over estimation of dewatering volumes

As shown in Figure 4.2 and Figure 4.3, the mine dewatering rate is proportional to the mining rate. Over the assessed period the mining rate has decreased, with a proportional reduction to the rate of water supply to the underground workings (Figure 4.4). However, in the first half of 2021 flow records for dewatering via one of the two dewatering lines ('underground' dewatering) showed an unexpected flow rate increase (Figure 4.5). Flow record spreadsheets include notes which show that the flow meter was replaced at the end of 2020, and the new meter recorded higher flow rates from the time of installation (Figure 4.6).

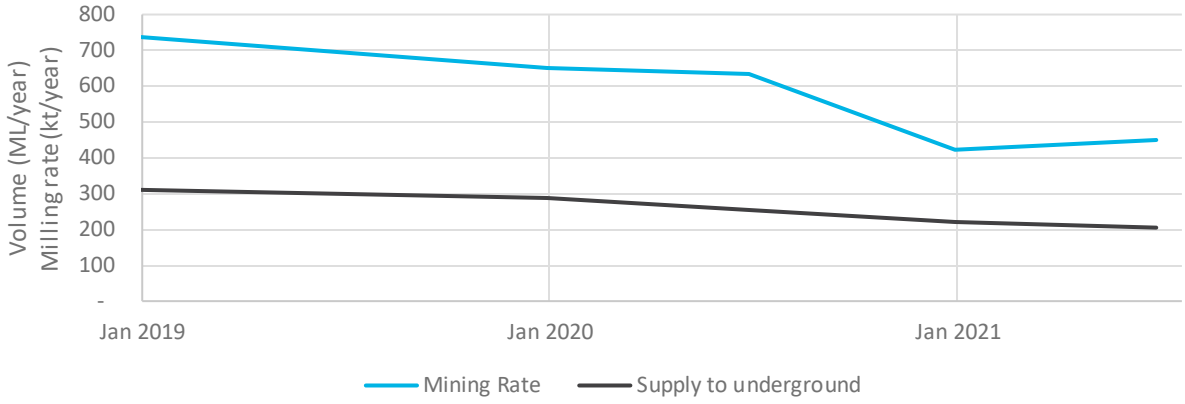
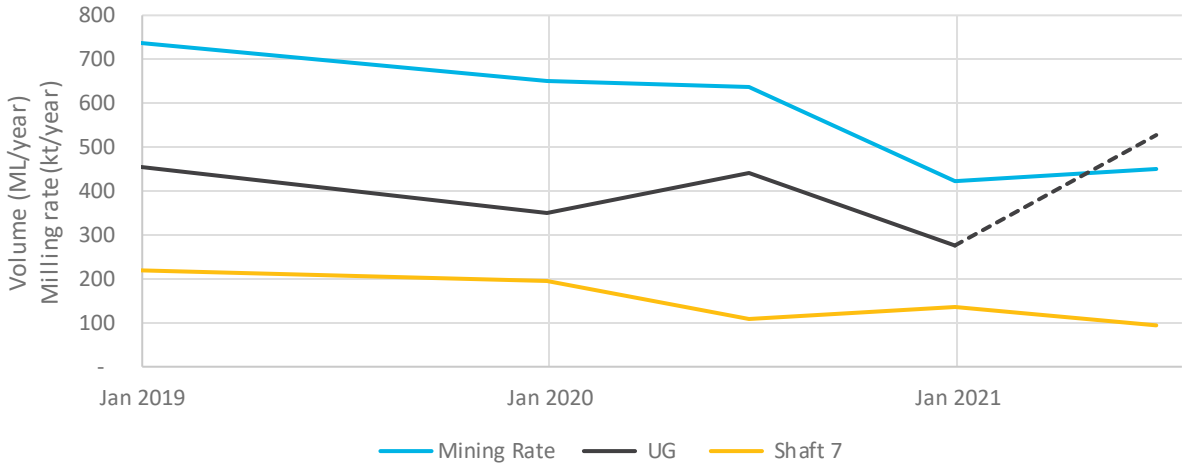
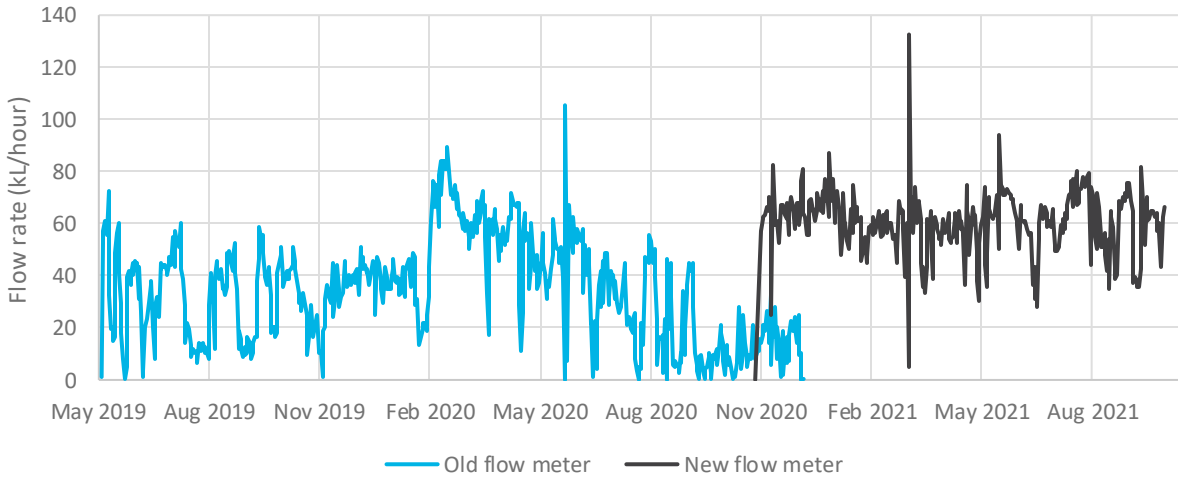


Figure 4.4 Recorded supply to underground workings



Note: Dashed line indicates data likely to be unreliable due to metering errors

Figure 4.5 Recorded dewatering rates



Note: Conflicting meter readings in November 2020 indicate a metering error

Figure 4.6 Underground dewatering meter records

The higher dewatering flow rates recorded by the new meter are not consistent with records of S22 volumes and S22 outflows; water taken from S22 to the process plant via 'Patto's' pond and for underground supply

did not increase in 2021 and so S22 would have overflowed if dewatering flow rates had increased as per the new flow meter. No overflows from S22 were observed by site operators.

The observed relationship between mining rate and dewatering over the period 2018-2020, the comparison of metering data for old and new meters, and the lack of S22 pond overflow during 2021 align with the proposition that the new flow meter for the underground dewatering was over-recording flow in 2021, and for this reason the 2021 underground dewatering and groundwater take data were not presented in section 4.2.

It would be reasonable to assume from the available data that and pre-2021 trends present in Figure 4.6 that the total dewatering for 2021 will be approximately 400 ML, and that the groundwater inflow component will be approximately 200 ML.

4.3.2 Over estimation of process water supply from S22

In each year of data assessed, the total metered volumes recorded entering pond S22 and the total metered volumes extracted from pond S22 did not balance (Table 4.2).

Table 4.2 Pond S22 water balance (ML/year)

Year	Total inflow	Total outflow	Imbalance
2018	675	745	70
2019	549	677	128
2020	480	517	37

It has been assumed that the imbalance recorded at S22 is due to metering errors on one or more inflows or outflows.

The estimate of groundwater inflow to the underground workings would not be affected if the metering error occurred when metering the offtake to the process plant via Patto's pond, or volumes used for dust suppression via water carts.

If the metering error was on the pipeline supplying water to the underground workings, the implication would be that volumes recorded as flowing through that pipeline were over-recorded. If the metering error occurred on either of the dewatering pipelines, the implication would be that recorded dewatering volumes were too low. In each of these cases, rectifying the metering would increase the estimate of groundwater take by the magnitude of the metering error.

The water balance data presented in Table 4.1 and Appendix B uses the assumption that the S22 imbalance metering error occurred on the pipe supplying water to the process plant via Patto's pond, as the volumes recorded as flowing through this pipe were in excess of plant requirements (calculated from the moisture content of tails and product leaving the plant).

If following meter verification it is found that rectifying the pond S22 imbalance results in an increased estimate of groundwater take, the revised groundwater take estimates could increase as presented in Table 4.3. The maximum estimates of groundwater take presented in Table 4.3 remain proportional to the mining rate, with an increased ratio of approximately 0.6 ML groundwater take per kt ore mined (cf Figure 4.3). At this rate, groundwater take would be expected to remain within the license limit of 370 ML/year for mining rates below 615 kt/year. The mining rate was below 615 kt/year in 2020 and is currently (November 2021) approximately 450 kt/year indicating that under the 'worst feasible case' the groundwater take is within the licence limit.

Table 4.3 Maximum effect of metering error on groundwater take estimate (ML/year)

Year	Current best estimate of groundwater take	Pond S22 imbalance	Maximum estimate of groundwater take
2018	386	70	456
2019	281	128	409
2020	260	37	297

5 Conclusion

EMM Consulting has undertaken an independent review of the Rasp mine site water balance with reference to flow meter data records and descriptions of day to day water movements provided by site operators. This review revealed that it is likely that one or more flow meters on the site are recording flows incorrectly. BHO has subsequently engaged a Duly Qualified Person to install and verify pattern approved flow meters. These installations will comply with the DPIE Non-urban water metering in NSW framework, and are expected to resolve metering errors from early 2022.

The available data indicate that the net groundwater take (calculated as 'Groundwater take = Total Dewatering – Underground supply') is proportional to the mining rate, with a best estimate of approximately 0.5 ML of groundwater taken per kt of ore mined. Metering errors introduce uncertainty to the estimate of groundwater take, with the 'worst feasible case' being 0.6 ML of groundwater taken per kt of ore mined.

The best estimate of groundwater take for 2020 is 260 ML, with an upper bound estimate of 297 ML. These rates are significantly below the current groundwater licence limit of 370 ML/year. Descriptions by the site operator of the proposed underground locations affected by Mod 9, and the probability of interception of groundwater at those locations indicates that future rates of groundwater take including Mod 9 activities are likely to be consistent with current rates of groundwater take. Future groundwater take is thus expected to remain within the license limit if the future mining rate remains similar to the current rate. It is noted that since 2018 the mining rate and groundwater take have been declining.

EMM Consulting recommends that the site water balance is revisited periodically (eg at 12 month intervals) following the installation of pattern approved flow meters to confirm that groundwater take rates follow historical trends as mine development continues.

Yours sincerely

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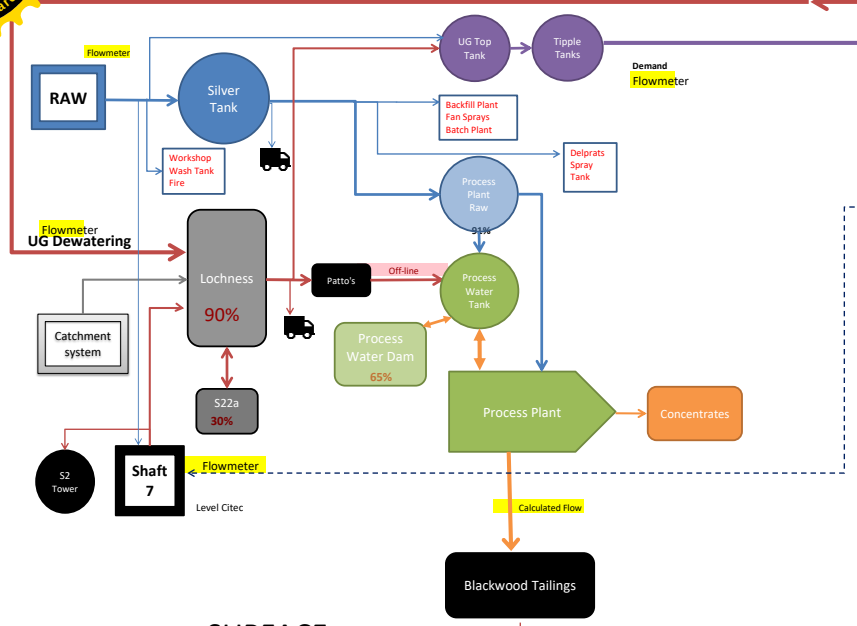
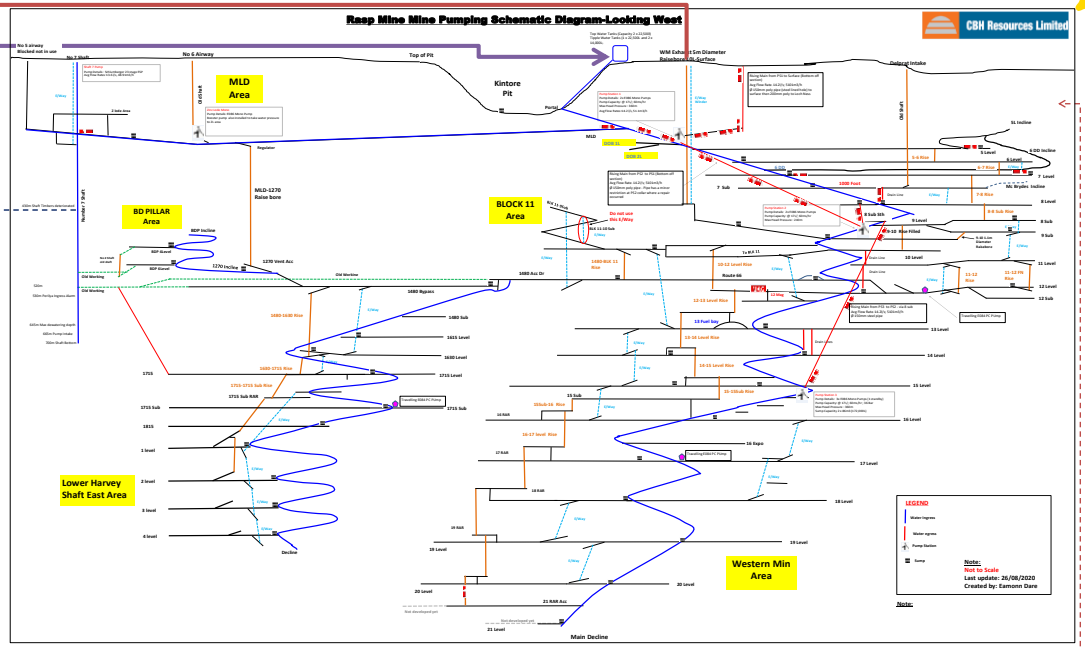
Appendix A

Rasp Water Flow Schematic (BHO)



SURFACE



UNDERGROUND

Appendix B

Rasp Water Balance Schematic (EMM)

The conceptual water balance presented in this document was developed to illustrate a high level summary of flow meter records, with a focus on estimating the groundwater inflows to the underground workings from records of dewatering and water recycling.

As discussed in section 4.3, total flow into pond S22 and total flow out of pond S22 do not balance, presumed to be due to a metering error.

The rate of seepage from tails illustrated in this appendix is considered to have low reliability as it is affected by:

- The estimate of unmetered overflow from Patto's pond, which is derived from the balance of water leaving S22 and water required by the process plant. The metering errors identified in section 4.3 could affect these flow rates.
- Estimates of evaporation from the surface of the tails.
- An assumption in this balance that no water evaporates within the process plant itself.
- The unmetered take of water for site services.
- A 'ball-park' estimate of water entrained in tails, based on professional experience without reference to in-situ testing.

Revision of any of these items would affect the presented water balance estimate of seepage, but would not affect the presented estimate of groundwater take other than as discussed in section 4.3.

The estimated rates of regional groundwater flow to the mine were not validated using groundwater modelling or by investigating aquifer properties.

: Flow meter

Start date **1/01/2020** End date 31/12/2020 366 days

Volumes in ML/year

Blue Water gains (rainfall, import)
Red Evaporative water loss
Black Water transfers

Shaft 7 121
UG Dewatering 359
Meter error adjust -
480

4.9 0.4

S22

S22a

69

Water carts

Underground supply
236

Underground mine

Process supply 207
Meter error adjust - 37
170

Pattos

Ore
3% water
Solids: 530 kt
Water: **16**

0
Infiltration

Groundwater Inflows
260
From UG balance

Regional groundwater inflow
69
Estimate from balance

Groundwater

Seepage
190
From tails balance

148 15.7

Process supply, from balance
41

Raw water
322

Workshop - carwash
96

Silver Tank

Raw water
226

Site services
2.3

Process plant
Excess water applied as overflow from Pattos

Overflow, unmeterec **130**

63% solids
Solids: 468 kt
Water: **276**

Tails (Blackwood)

Entrainment
83
Estimate from assumed water content

Entrainment

Raw water supply
Silver Tank to mill

Operations

Operations

7% water
Solids: 59 kt
Water: **5**

Concentrate