Submission No 24

IMPACTS OF THE WATER AMENDMENT (RESTORING OUR RIVERS) ACT 2023 ON NSW REGIONAL COMMUNITIES

Name: Mrs Bronwyn Wannan

Date Received: 6 April 2025

Roy Butler MP

Committee Chair

Legislative Assembly Committee on Investment, Industry and Regional Development

Parliament of New South Wales

E investmentindustry@parliament.nsw.gov.au

Parliament House, Macquarie Street, Sydney, NSW 2000, Australia

www.parliament.nsw.gov.au

Inquiry into the impacts of the Water Amendment (Restoring Our Rivers) Act 2023 on NSW regional communities

Terms of Reference

a) the social, economic and environmental impact of repealing limits to the cap on Commonwealth water purchases

b) the risks to the effective implementation of the Federal Water Amendment (Restoring Our Rivers) Act 2023 including unlicensed take of water and options to address these risks such as rules for floodplain harvesting

c) the impact of Planned Environmental Water rules on the reliability of water allocations in NSW and the Commonwealth's environmental water holdings

d) the impact of rules-based changes on the reliability of water allocations in NSW, including their impact on different water license categories

e) the effectiveness and impacts of past water reforms, including community-based water reduction adjustment programs such as the Strengthening Basin Communities program and Murray-Darling Basin Economic Development Program

f) options to improve future community-based reduction adjustment programs including next rounds of the Sustainable Communities Program

g) any other related matter.

https://www.parliament.nsw.gov.au/ladocs/inquiries/3089/Terms%20of%20reference%20for%20the%20inquiry%20into%20the%20impacts%20of%20the%20Water%20Amendment%20(Restoring%20Our%20Rivers)%20Act%202023%20on%20NSW%20regional%20communities.pdf

The Committee will look into major changes from recent federal legislation, such as

- the impact of reintroducing buybacks
- risks to achieving legislative outcomes, such as reducing unlicensed take of water
- the impact of environmental water rules and rules-based changes in NSW

- options to improve government programs aimed at offsetting the impacts of buybacks.

Dear Committee Members

I hope this submission may assist the Inquiry in achieving legislative outcomes and in particular reducing the unlicenced take of water in NSW and in turn its impact on the Basin according to the Terms of Reference and in particular (b).

This Submission will concentrate on the unlicenced take of water under Excluded Work exemptions.[1] Clause 3 of Schedule 1 of the Water Management (General) Regulation 2018 allows an exemption for landowners to construct a dam to capture, contain and recirculate drainage or effluent that would otherwise result in a water source being contaminated.

In NSW Landholders are permitted to take and use the captured water on their property without a water access licence. Not only are they permitted to take water that is contaminated they are permitted to catch water that is clean but may be contaminated.

The accumulated take of Excluded Work Exemptions is not known by the NSW Water Group or any other NSW Government agency nor is it accounted for in the Murray Darling Basin Plan.

Cumulative Impact and cumulative take of water from mines in NSW - Budget Estimates, Portfolio Committee No 2 – Health – 9 September 2024

Ms Cate Faehrmann on 9 September 2024, asked The Hon. Rose Jackson, Minister for Water, the

Ms CATE FAEHRMANN: *I've asked this before and I'm going to ask it again. Within DCCEEW Water, is there some unit within the department that looks at the cumulative impact of the cumulative take of water from mines? There's a range of different projects up for approval in terms of expansion. Central West is a critical minerals-rich area, apparently, and potentially many more mining companies will be seeking to operate. Is there a cumulative database of the water which is licensed to mines, as well as this rainfall and run-off take?*[2]

Ms Amanda Jones from the NSW Water Group responded "*The water take is looked at under our water sharing plans and the compliance for those plans, either an LTAAEL (Long Term Average Annual Extraction Limit) compliance or an SDL (Sustainable Diversion Limits) compliance, depending on where the plan is. In DCCEEW Water we have a small team who look at State-significant developments, which mining developments often are. They will be assessing those developments, not from an environmental impact perspective and not from a water quality perspective, but from a water availability perspective. On McPhillamys, for example, all of the department's advice is on the planning website. That advice is all about the volume of water not about the environmental impact assessment.*" [3] Ms Faehrmann has not received any advice regarding the cumulative take or the cumulative impact of that take from either Ms Jones or Minister Jackson.

[1] https://water.nsw.gov.au/__data/assets/pdf_file/0008/554444/excluded-work-exemption-fact-sheet.pdf
[2] Transcript - PC2 - 9 September 2024 - Budget Estimates (Jackson) - CORRECTED.pdf (Page 57)
[3] Transcript - PC2 - 9 September 2024 - Budget Estimates (Jackson) - CORRECTED.pdf (Page 58)

Water Engagement Roundup held 20 November 2024

In November 2024 a senior advisor with the NSW Water Group stated in a webinar[4] (see 30 mins into webinar) presented by Amanda Jones, Deputy Secretary Water Group, that while the impacts (of Excluded Works Exemptions) are "locally significant" on a local level but they are small on a broader valley scale. The Water Group has been unable to provide the cumulative impact of Excluded Works Exemptions.

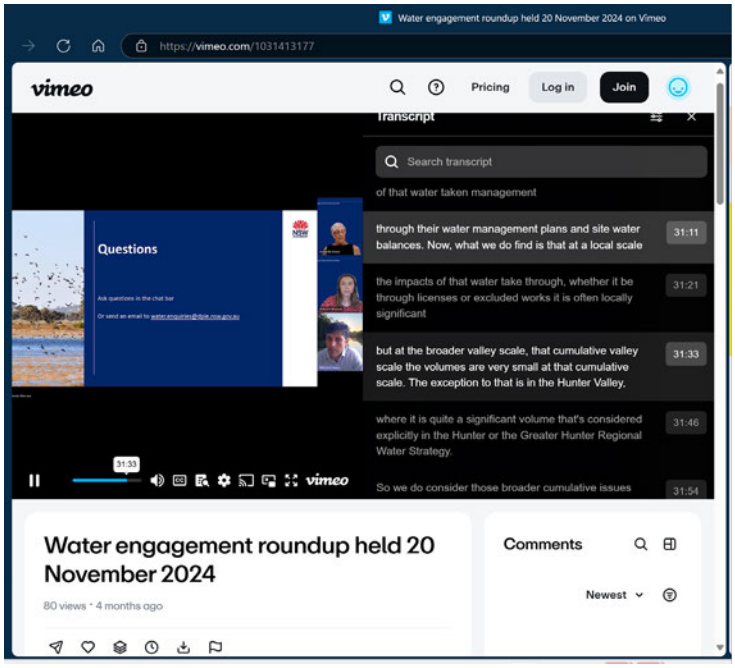

Figure 1 – Screenshot of 20 Nov 2024 webinar transcript noting response to the question regarding the cumulative impact of Excluded Works.

While the long term average annual extraction limit (LTAAEL) is considered in all other forms of water take, excluded works exemptions and the use of contaminated water is not considered.

On 27 July 2023, DPE Water, with reference MF23/1815, wrote to me and noted that *"water taken from such dams is not considered under the relevant water sharing plan".* (This letter is attached to the submission).

Please see the Submission 0115c[5] to the *Inquiry into planning system and the impacts of climate change on the environment and communities* held in November 2023 which will outline a Case Study of the Bowdens Project at Lue which proposes to source 50% of its water needs from excluded works exemptions for contaminated water.

Case Study of Bowdens Project

[4] https://water.dpie.nsw.gov.au/have-your-say/community/round-up/engagement-november-2024
[5] https://www.parliament.nsw.gov.au/lcdocs/submissions/83171/0115c%20Bronwyn%20Wannan.pdf

Bowdens plan to catch an average of 924 megalitres of rainfall and runoff each year from the site under the excluded works rules[6]. This water is unlicenced and will be used in processing of silver lead and zinc and due to its further contamination by its use will not be able to be rehabilitated and returned to the system.

Bowdens also plan to construct storage dams of 180.6 megalitres to catch rainfall and runoff for dust suppression from an adjacent property.

Bowdens claim the mine activity will increase the no flow days by 2 days per year on average.[7] During the last drought the creek ceased to flow for several months, like many creeks and rivers around the state. Bowdens used flow data from a flow gauge over 20 kilometres from the mine site in an entirely different catchment to make its assessment and cannot be relied on the provide accurate data for water flows in Lawsons Creek.

Downstream licenced and riparian water users will be impacted by less flow in the creek and the impacts on other water users and Lawsons Creek will be extreme and as stated by Mr Isaacs in the Water Group November webinar will be significant.

The Surface Water Report[8] states that there will be a 44% reduction in flows in Hawkins Creek and 11% reduction in flows in Lawsons Creek.

All water users and aquatic species will be impacted with the creek water being only suitable for livestock.

Impacts on Environment, Protected Woodland, Groundwater Dependent Ecosystems, Montain Springs and Peatlands and protected and threatened Flora and Fauna.

The Bowdens Mine will have extraordinary impacts on the environment as a result of reduced flows in all watercourses and contamination of those water courses with lead and acid. This locality contains many threatened and critically endangered species that cannot be offset including Montane Springs and Peatlands, Regent Honeyeater, Grassy Box Woodland and Koalas. Bowdens have not acknowledged the 29 springs on their site resulting in flawed assessments and modelling of impacts.

The following reports provide expert opinion on the impacts of Bowdens on the water resources of the Lawson Valley catchment.

- Surface Water Impacts, Shireen Baguley
- Groundwater Impacts, Craig Flavel
- Groundwater and aquatic ecology issues, Dr Peter Serov.

[6] https://water.nsw.gov.au/__data/assets/pdf_file/0008/554444/excluded-work-exemption-fact-sheet.pdf
[7] https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-5765%2120221222T030902.626%20GMT See Paragraphs 441-442

[8] https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2022/12/bowdens-silver/email-and-postal-public-submissions/lue-action-group/01_surface-water_shireen-baguley_february-2023.pdf Page 5

Murray Darling Basin Plan and Sustainable Diversion Limits

The Basin Plan aims to strike a balance between access to water for Basin communities, while also providing water for the environment, for the benefit of all Australians.[9]

Compliance

At its heart, the Basin Plan sets sustainable diversion limits (SDLs), which limit how much water, on average, can be used in the Basin by towns and communities, farmers, and industries, while keeping the rivers and environment healthy.

To ensure water use is within the sustainable diversion limit the MDBA is required to:

Establish and maintain a Register of the amount of water taken each year in each SDL resource unit across the Basin.

Publish 'Registers of Take' that are used to compare the annual water take to the SDLs.

In February 2025 the Murray Darling Basin Authority published the *Sustainable Diversion Limit Accounting and Reporting Framework February 2025*[10]*.* This document describes how Sustainable Diversion Limits (SDLs) are a key component of the Basin Plan and how SDLs restrict the amount of water that can be sustainably taken from the surface and groundwater resources of the Basin for use by towns and communities, industry, and farmers. They are required by the Water Act to reflect an environmentally sustainable level of take and underpin the achievement of Basin Plan outcomes, and are key to securing the outcomes sought by the Commonwealth's investment in water recovery.

It is noted that the SDLs expand on the earlier management system for limiting Basin water take, the Murray–Darling Basin Cap on Diversions which is set out in Schedule E to the Murray–Darling Basin Agreement. The Basin Plan settings have a greater geographic application (extending to all SDL resource units in the Basin) and explicitly cover all forms of water take defined in the Basin Plan:

- take from a watercourse;
- take from a regulated river;
- take by floodplain harvesting;
- take by runoff dams;
- net take by commercial plantations;
- take from groundwater; and [11]
- take under basic rights.

Permitted Take

[9] https://www.mdba.gov.au/water-use/water-limits/sustainable-diversion-limits/sustainable-diversion-limit-accounting-and

[10] https://www.mdba.gov.au/sites/default/files/publications/sustainable-diversion-limit-sdl-accounting-and-reporting-framework-2025.pdf

[11] https://www.mdba.gov.au/sites/default/files/publications/sustainable-diversion-limit-sdl-accounting-and-reporting-framework-2025.pdf (Page 17)

In general terms, lawful access to Basin water resources is granted through frameworks based around several fundamental arrangements.

These include:

- volumetric allocations against water entitlements/licences/shares
- access to allocation volumes carried over from previous water years
- trade of annual allocations between SDL resource units
- rights to take surface water or groundwater
- rights to capture flows in runoff dams for domestic and stock purposes
- rights to intercept surface water through introduction of commercial plantations
- rights to harvest overland flows (including floodplain harvesting).

Therefore, an estimate of water lawfully accessible for take includes all forms of water take used for consumptive purposes as defined in the Basin Plan.

This list of water available by *Permitted Take* does not include Contaminated Water caught under Excluded Works Exemptions[12].

Analysis of recent approvals and current applications of projects in NSW taking advantage of licencing exemptions for Excluded Works

Appendix 1 is an *Analysis of recent approvals and current applications of projects in NSW taking advantage of licencing exemptions for Excluded Works.* This short analysis of 5 projects in the Central West reveals that 12,717 ML or 12.7 GL will be taken on average every year and outlines several mining projects in NSW that intend to use "Excluded Works" exemptions to provide a substantial percentage of their water needs, with cumulative water take in NSW not being assessed by either the Department of Planning Infrastructure and Housing or the NSW Water Group. These few mining projects are not the only State Significant Developments taking advantage of this rule and the Water Group should be required to include this take in the Murray Darling Basin Plan.

The current NSW Government policy, backed by the lobby group, the NSW Minerals Council, of promoting of Metal Mining in NSW is encouraging the NSW Department of Planning, Housing and Infrastructure to recommend State Significant Developments that do not have sufficient licenced water to operate and will therefore take from licenced users as well as riparian users and environmental users. Many of these projects have a condition that states they must modify their operations to available water. For example the Recommended Conditions prepared by the NSW Government Department of Planning and Environment Bowdens Silver Project (SSD 5765) [13] on page 14 state "*B36. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of the development to match its available water supply".*

[12] https://water.nsw.gov.au/__data/assets/pdf_file/0008/554444/excluded-work-exemption-fact-sheet.pdf
[13] https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-5765%2120221222T030902.326%20GMT (See Page 14)

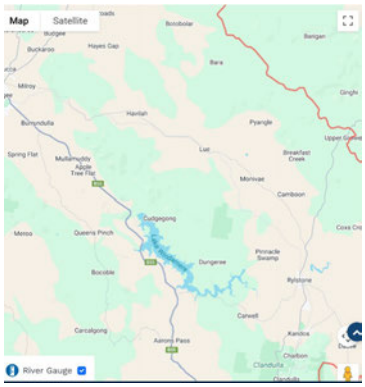

Figure 2 – Map of Lawsons Creek Valley Village of Lue centred (local area) [14]

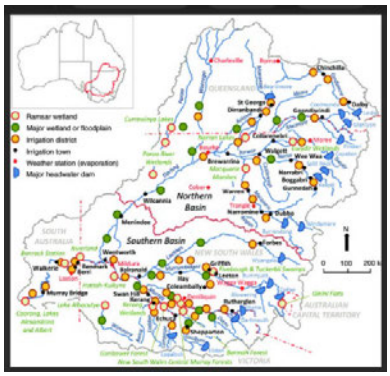

Figure 3 – Murray Darling Basin noting Windamere Dam, centre right.

The Mudgee Region Action Group submission to the Parliamentary Inquiry into *Current and potential impacts of gold, silver, lead and zinc mining on human health, land, air and water quality in New South Wales* neatly outlines the impacts of unlicenced water and contaminated water has on the water resources of NSW.

https://www.parliament.nsw.gov.au/lcdocs/submissions/81764/0072%20Mudgee%20Region%20Action%20Group.pdf

Conclusion

Under the Terms of Reference of this Inquiry the unrestricted use of contaminated water which is unlicenced, unmetered and unaccounted for in the Murray Darling Basin Plan and in calculations of allocations to water users in NSW we request that "Contaminated Water" be included and identified in the risks of unlicenced water take in the Basin.

The risks of the unlimited capture of contaminated water while preventing contamination of a water source in the short term provides an unacceptable risk in the long term being the inability to store this water indefinitely and the risk of flooding or overflow into the water source and the significant impacts of the reductions in flow in those water resources which in many cases are unregulated. The Sustainable Diversion Limits do not consider any allocation of contaminated water in the calculations.

[14] https://riverdata.mdba.gov.au/map-view

APPENDIX 1

Analysis of recent approvals and current applications of projects in NSW taking advantage of licencing exemptions for Excluded Works.

By Bron Wannan – Food Producer and Irrigator

Executive Summary

The NSW Department of Planning Housing and Infrastructure (formerly NSW DPE) are recommending projects, including metal mining projects, in NSW that will permanently damage and reduce water flows in NSW. The NSW DPE are allowing Applicants to propose the use of excluded works exempt from licencing for a large percentage of their water requirements.

These mines and projects and the Rainfall and Runoff figures included in their respective Water Balance Tables are listed below. In the case of Bowdens at Lue, with a 2580 hectare property, located in a rural area they are entitled to construct dams to catch 180.6 megalitres of Harvestable Rights Allowance (HRA) with some of their water storage being the Tailings Storage Facility. It is unclear from information supplied by some of the other projects listed what their harvestable rights are.

Table 1 – List of some projects in Central West NSW and their proposed Average Annual Catch of Rainfall and Runoff.

McPhillamys Gold Project – 1971 megalitres
Moolarben Coal Expansion – 1102 megalitres
Bowdens Silver (Lead and Zinc) Project – 954 megalitres (HRA 180.6 megalitres) = 773.4 megalitres
Dubbo Zirconia Mine – No provision for the catch of rainfall and runoff
Cadia – 8871 megalitres
Central West and Orana Renewable Energy Zone – No accurate water balance tables provided for the 40 solar farms and wind farms approved in the region and water needs are estimated to be 1000 megalitres per year for each project during the construction period.
Total – 12,717 megalitres average per year

These five mining projects listed in Table 1 in the Central West will catch rainfall and runoff of 12,717 megalitres per year. This catch is unlicenced, unmetered and unaccounted for. Given that this water is allowed to be caught in Excluded Works because it is contaminated or will be contaminated it will be prevented from returning to the river system.

Please see the following fact sheets for details of Excluded Works Exemptions

Excluded Work Exemption for Inland Draining Catchments

https://water.nsw.gov.au/__data/assets/pdf_file/0008/554444/excluded-work-exemption-fact-sheet.pdf

Excluded Works Exemptions Fact Sheet for Coastal Catchments

https://water.nsw.gov.au/__data/assets/pdf_file/0015/551013/Coastal-Harvestable-rights-excluded-works-.PDF,-194KB.pdf

With Climate Change resulting in less predictable rainfall Projects in the Murray Darling Basin must be persuaded to catch less rainfall and runoff and be encouraged by increased penalties to avoid contaminating water caught on their sites.

The following article on ABC Rural News on 28 March 2024 reports Federal Minister Tanya Plibersek has opened debate on the future direction of water policy.

https://www.abc.net.au/news/rural/2024-03-28/federal-government-opens-debate-on-national-water-initiative/103639252?utm_campaign=abc_news_web&utm_content=link&utm_medium=content_shared&utm_source=abc_news_web

Recent and Current Applications in NSW

See below pages from the **McPhillamys Gold Project** Statement of Reasons for Decision from the NSW Independent Planning Commission showing the average rainfall and runoff being 1971 megalitres each year. It has been assessed that between 223 and 413 megalitres will be prevented from entering Carcoar Dam. The entire amount of runoff has not been assessed.

See paragraph 211 for the Water Balance Table showing rainfall and runoff.

NSW DPE recommends many projects that do not have adequate water licenses to operate and these operators will unfairly use the exemptions for excluded works to meet their water requirements.

https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2022/11/mcphillamys-gold-project/determination/230330--mcphillamys-gold-project--statement-of-reasons-for-decision.pdf

211. Totalling the figures provided by the Applicant in **Figure 9** gives total average inflows of 4967 ML/yr which exceed total average outflows of 4521 ML/yr as per **Table 3**, indicating that there appears to be sufficient supply to meet demand for the Project:

***Table 3** – Average Predicted System Water Balance (source: based on Revised SWA)*

Average Inflows		**Average Outflows**	
Source	**Volume (ML/yr)**	**End use**	**Volume (ML/yr)**
External supply (pipeline)	2,592	Process supply	3,427
Runoff	1,781	Truckfill supply	801
Groundwater	286	Evaporation	293
Direct rainfall	190	**TOTAL**	**4,521**
Tailings decant	100		
Bore supply	18		
TOTAL	**4,967**		

212. The Applicant would source water during construction from onsite groundwater bores until the water pipeline is commissioned. Approximately 470 ML would be required for the initial 9 months of construction (AR para 313). The Applicant has secured 400-unit shares, leaving a shortfall of 70-unit shares to meet the predicted demand (AR para 314). The Department noted that the Applicant's investigations demonstrate that sufficient groundwater resource exists on the Site to meet the construction water demands and the Applicant has lodged an expression of interest for an additional 200-unit shares to accommodate the shortfall if required (AR para 314).

213. In relation to operational water supply, the Applicant's Revised SWA states that the imported pipeline supply provides the highest proportion of the total system inflow, followed by runoff from the operational water management system (Revised SWA, page 74).

214. The water supply pipeline will transfer approximately 13 ML per day (and up to 15.6 ML

The excerpt below being page 42 of the McPhillamys Gold Project IPC Statement for Reasons for Decision

https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2022/11/mcphillamys-gold-project/determination/230330--mcphillamys-gold-project--statement-of-reasons-for-decision.pdf

gives a very good outline of the approach taken by Applicants in order to circumvent NSW water licence requirements. See paragraph 229 for the various ways Applicants can address their licencing shortfalls.

Water Licensing

226. The Department states that the 'take' of water from surface water sources and groundwater aquifers must be licensed under the *Water Management Act 2000* (**WM Act**) and that this has been an important issue in the Department's assessment as the Belubula River above Carcoar Dam surface water source is highly constrained in terms of available water licenses" (AR para 306).

227. DPE Water in its advice dated 10 February 2021 stated that there is insufficient water entitlement available in the Belubula River above Carcoar Dam water source to account for the water take requirements of the Project.

228. The Department states that the Applicant has acquired 262 unit shares from a total allocation of 264 shares in the Belubula River above Carcoar Dam water source. The Department notes that this does not fully account for the Project's water take and the Project would have a shortfall of around 2,083 ML/yr (AR paras 324 and 325).

229. The Applicant has identified the following approaches to address the license allocation shortfalls (AR para 329):

- applying for a Specific Purpose Access License (**SPAL**) under the NSW *Water Management Act 2000* (**WM Act**) for the TSF and any other storages not captured by harvestable rights or the excluded works exemption;
- applying the excluded works exemption under the *Water Management (General) Regulation 2018*;
- constructing two storages that do not capture rainfall runoff and are exempt from licensing under the WM Act; and
- the use of groundwater drawdown entitlements for loss of groundwater flows reporting to surface water.

230. DPE Water in its advice dated 15 August 2022 stated that it had not identified any critical barriers to a successful application for a SPAL.

231. The Department adopted DPE Water's recommended conditions requiring the Applicant to:

- *prepare and implement a Trigger Action Response Plan (**TARP**) to monitor, investigate and manage impacts to water supply availability on the Belubula River between the project site and Carcoar Dam.*
- *offset the impacts to the Belubula River Regulated River Water Source caused by an estimated reduction in inflows to Carcoar Dam of 413 ML/year associated with the construction of the TSF by acquiring water access licence shares of high and/or general security water in the Belubula River Regulated Water Source (and not using or trading those shares until the TSF is rehabilitated).*

5.4.3 Water Quality Impacts

232. The Commission notes that the Project has been designed to operate as a nil discharge site for mine water. The Department stated that runoff from the catchment above the Site would be captured in clean water storages and pumped to the Belubula River downstream of the mine during and following rain events (AR para 268).

Construction

233. To manage erosion during construction, the Applicant has committed to constructing an upstream coffer dam to capture upstream flows and divert water flows around the TSF construction site and downstream (AR para 270).

Bowdens Silver Project will collect 924 megalitres in rainfall and runoff, 180 megalitres (less existing dams) will be allowed in harvestable rights, according to their land size, while only 177 megalitres has been assessed. Water downstream from the Bowdens Tailings Storage will not be fit for human consumption or other domestic purposes once mining commences.

https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-5765%2120221222T030902.626%20GMT

Table 5.5b
Average Annual Site Water Balance – Years 1 to 14 - Revised

Item	Inflow ML/a	Outflow ML/a
Rainfall and runoff	924	
Net groundwater inflows to open cut pit	431	
Advanced dewatering	380	
Clean water harvesting	27	
Ore moisture	83	
Retained tailings moisture		1 143
Evaporation		477
Dust suppression demands supplied		128
Concentrate moisture		6
Other plant losses		19
Dam overflows		0
Annual increase in stored volume		72
Total	**1 844**	**1 844**

https://www.ipcn.nsw.gov.au/resources/pac/media/files/pac/projects/2022/12/bowdens-silver/correspondence/department-of-planning-and-environment/230309_in_attachment-b_interpreting-excluded-works-factsheet.pdf

Neither McPhillamys or Bowdens have accounted for any water being returned to the river system.

Dubbo Zirconia Project at Dubbo has no provision for the collection of rainfall and runoff other than its Harvestable Rights Allowances. See Section 2.8.2 Water Supply and Security page 60 for information regarding water supply.

https://asm-au.com/wp-content/uploads/2020/02/54504-Section-2.7-2.17.pdf

Moolarben Expansion

https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-33083358%2120221104T091015.587%20GMT

28. Appendix B - Surface Water and Flood Impact Assessment (nsw.gov.au)

603 – 1102 megalitres of runoff be caught in Excluded Works or sediment dams. The mine requires 1282 megalitres each year. Sediment dams are designed to spill and given the impacts of climate

change and a more variable climate we can expect there will be longer dry times and heavier rainfall. Sediment dam overflows must be minimised and required to be no release or no spill unless treated.

volume would be required. This would correspond to very dry climatic conditions. It is important to note that a percentile trace shows the likelihood of a particular value on each day and does not represent continuous results from a single model realisation. For example, the 50th percentile trace does not represent the model time series for median climatic conditions.

7.3 WATER BALANCE MODEL RESULTS

7.3.1 Overall water balance

Water balance results for all of the 121 model realisations are presented in Table 7-1, averaged over each model stage. The results presented in Table 7-1 are the average of all realisations and will include wet and dry periods distributed throughout the mine life. Rainfall yield for each stage is affected by the variation in climatic conditions within the adopted climate sequence. The results in this table represent the OC3 area only - the behaviour of the wider MCC water management system is discussed in Section 7.3.6.

Table 7-1 provides an indication of the long-term average annual inflows and outflows from the OC3 area. Key outcomes from the overall water balance are as follows:

- Average annual inflows from rainfall runoff gradually increase between Stage 1 and Stage 5.
- The majority of water generated at OC3 would be transferred to the wider MCC water management system for reuse and/or release.
- The change in stored volume per stage is small in comparison to the inflow and outflow volumes and therefore the water management system is generally in balance.

Table 7-1 - Average annual water balance results - all realisation

Process	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
Inflows (ML/year)					
Rainfall runoff	603	790	1,066	1,015	1,102
Net groundwater	0	0	0	0	0
Mine water transfers from MCC	22	45	156	57	74
Brine transfers from MCC	115	25	0	0	0
Total inflows	**740**	**860**	**1,222**	**1,072**	**1,176**
Outflows (ML/year)					
Evaporation	197	196	244	260	263
Mine water transfer to MCC	40	837	851	703	768
Brine transfer to MCC	0	29	0	0	0
Clean water releases	19	19	19	26	26
Mine water dam overflows	0	0	0	0	0
Sediment dam overflows*	45	31	22	19	22
Total outflows	**300**	**1,111**	**1,136**	**1,007**	**1,079**
Change in site water inventory	**440**	**-251**	**86**	**65**	**97**

Note: Totals may not add due to rounding.

* The adopted design standard for sediment dams is not intended to provide 100% containment for runoff from disturbed areas. Hence, overflows will occur from sediment dams when rainfall exceeds the design standard.

Newmont Cadia

Cadia must also match its scale of operations to the available water supply. Cadia have not provided a Water Balance Table as required in their conditions but instead have provided a pie chart which indicates that on average 8871 megalitres per year will be caught on the mine site as runoff. It is unclear if that figure includes rainfall. The list of licences held by the mine (Table 4 below) does not include runoff. The information below can be found on the NSW DPE Major Projects website.

Water Management Plan (caapp.com.au) Cadia Water Management Plan Revision 8.2 dated 31/08/2023. Page 36-38

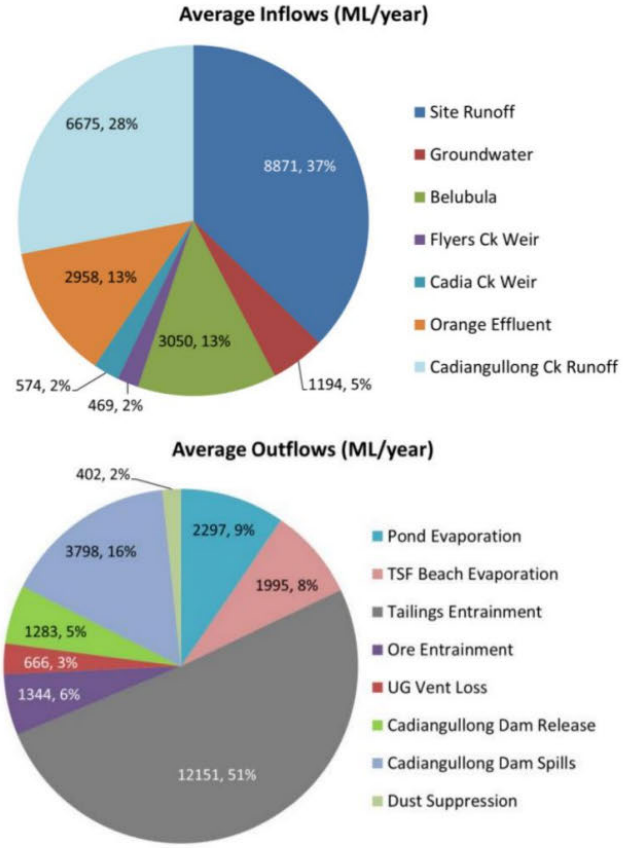

Figure 11: Values are averaged across the full forecast period outlined in MOD 14

Appendix A

The model results indicate that, on average, rainfall runoff is predicted to comprise the highest system inflow, with Cadiangullong Creek Dam inflow, supply from the Belubula River licensed extraction and Orange effluent also providing substantial inputs.

The water balance model predictions indicate that 51% of system outflows are predicted to be associated with the deposition of tailings in the TSF, with the majority of this water entrained in the tailings. A further 16% on average is predicted to overflow from Cadiangullong Dam and 9% is lost as pond evaporation. The remaining minor water outflows comprise by dust suppression, environmental flow release from Cadiangullong Dam and water vented from underground mining operations.

The water balance model results indicate that the Cadia water supply scheme, as approved under PA06_0295, is predicted to provide an average volumetric supply reliability of greater

4.7 Water Metering

In addition to existing flow metering, Cadia has implemented metering of non-exempt licenced water supply sources in accordance with the NSW Non-Urban Water Metering Policy (see Table 4).

Table 4: Licenced Water Supply Metering

Extraction Site	No. of Flow Meters	Water Supply Work Approval	WAL
Cadiangullong Dam	1	80WA716140	31527
Flyers Creek Weir	2		
Cadia Creek Weir	1		
Belubula River (Happy Mountain)	2	70WA614341	32255 32280
Bore CB6	1	70WA610477	31072
Bores CB8 / CB8A	2		
Bore CB9	1		
Bore CB3	1		
Bore RH641	1		

A flow meter is to be installed on the pipeline from Copper Gully Dam to the PTSF once water levels recede sufficiently to enable installation.

Pipeline of Metals and Minerals Projects in NSW

Project Name	Capital investment in NSW ($m)	Royalties ($m)	Jobs created for NSW
Dubbo Project	1,678	102	650
Tomingley Gold Extension Project	281	44	230
Sunrise Nickel Cobalt	1,770	235	1,300
Bowdens Silver Project	310	38	230
Cowal Open Pit Continuation	134	76	330
McPhillamys Gold Project	500	80	136
Kempfield Silver Mine	60		240
Northparkes E22 Development	480		500
Broken Hill Cobalt Project	650	200	710
Copi Mineral Sands	450		450
Constellation Project (related to Tritton mine)			383
New Cobar Complex Underground Project	67	60	501
Nyngan Scandium Mine	124	40	135
Balranald Mineral Sands Project	681	96	775
Euston Mineral Sands Project	500		500
Federation Project (related to Hera Mine)	200	63	350
Platina Scandium Project	125	112	121
Hawsons Iron Ore Project	1,940	25	1,700
Flemington Cobalt Scandium Mine			
TOTAL	**9,950**	**1,171**	**9,241**

0075 NSW Minerals Council.pdf

https://www.parliament.nsw.gov.au/lcdocs/submissions/81765/0075%20NSW%20Minerals%20Council.pdf

The NSW Minerals Council in their submission to Parliamentary Inquiry into Metals Mining and inquiry into current and potential impacts of Gold, silver, lead and zinc mining on human Health, land, air and water quality in New South Wales Stated that of the mines in the table above 17 greenfield mining projects are proposed in NSW.

Conclusion

Recent approvals of developments in Central West NSW by NSW Department of Planning, Housing and Infrastructure in the upper Murray Darling Basin catchment and Hunter Catchment cannot be sustained and will result in permanent damage to water assets. There is no avenue or pathway for complaints in NSW with all correspondence seeking information or clarification from other departments and Ministers being forwarded to the same NSW DPE employees who recommended those projects. There is no separate body in NSW tasked with investigating the excessive and unlicenced water use of these projects or the way these projects were assessed. Because much of the water requirements of these developments are exempt from requiring a licence the Water Group (formerly NSW DPE Water) is not able to assess the catch of contaminated water, and therefore this water is falling between the cracks with the Department of Planning, Housing and Infrastructure and the Applicants simply ignoring this water take in assessing the water impacts of developments. The NSW Department of Planning, Housing and Infrastructure does not have the skills to investigate or query statements made by the Applicants regarding existing water conditions, water use, water licences, water quality or water availability in a changing climate. In some cases flow rates are taken from entirely different catchments, existing water quality is downgraded or conservatively assessed to allow for contamination of clean water courses and catchments are manipulated in order to take more or less water as a project requires and Applicants state that all their water requirements are licenced when they are not. In all cases no attempt is made to prevent water from being contaminated.

The Excluded Works licence exemptions in NSW must be amended to prevent contamination of water assets and the unlimited take of water. This brief analysis considers a small number of projects while there are thousands across the Murray Darling Basin that could be prevented from the unlimited take of water resulting in saving thousands of gigalitres across the Basin.

Questions and Concerns

1. There is no allowance in the MDB Plan for excluded works or the retention of contaminated water in excluded works.

2. Has contaminated water been assessed with regard to Climate Change and the future impacts on water assets in particular on water availability and quality?

3. Which authority approves the unlimited catch of contaminated water in NSW?

4. NSW Government is recommending developments without a Water Management Plan and without secure water supplies with unenforceable conditions that operations must be adjusted to the available water. (Narrabri Gas Project, Bowdens Silver Project, Cadia)

5. Miners are manipulating their catchment areas to enable the catch of required amounts of water in sediment dams.

6. State Governments (in particular NSW and Victoria) are approving and recommending projects and mines that take unlicenced water from the MDB to the detriment of other users and without accounting for that take. NSW Government Planning Department accepts statements made by Applicants that they know are untrue and exclude facts from their assessments. Applicants seem to be ignorant of the facts and have no understanding of licencing or the requirements of licences. The mining lobby in NSW (NSW Minerals Council) and others are prepared to argue that all mines are producing "Critical Minerals" which they are not and are using that statement to push for any and all mining in NSW to be approved.

7. NSW Government Planning Department does not properly consider the Murray Darling Basin Plan, or its catchments, or designated National Parks and consequently will approve and recommend any project or mine irrespective of the permanent damage that will be sustained to water assets and the environment.

8. The long lasting effects and impacts of lead mining in Broken Hill on human health are well documented. See Professor Mark Taylors report for his findings on elevated lead levels in the Broken Hill population https://leadsmart.nsw.gov.au/wp-content/uploads/2023/10/BH_Pb_State_of_Science_FINAL-19-June-2020-Accessible-V2.0.pdf

9. In NSW new minerals mining projects are being approved in populated areas where large numbers of towns and private properties will be impacted with no compliance or consideration of the Orana Strategy 2041 or of existing zoning and land use.

Received as attachment to this submission:

Letter - 27 July 23 - DPE Water response - Bronwyn Wannan re Bowdens silver mine and unlicensed surface water.pdf

Our ref: MF23/1815

Ms Bronwyn Wannan

[redacted]

27 July 2023

Subject: Bowdens Silver Project – surface water licensing

Dear Ms Wannan

Thank you for your email of 10 July 2023, to the Hon Rose Jackson MP, Minister for Water. The Minister has asked that I respond on her behalf.

I understand you have concerns regarding unlicensed surface water take for the Bowdens Silver Project and with advice provided from DPE Water (OUT23/3551) which responded to questions from the Independent Planning Commission (IPC). To assist with this matter, I have included information below on applicable requirements under water legislation and provided an overview of key comments provided in OUT23/3551.

Surface water take must be authorised via either a licence or an exemption under the *Water Management Act 2000* (WMA 2000) or the *Water Management (General) Regulation 2018* (WM Reg 2018). In the case of Bowdens Silver Project, water captured in dams and subsequently removed, is to be the primary method of surface water take. Surface water take from dams that are located on third order streams or higher (according to the Strahler method of classifying streams), such as Walkers Creek where the Tailings Storage Facility is to be located, must be accounted for with a water access licence. Where surface water take is to occur from dams on minor streams (ie. first order or second order) the following two aspects are most relevant for this project.

1. Water take from dams excluded under Schedule 1(3) of the WM Reg 2018 do not require a Water Access Licence. These dams include those used to capture contaminated water and dams used to prevent contamination of a water source. Further advice on excluded works is available in a factsheet at the following link: Interpreting excluded works dams (nsw.gov.au)
2. Water take from dams that satisfy Harvestable Rights provisions of the WMA 2000 do not require a Water Access Licence.

It is noted the Bowdens Silver Project proposes capture and take of water via excluded dams which does not require a water licence. This water take will need to be implemented consistently with the requirements of the water regulatory framework.

In terms of your concerns regarding DPE Water's response to questions from the IPC about contaminated water at the Bowdens Silver Project, I can confirm that DPE Water provided information in accordance with water legislation. This advice noted that Harvestable Rights provisions were not applicable for contaminated water and that dams which prevent contamination of a water source that satisfy Schedule 1(3) of the WM Reg 2018 are exempt from the need to hold a water access licence. Further to this,

DPE Water advised that water taken from such dams is not considered under the relevant water sharing plan. I note that there is a regular audit and review process into water sharing plans, oversee by the NSW Natural Resources Commission.

I can also advise that DPE Water is required to be consulted on the preparation of a Water Management Plan for the Bowdens Silver Project. A Water Management Plan is a key tool for detailing the water supply, storage and transfer infrastructure, in addition to establishing the monitoring, management and mitigation of impacts. This plan would include details of measuring water take and the ability to verify impact predictions. DPE Water's review of the Water Management Plan would seek to ensure the activities are consistent with the water regulatory framework and the relevant development consent conditions.

Compliance with water legislation and conditions of water access licences is undertaken by the independent Natural Resources Access Regulator (NRAR). NRAR has put the mining sector on notice in recent months with several investigations and regulatory actions undertaken. You can find more information on NRAR online at nrar.nsw.gov.au.

Thank you again for your email. I have asked [redacted], Senior Project Officer be available should you need further information or wish to discuss this matter further. [redacted] can be contacted on [redacted].

Yours sincerely,

[redacted]

Mitchell Isaacs

Chief Knowledge Officer
DPE Water Group