



Lithgow Environment Group Inc.

PO Box 3081 Bowenfels, NSW 2790

Incorporated Association No. 9892192

www.lithgowenvironment.org

Preserving the Balance of Nature

catchmentaudit2025@ecoaus.au

24 May 2026

RE: SUBMISSION TO WATER NSW CATCHMENT AUDIT 2025

The Lithgow Environment Group Inc. (LEG) request that the Water NSW Catchment Audit 2025 consider the following comments, and LEGs water quality monitoring data 2006 – 2026 attached.

INTRODUCTION

Lithgow Environment Group was formed in 2005 to protect, conserve, and enhance our unique flora, fauna, natural environments, and waterways. In 2006 LEG joined the SCA Streamwatch Program, which folded without explanation in 2012. Water quality monitoring continues to this day.

LEG is a member of the Gardens of Stone Alliance (GoSA) comprising NSW Nature Conservation Council (NCC), Blue Mountains Conservation Society (BMCS), Wilderness Australia, 4 Nature, National Parks Association (NPA), and Bushwalking NSW. All have worked tirelessly for many years seeking improved water quality outcomes for the Coxs River, Greater Blue Mountains World Heritage Area (GBMWH), and Sydney water catchment. LEG is also a member of the Central West Environment Council (CWEC).

After commencing water quality monitoring in 2006 it was immediately obvious that salinity was an issue. LEG contacted the then Minister for the Environment Bob Debus MP who advised “*According to Delta Electricity there is no evidence of a salinity problem in the Coxs River*”. When LEG contacted Delta Electricity’s then General Manager his reply was “*I’ll trust my \$250k/year consultant, thanks*”.

Official cover-ups, denials and obfuscation continue to this day. If this submission appears overly-critical LEG believes we have earned that right after 20 long years of monitoring and lobbying - to no avail.

LEG disputes NSW Government claims that the Springvale Water Treatment Plant commissioned in 2019 improved water quality in the Coxs River, which only improved due to unprecedented rainfall since the drought ended in 2020. Salinity actually increased at many sites. The Coxs River in Lidsdale (Site 7) is currently 1,607 $\mu\text{S}/\text{cm}$ compared to the Macquarie River in Bathurst at 257 $\mu\text{S}/\text{cm}$ and Nepean River at Penrith Rowing Club at 220 $\mu\text{S}/\text{cm}$.

IPC Commissioners were visibly shocked during a 2025 tour of Springvale Water Treatment Plant (SSD-7592 MOD 11 MPPS Outages), and strictly limited that approval to the 3-month outage period only.

1. LACK OF CONSULTATION WITH STAKEHOLDER GROUPS

WaterNSW has never consulted LEG, despite our involvement in the SCA Streamwatch program from 2006 until it closed without explanation in 2012. Nor to our knowledge the Gardens of Stone Alliance despite their long history lobbying for improved water quality in the Coxs River and Sydney catchment.

LEG and the GoS Alliance were therefore quite upset to read an Agenda Item on the Lithgow City Council Environmental Advisory Committee (EAC) meeting scheduled for 13 May 2026 which stated –

Council, partnering with Water NSW and Blue Mountains City Council is currently scoping a Lithgow Healthy Waterways Program. The goals of this program will be:

- *To establish a water quality monitoring baseline for both ecosystem health and recreational use within Lithgow's waterways.*
- *To create a publicly accessible water quality dataset that can be used to inform land management, development planning controls and community education.*
- *To increase capacity and expertise within Council and the community around water quality monitoring methods and data.*
- *To increase interagency knowledge and data sharing between other Council and Government Agencies.*

A proposal is being prepared for funding and, if successful, the program will commence next financial year. The Healthy Waterways team at Blue Mountains City Council has been instrumental in mentorship and advice when scoping this proposal.

LEG is the only community group or government agency that has monitored water quality in Farmers Creek for 20 years, both upstream (**Site 10 & 11**) and downstream (**Site 9, Site 13**) of Lithgow township.

LEGs baseline water quality data precedes by 8 years the data from NOW Gauge 212042 Farmers Creek at Mount Walker, which only commenced reporting salinity, turbidity, DO, and pH in 2014.

A LEG representative has been on the LCC Environmental Advisory Committee (EAC) for 15 years.

LEG is a member of the Gardens of Stone Alliance (GoSA) comprising the NSW Nature Conservation Council (NCC), Blue Mountains Conservation Society (BMCS), Wilderness Australia, 4 Nature, the National Parks Association (NPA), and Bushwalking NSW. The GoS Alliance has worked tirelessly for many years seeking improved water quality outcomes for the Coxs River, Greater Blue Mountains World Heritage Area (GBMWH), and Sydney drinking water catchment. LEG is a long-standing member of Central West Environment Council (CWEC), and worked with RiversSOS for many years.

Therefore while LEG welcomes a *Lithgow Healthy Waterways Program*, our members are validly upset to learn that WaterNSW are snubbing the GoS Alliance member groups by proposing to initiate an identical program to the one which Lithgow Environment Group has been conducting for 20 years.

2. GAPS IN REPORT ON RECOMMENDATION 24 - DRINKING WATER CATCHMENT AUDIT 2019-2022

The Drinking Water Catchment Audit 2019 – 2022 contained Recommendation 24: *Create a map showing all sources of mine and quarry water discharges in the catchment, including both licensed operations and old legacy sites.* A map was produced <https://www.epa.nsw.gov.au/Your-environment/Water/managing-water-pollution-in-nsw/sydney-drinking-water-catchment-industry-activity-map>

However numerous local sites were inadvertently or otherwise omitted from that map, including –

2.1 Kerosene Vale Ash Repository (KVAR)

On 22 August 2022 Kerosene Vale Ash Repository was declared a Significantly Contaminated Site under the *Contaminated Land Management Act 1997* (CLM Act) administered by the NSW EPA.

The KVAR is located on top of old Kerosene Vale Shale Oil mine workings (see photo in *Journal of Australasian Mining History, Vol. 10, October 2012*), and old Newcom Colliery (now Angus Place) underground coal mine workings. Sawyers Swamp Creek was dammed off, and the entire valley filled with former Wallerawang Power Station fly ash and boiler ash waste (both wet and dry ash disposal methods), asbestos, and power station demolition materials.

Salts and heavy metal leachates have contaminated groundwater aquifers associated with the KVAR and those old open-cut and underground mine workings. POEO Licence non-compliances have been recorded for Selenium and Hexavalent Chromium at Springvale/Angus Place LDP4 & 5.

Licence number: 3607

L3.1&L1.1	Filterable Magnanese, Filterable Iron, Chromium VI and Selenium concentrations exceeded those specified in Clean Waters Regulations Schedule 2 for Class C Waters from discharge from LD4/5 (note: ADWG: Based on health considerations, the concentration of hexavalent chromium (Cr(VI)) in drinking water should not exceed 0.05 mg/L. ADWG: Based on health considerations, the concentration of selenium in drinking water should not exceed 0.01 mg/L.
-----------	---

In 2008 the original Springvale Transfer commenced discharging up to 42 ML/day of untreated minewater via LDP009 into Sawyers Swamp Creek and KVAR. The Springvale West proposal plans to further undermine this area, releasing more of that toxic leachate into the catchment. And god-forbid the KVAR dam wall fails, and buries Lidsdale township under 50+ years of accumulated fly-ash slurry.

LEG has monitored water quality in Sawyers Swamp Creek since 2006 (see **Site 3**). As recently as February 2020 salinity levels exceeded the limit of our Electrical Conductivity metre (<1,999 µS/cm), and as recently as 5 May 2026 turbidity exceeded 100 NTU despite only 13mm of light rain.

The KVAR is clearly a legacy mine site, is a major point-source of pollution that poses a legacy pollution risk for the Sydney drinking water catchment, and surface and groundwater contamination will likely continue long into the future. Neither WaterNSW nor this Audit should cover that up.

2.2 Mount Piper Power Station, Mt Piper Ash Repository, and Springvale Water Treatment Plant

These three (3) sites are not mapped, despite clearly being mine discharge points into the catchment. All are built on top of old underground and open-cut workings (ie. Huon open-cut mine, Bulkeley's Mine Lambert's Gully Mine, Western Main Colliery, Ivanhoe No.4 Colliery, Irondale Mine), and contaminated leachate has entered those old workings to pollute groundwater aquifers and Neubecks Creek (**Site 6**).

Minewater discharges have occurred into Wangcol Creek and Thompsons Creek despite Mt Piper PS and Springvale Water Treatment Plant being promoted to the NSW public as zero-discharge facilities.

WaterNSW are fully aware of saline water from Mt Piper Ash Repository currently emerging from old Huon Mine open-cuts (Cooks Dam, DML Dam, Neubecks Ck), and aware of EPA Pollution Reduction Notice 3514814 issued on 23 January 2026 requiring Centennial to report on solutions by 8 May 2026.

In April 2007 Delta Electricity incurred a Licence non-compliance for discharging large volumes of brine into Neubecks/Wangcol Creek "*Uncontrolled discharge into Neubecks Creek from Mount Piper cooling tower #1 following blockage of filter screens*". A large salt spill occurred in April 2016 adjacent Mt Piper Ash Repository. In both cases Electrical Conductivity exceeded the limit of LEGs metre (2000 EC).

Neither event was recorded by NOW Gauge 212055 Neubecks Ck, however were detected by LEGs regular water quality monitoring in April 2007 & 2016 respectively (see **Site 5** and **Site 6**).

All of Springvale/Angus Place Colliery minewater is currently sent to the Springvale Water Treatment Plant. Minewater in excess of Mount Piper PS cooling water requirements has for some considerable time been discharged via an unlicensed discharge point into Thompsons Creek and hence Pipers Flat Creek and the Coxs River (see **Site 15**). Another unlicensed discharge point operated for many years on the western side of Lake Wallace (see **Site 14**).

WaterNSW and this Audit 2026 should publicly disclose and not cover-up the above current and legacy minewater discharges, and ensure that all minewater discharge points are officially licenced.

2.3 Thompson's Creek Reservoir (TCR)

The TCR isn't mapped as a mine discharge point, despite ongoing unlicensed mine water discharges into Thompsons Creek, which has in affect become a "de facto" unlicensed Springvale/Angus Place Colliery minewater discharge point. Thompson's Creek is ephemeral and unsuited to prolonged high-volume discharges. Severe erosion has occurred in Falnash State Forest, and soil contaminated with seed of the WONS weed Gorse (*Ulex europaeus*) has been mobilised into the Coxs River downstream.

WaterNSW and this Audit should publicly disclose and not cover-up this unlicensed mine water discharge, require it to be licenced with publicly available monitoring under the POEO Act, and address ongoing erosion, siltation, and weed seed dissemination issues in Falnash State Forest.

2.4 Former Clarence Transfer outlet into Farmers Creek Swamp

This discharge point isn't mapped despite a specific 2010 Sydney Catchment Audit Recommendation 9: Lithgow City Council & Centennial Coal should ensure that water transfers from the Clarence Water Transfer Scheme are piped around, rather than flow through, Farmers Creek Swamp.

The Federal Government provided \$4 million for a new pipeline but not a cent for rehabilitation, and severe swamp erosion is ongoing. WaterNSW must require rehabilitation of this swamp damage.

2.5 Invincible Colliery LDP001 & LDP002

Invincible Colliery is mapped outside the Catchment, however discharge points LDP001 & 002 into the Coxs River Long Swamp should be mapped, because they could re-open any day. Last time that occurred was in 2007 when LEG observed LDP001 flowing strongly with an anoxic odour, extremely low Dissolved Oxygen levels, dead frogs, and the Coxs River downstream a rusty-red colour.

Sydney Catchment Authority (SCA) recorded Dissolved Oxygen of only 1.5% and salinity of 1,648 $\mu\text{S}/\text{cm}$ on 18/7/2007. Despite that, just 2 days later on 20/7/2007, the EPA approved Licence Variation No. 1073146 on Invincible POEO 1095 - doubling the discharge from 2 to 4 ML/day.



Photos: Invincible Colliery LDP001 discharge into Coxs River – 2/09/2007. EC 1710 $\mu\text{S}/\text{cm}$, pH 6.5, DO 0%, Anoxic odour

Why didn't WaterNSW act at that time, nor liaise with the EPA or LEG?

2.6 Baal Bone Colliery Long Walls 29 – 31

Baal Bone Colliery is mapped outside the Catchment, but Longwalls 29-31 undermined the headwaters of the Coxs River catchment from 2009 - 2011. LEG was shocked in late October 2009 to discover two waterholes downstream of Piezo BBP4 suddenly dry. Whilst a TARP was triggered for 'Anomalous Groundwater Behaviour' (ie. dramatic drop in groundwater levels at piezo BBP1 & BBP2), up to 1,500 ML/annum was dewatered via LD3 and LD6 into Baal Bone Creek and the Macquarie River Catchment ie. **unlicensed inter-catchment transfers.**

What did WaterNSW do to protect water quality & quantity in the Coxs River in 2009? What will WaterNSW do to prevent a repeat of this damage by the imminent Angus Place West proposal?

2.7 Lithgow Valley Colliery is mapped, however an open-cut mine has been operating in the Silcock Street area for the past 5 - 6 years. WaterNSW should investigate the legality of that open-cut mine.

2.8 Many legacy mines are not mapped as required by Recommendation 24, including –

- Newcom Colliery
- Fernbrook Colliery
- Hermitage Colliery
- Oakey Park Colliery
- Vale of Clywdd No.1 Colliery
- Vale of Clywdd No.2 Colliery (near Angus Place)
- Coerwull Colliery
- Methven Colliery
- Zig Zag Colliery
- Steelworks Colliery
- Cobar Park Mine
- Tankersley Colliery
- Irondale Colliery
- Methven Colliery
- Vale (New Vale) Colliery
- Huon Open-cut mine
- Bulkeley's Mine
- Main Range Colliery
- Commonwealth Open-cut Lidsdale (Blue Lagoon)
- Kersosene Vale Shale Oil Mine
- Western Main Colliery
- Eastern Main Colliery
- Wallerawang Colliery
- Renown Colliery.

Bell Quarry Lot 23 DP 751631 Sandham Road Newnes Junction isn't mapped. Swamp damage above Blue Mountains Colliery (Lot 231A, DP 751650) has not been recorded/reported. NSW Forests has several small quarries in Lidsdale, Hampton, Jenolan, and Sunny Corner State Forests which aren't mapped. Salinity in Jews Creek (**Site 41**) has risen from around 1000 EC to 1483 EC since Baal Bone Colliery closed. LEG reported an illegal topsoil quarry in the Gardens of Stone SCA to the NPWS in 2022, but never received a response. Tarana Gravel Quarry is incorrectly mapped in Landa Street, Lithgow.

2.9 It is unclear from the title “WaterNSW Catchment Audit 2022 – 2025” whether this audit is limited to the Sydney (ie. Warragamba Dam) catchment only, or includes the Grose River, Wollangambe River, Colo River, Wolgan River, Capertee River, Fish River, Turon River etc? Whilst some legacy mines outside the Warragamba catchment were mapped (eg. Baal Bone, Invincible, Ivanhoe North), others were not. If this Audit does cover the wider area, then the following legacy mines should be included –

- **Canyon Colliery** (Grose Valley Colliery) including two drainage adits in Jinki Gully & Dalpura Creek
- **Blair Athol Mine** and **Asgard Swamp mines** near Mount Victoria, and **Katoomba Colliery**
- **Cullen Valley Mine**
- **Tyldsley Mine**
- **Cullen Bullen Colliery (1889–1962)**
- **Hyrock Limestone Quarry** on Ebenezer Road north of Capertee
- **Airly Mine**, and **Shale oil mines** near Torbane/Mount Airly/Glen Davis/Newnes Wolgan Valley
- **Crown Ridge Shale Mine** on Blackmans Crown near Capertee
- **Coalex experimental mine** in the Wolgan Valley
- **Sunny Corner Silver & Lead Mine** and many more old mines in the Sunny Corner SF area.

The WaterNSW Catchment Audit 2022 – 2025 should acknowledge, address, and map the above discharges into the catchment omitted from Recommendation 24 Catchment Audit 2019 – 2022.

3.0 GROUNDWATER EXTRACTION/MINEWATER DISCHARGES SHOULD CEASE UPON MINE CLOSURE

It has always been the community expectation that once a coal mine closed, so too should groundwater extraction and minewater discharges. This has long been regarded as essential to restore baseflows into creeks and rivers, to allow groundwater aquifer recharge, and to allow some swamp recovery.

Centennial mines extract an unsustainably high 20.1 billion litres of groundwater from Newnes Plateau each year, increasing with every new panel. WaterNSW appear to be enabling groundwater extraction to continue indefinitely. Angus Place Colliery closed 11 years ago (March 2015) yet huge volumes of groundwater continue to be extracted from Bore 8 on Newnes Plateau, and plans are afoot to transfer 15.6 ML/day of Angus Place minewater to McPhillamy’s Gold Mine near Blayney indefinitely.

WaterNSW must explain to the NSW public why groundwater extraction by mines from Newnes Plateau hasn’t stopped upon mine closure, and who/when approved it to continue indefinitely.

4.0 STATUTORY NEGLIGENCE

LEG considers that WaterNSW should have known, or should reasonably be expected to have known about all of the examples of water pollution and other catchment damage detailed throughout this submission, and demonstrated by the 20 years of LEG water quality monitoring data supplied.

LEG and Gardens of Stone Alliance member groups have over the past 20 years raised these issues on numerous occasions through CCC and stakeholder group meetings with Delta Electricity, Energy Australia, Centennial, Lithgow Council, EPA, and others; via formal complaints to the EPA; in previous submissions on Sydney Catchment Audits; to NSW Planning in numerous submissions on mining and other proposals; and in correspondence to various Ministers and government agencies.

LEG has often considered writing to IPART and the NSW Ombudsman questioning how WaterNSW can possibly be in compliance with its Licence Conditions given these long-term ongoing failures.

Statutory Negligence is the only conclusion we can draw. And many people are likely to agree –

- That it was Statutory Negligence by WaterNSW that allowed PFAS to contaminate the Blue Mountains Water Supply (Greaves Creek Dam, Medlow Dam), and the Bellubula River;
- That it was Statutory Negligence by WaterNSW which allowed salinity levels at Western Coal Services LDP001 to increase 6-fold from 1,240 EC in 2006 to 7,780 EC in 2018, prompting Dr Ian Wright to describe it on ABC News on 7 November 2023 as "*In the whole of the Warragamba drinking catchment that is the worst point source of waste I have ever measured.*" And the EPA's POEO Licence for LDP001 – "*That is one of the most ineffective pollution licences I have ever seen,*" he said. <https://www.abc.net.au/news/2023-11-07/water-contamination-lithgow-coal/103067856>
- That it was Statutory Negligence by WaterNSW to stand by and do nothing while numerous endangered swamps were killed, rivers dried up, and waterfalls stopped flowing due to longwall mining in the Sydney Catchment Special Area, Illawarra, and on Newnes Plateau.
- That it was Statutory Negligence by WaterNSW which degraded and polluted Lithgow's drinking water self-sufficiency to such an extent that we are now forced to either drink contaminated minewater, or rely totally on the Fish River Water Supply Scheme (FRWS). And now IPART plans to price-gouge Lithgow water consumers to pay for WaterNSW's negligence.

Official ignorance and cover-ups, pretending 'not to know' what WaterNSW reasonably should, monitoring without 'seeing' anything, avoiding 'seeing or knowing' anything that may require taking some action – all of these behaviours add up to just one thing - Statutory Negligence.

The Catchment Audit 2022 – 2025 should address the above issues.

5.0 DISCRIMINATORY WATER PRICING FOR LITHGOW/OBERON RESIDENTIAL WATER CONSUMERS

IPART recently announced new Prices for WaterNSW Regional and Rural Bulk Water from 1 July 2026.

Lithgow and Oberon are the smallest water users by far from the Fish River Water Supply Scheme (FRWS), and yet cop the highest price rises. IPART expects Lithgow water consumers to subsidise

Energy Australia who only get a 6.5% price rise, Greater Sydney water consumers who only get a 7% price rise, whereas Lithgow gets a 7.7% rise, and Oberon water users a whopping 10% per year rise.

Table 10.3 Draft decision on the FRWS MAQ and water usage forecasts for the 2026 determination (ML)

	MAQ	Water usage
Raw water		
Energy Australia	8,184	1,544
WaterNSW (Greater Sydney)	3,650	1,547
Oberon Council	1,064	636
Lithgow Council	100	100
Individual minor customers	17	51
Filtered water		
Lithgow Council	1,678	785

Prices for WaterNSW regional and rural bulk water from 1 July 2026

Page | 130

Energy Australia is the largest polluter of the Sydney drinking water catchment, and should not even receive a discount let alone be permitted to use the best quality drinking water in the entire region (ie. Oberon Dam & Duckmaloi Weir) for industrial purposes. Condition 4 of Energy Australia’s Mount Piper PS Water Access Licence 27428 clearly states:

Condition 4: The Licence Holder must not take any water from the Coxs River under this access licence unless the Licence Holder has first used all available mine water from its storages for the purpose of power generation.

This has been the case since before Energy Australia arrived in 2011. The Government intent was to use mine water to reduce pollution and water-take from the Coxs River, and presumably also the Fish River.

WaterNSW did nothing to stop coal mines draining upland swamps that feed Lithgow’s drinking water supply, nor to stop coal mines and power stations from polluting all of Lithgow’s other potential drinking water supplies with salts, heavy metals, and other mine contaminants.

And now WaterNSW plans to price-gouge Lithgow water-users to pay for its years of negligence.

6.0 FISH KILLS IN THE COXS RIVER, LAKE WALLACE, AND LAKE LYELL

LEG believes that it would be negligent of the NSW Water Catchment Audit 2022 – 2025 to fail to mention the fish kill reported by ABC News along the Coxs River in Lake Wallace on 4 January 2024. <https://www.abc.net.au/news/2024-01-04/mass-fish-kill-of-redfin-near-blue-mountains/103283880>

And remiss of this Audit to conceal the 250 NTU Turbidity spike at NOW 212054 Wallerawang PS around 4 January 2024. pH 8.4 was also higher than normal 2 days before. **Site 18** upstream reported 3,150 µS/cm and NOW212054 Neubecks Creek a spike of 1,450 µS/cm on 4 January 2024.

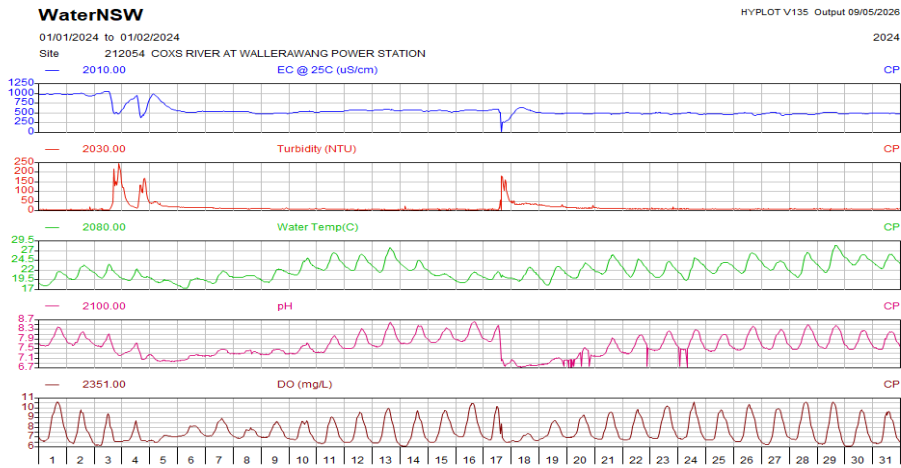


Figure: NOW212054 Wallerawang PS readings for January 2024 coinciding with Fish Kill on 4 January 2024

We believe it would also be remiss of this Audit to fail to mention a previous fish-kill in the Coxs River at Maddox Lane Lidsdale (LEG Site 7) and Lake Wallace (LEG Site 14) on 3 & 4 January 2020.

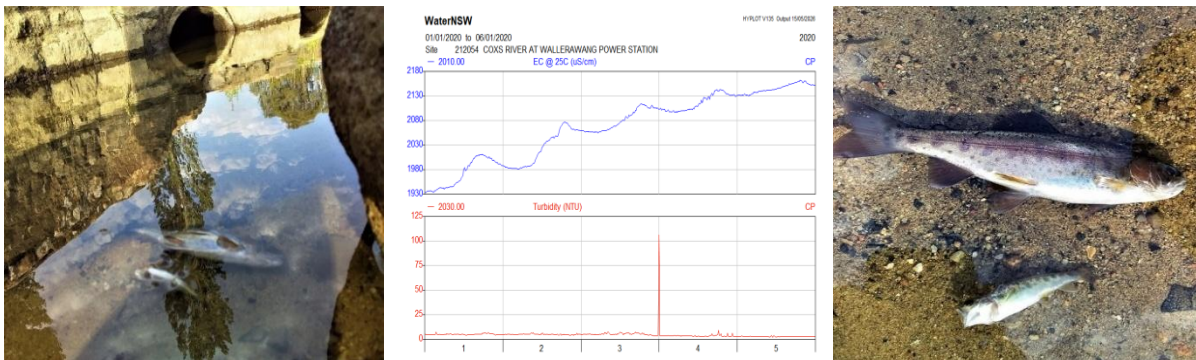


Figure: NOW212054 Wallerawang PS Conductivity and Turbidity readings on 3 & 4 January 2020

And fail to report that on 4 January 2020 NOW212054 Wallerawang PS read "no EC data for last 7 days" yet EC data has magically appeared since. LEG recorded >2000 $\mu\text{S/cm}$ in Neubecks Ck (Site 6) on 4/4/2020 when NOW 212055 Neubecks Ck reported 0 $\mu\text{S/cm}$ at 12:30. The EPA investigated this fish kill on 10/1/2024 and recorded 2,108 $\mu\text{S/cm}$ in the Coxs R Lidsdale (Site 7), the highest ever at this site.

Another Fish Kill in Lake Wallace was reported on Facebook on 13 March 2016. LEG recorded 1,140 $\mu\text{S/cm}$ in Lake Wallace; 1,270 $\mu\text{S/cm}$ at Site 7; >2000 $\mu\text{S/cm}$ at Site 6; Site 18 reported 4,900 $\mu\text{S/cm}$.

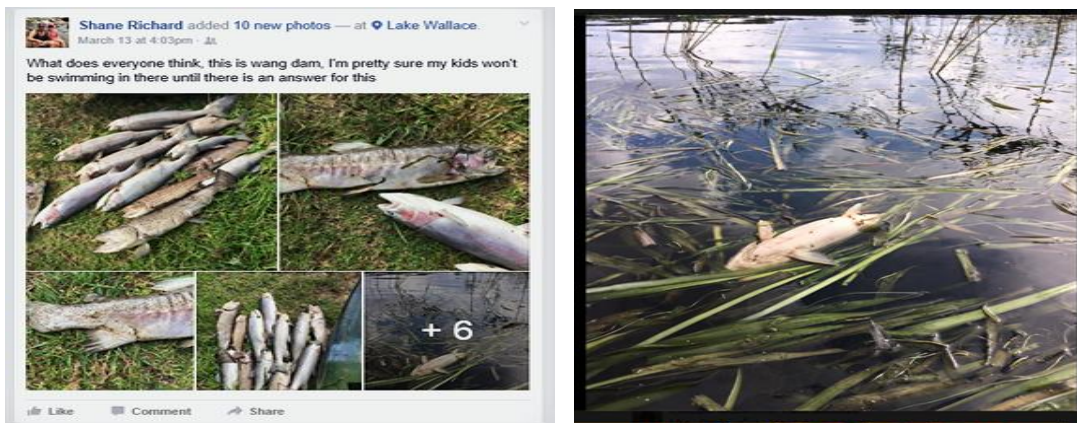


Photo: Fish Kill - Coxs River, Lake Wallace - 13 March 2016

Many peer-reviewed papers have reported on water contamination in the upper Coxs River. A report on selenium bioaccumulation and biomagnification in Lake Wallace found that selenium concentrations in water, sediments, and organisms were significant, with fish liver containing the highest levels.

<https://researchportalplus.anu.edu.au/en/publications/selenium-bioaccumulation-and-biomagnification-in-lake-wallace-new/>

Elevated selenium concentrations in coal mine water are uncommon in Australia. However selenium is a signature element for fly-ash pollution from coal-fired power stations. POEO Licence non-compliances for Selenium have been recorded on Springvale Mine EPL 3607 at LDP4 & 5. High selenium levels in Lake Wallace have not magically disappeared over time, but are bound up in sediment. Local fly-ash repositories continue to cause turbidity and salinity spikes, and further fish kills are inevitable.

The standard WaterNSW and EPA response to fish-kills is that they are not pollution-related but due to 'natural causes and will be thoroughly investigated'. Nothing more is ever said, until the next time. That 'next time' may mean extinction for platypus, and off-target kill of birds eating poisoned fish.

Peabody Metropolitan Mine (EPL 767) has a **3 NTU** Turbidity limit on LDP7 discharges. Why not here?

This Audit must truthfully report on –

- Regular fish-kills in the Coxs River;
- Data gaps, errors and omissions in WaterNSW NOW Gauge data (see LEG 2006 – 2026 data);
- Groundwater contamination from fly-ash repositories and measures to minimise salt/heavy metal leachate, and ways to minimise stormwater run-off from fly-ash repositories, and
- Measures to minimise minewater discharges contaminated with leachate from fly-ash repositories ie. Mt Piper Ash Repository (MPAR) and Kerosene Vale Ash Repository (KVAR).

7.0 FAILURE TO ADDRESS SALINITY OR SET LICENCE LIMITS FOR DISCHARGE POINTS

WaterNSW has consistently failed for over 20 years to comply with previous Audit Recommendations requiring Salinity impacts in the catchment to be identified and addressed -

- The 2005 Sydney Catchment Audit contained two recommendations regarding salinity –
 - **Recommendation 18:** That DIPNR and SCA investigate the development of a methodology to identify and report on areas of land affected by salinity.
 - **Recommendation 19:** That SCA adopts 300 μ S/cm as a practical conductivity trigger value for compliance monitoring of lakes and reservoirs in its Water Quality Monitoring Program.
- The 2010 Sydney Catchment Audit contained Recommendation 4 and Case Study 2 Upper Coxs River Licenced discharges (included in full below as a reminder).

- Recommendation 4: DECCW Review licence limits in the Upper Coxs sub-catchment for all licensed discharge points with a view to reducing the heavy metal and salinity concentrations and loads being discharged to the Coxs River catchment.

This audit should note that DECCW and SCA sampling at that time recorded concentrations of aluminium, boron, copper, nickel, and zinc exceeding ANZECC/ARMCANZ 2000 guideline values.

Case study 2: Upper Coxs River licensed discharges

Local environment groups and the Environmental Defenders Office have publicly raised concerns about unnaturally high concentrations of heavy metals in the Upper Coxs River and its tributaries. These metals were claimed to be present at elevated concentrations with respect to environmental guidelines and were suggested to be having a negative impact on both the river environment and the quality of Sydney's drinking water. The environment groups claimed that the elevated metals were directly attributable to the coal mining industry and to the two Delta Electricity power stations.

In July 2008 and February 2009 the DECCW and the SCA undertook a joint sampling program of the Upper Coxs River. The samples were analysed for an extensive range of contaminants including heavy metals. The results of this sampling indicated that a number of heavy metals were present in water samples at concentrations greater than ANZECC/ARMCANZ (2000) guideline values. These metals included aluminium, boron, copper, nickel and zinc. Articles in *The Sydney Morning Herald* (SMH, 2 December 2008, p.5; SMH 18 June, 2009, p.1; SMH, 19 June, 2009, p.1) highlighted potentially toxic concentrations of other heavy metals, for example arsenic and fluoride, from the Wallerawang Power Station discharge (often referred to as the 'blowdown'). Follow-up water quality and macroinvertebrate sampling by DECCW in September–October 2009 confirmed a number of areas where contaminant levels were relatively high.

It is understood that in response to these concerns, Delta Electricity has implemented a number of improvements aimed at reducing salt loads and contaminants in its discharges to the Coxs River catchment. Delta is also currently in the process of constructing a reverse osmosis plant at Wallerawang Power Station and a pipeline to Mt Piper Power Station for treatment (Delta Electricity submission 2010a). DECCW has also been working closely with industry to try and address these issues.

The following sections provide a summary of the results of analyses of water quality and macroinvertebrates in the Upper Coxs River catchment (DECCW 2010b).

Water quality in the Upper Coxs River sub-catchment

Heavy metals

Analysis of total and dissolved metal levels in water samples collected from the Upper Coxs River catchment identified 4 distinct clusters of sites:

1. sites associated with and downstream of Wallerawang blowdown discharge
2. sites associated with Neubecks Creek
3. sites associated with Sawyers Swamp Creek below the ash dam
4. all other sites (with generally lower dissolved metal levels).

The water quality analyses indicated that dissolved metals and total metals were generally higher in waters downstream of the Wallerawang blowdown discharge, in Neubecks Creek and in Sawyers Swamp Creek below the ash dam. Relatively increased metal levels in water samples could be identified for at least 6–7 km downstream from the Wallerawang blowdown source (DECCW 2010b).

Salinity

Salinity is also an important issue in the Upper Coxs River and there are concerns about saline discharges affecting the aquatic ecology above and below Lake Lyell. Salinity has previously been shown to have an impact on species retention rates in the Victorian and South Australian streams (Kefford et al. 2010) with species retention rates often decreasing as salinity levels increased. Wallerawang blowdown discharges are currently around 2500 $\mu\text{S}/\text{cm}$ conductivity, while those of the minewater discharges are typically around 1200 $\mu\text{S}/\text{cm}$. Streams high up in the Catchment typically have much lower conductivity levels (often between 20 and 100 $\mu\text{S}/\text{cm}$). If the major salt ions (sodium, calcium, magnesium and potassium) are considered, then the blowdown discharge and Neubecks Creek sites are identified as having elevated salt ion levels. The salt signature of minewater discharges is also very similar to that of the blowdown discharge. This is not surprising since minewater is currently transferred from Centennial Coal's operations to Delta Electricity and subsequently used for cooling water purposes. Some concentration of salts in the blowdown discharge is expected simply due to evaporation.

Investigation of historic water quality data generally indicated that, since the 1960s–1990s, salinity levels have noticeably increased in the Coxs River at locations upstream of the Wallerawang Power Station, downstream of the Great Western Highway, at Lake Lyell and downstream of Lake Lyell as far as Duddawarra.

Nutrients

In contrast to the metals and salt data, the nutrient data indicate alternative sources for the majority of nutrients in the Coxs River catchment. Sites in Farmers Creek downstream of Lithgow township and the Lithgow STP have elevated nutrient levels compared to most other sites in the catchment. Nutrient levels in Lake Lyell are also often elevated as a result of inflows from both Farmers Creek and the Upper Coxs sub-catchment. While recent improvements have been made to the Lithgow STP, this remains an important source of elevated nutrients in the Coxs River catchment. In addition, the urban areas around Lithgow are also potential contributors to elevated nutrients in Farmers Creek and Lithgow Council has recently undertaken an assessment of the environmental impacts of the sewerage collection systems (Aurecon 2009b).

Macroinvertebrates in the Upper Coxs River sub-catchment

Elevated contaminants in water were considered to be having an effect on the aquatic biota, including macroinvertebrates. DECCW sampled a large number of sites for macroinvertebrates in the Coxs River catchment in September–October 2009. The fauna assemblages at most sampled sites in the Coxs River catchment were dominated by pollution-tolerant taxa such as worms and chironomids. This was particularly evident in the Coxs River between the Neubecks Creek confluence and Lake Lyell; Farmers Creek downstream of the STP and Lithgow township; Neubecks Creek; and Sawyers Swamp Creek. The site on Kangaroo Creek downstream of the Angus Place discharge was found to have a depauperate macroinvertebrate community.

Analyses indicated that the invertebrate assemblages were influenced by the elevated salinity levels, with the assemblages of sites with elevated conductivity and salts being more similar to each other than to other sites with lower conductivities. There were two caddisfly genera, three mayfly genera and two dipterans that were collected only from sites of lower conductivity. Dragonflies and damselflies were less common at sites of higher salinity, and the total number of taxa collected from each site was generally lower with increasing conductivity. The invertebrate fauna collected from Farmers Creek downstream of the STP were indicative of nutrient pollution, having low diversity and being dominated by dipterans and oligochaetes.

Conclusion

The major conclusions of the DECCW (2010b) assessment were that:

- salinity and metals were elevated in river reaches of the Upper Coxs River sub-catchment as a result of power station and mine water discharges, mine water runoff and re-use
- nutrients were elevated downstream of Lithgow township and STP
- these water pollutants were having a detrimental effect on the aquatic biota.

As a result of the above conclusions the Auditor considers that a reduction in the salt and metal loads in the Upper Coxs River sub-catchment is highly desirable and necessary. While efforts by industries have been made to reduce the level of contaminants in their discharges, at this stage this is not sufficient to protect the ecosystem health of the waterways. The Auditor therefore recommends that the Environmental Protection Licence limits for these discharges be reviewed with a view to reducing the heavy metal and salinity concentrations and loads being discharged to the Coxs River catchment.

Recommendation 4: DECCW review licence limits in the Upper Coxs sub-catchment for all licensed discharge points with a view to reducing the heavy metal and salinity concentrations and loads being discharged to the Coxs River catchment.

Consent Condition 13, Schedule 4 of the 2015 Springvale Mine Extension approval set the long-term water quality objective for the Upper Coxs River catchment at 350 $\mu\text{S}/\text{cm}$. Despite Recommendations and PAC Consent Conditions dating back up to 20 years, local licenced discharge points still have no licence limit for salinity, and levels at one site (**Site 18**) increased 6-fold from 1,240 to 7,780 $\mu\text{S}/\text{cm}$.

And yet the Peabody Metropolitan mine discharge into Camp Gully Creek in the Royal National Park has had an EPL salinity limit of **270 $\mu\text{S}/\text{cm}$** since 2024 (and a **3 NTU** turbidity limit).

Industry regularly gives WaterNSW, the EPA, and DECCWW the middle-finger when pushed by setting outrageously high limits. For example, after the 2009 Blue Mountains Conservation Society v Delta Electricity court case Delta set a 2,600 $\mu\text{S}/\text{cm}$ limit on its 'Tortuous watercourse' discharges into the Coxs River; the Springvale Transfer discharge from LDP009 into Sawyers Swamp Creek had a 1,200 $\mu\text{S}/\text{cm}$ limit; unlicensed discharges of excess Springvale Transfer water into Thompsons Creek have a 500 $\mu\text{S}/\text{cm}$ limit; and WCS LDP001 has no limit despite currently being 4,220 $\mu\text{S}/\text{cm}$, TDS 2,990 ppm.

The Coxs River Lidsdale (Site 7) is currently 1,607 $\mu\text{S}/\text{cm}$ compared to the Nepean River in Penrith at 220 $\mu\text{S}/\text{cm}$ and Macquarie River in Bathurst at 257 $\mu\text{S}/\text{cm}$. How can this be regarded as acceptable?

WaterNSW has known all of this for 20 long years yet failed to set consistent, ecologically acceptable, or indeed any licence limits for salinity at licensed discharge points in the Upper Coxs sub-catchment.

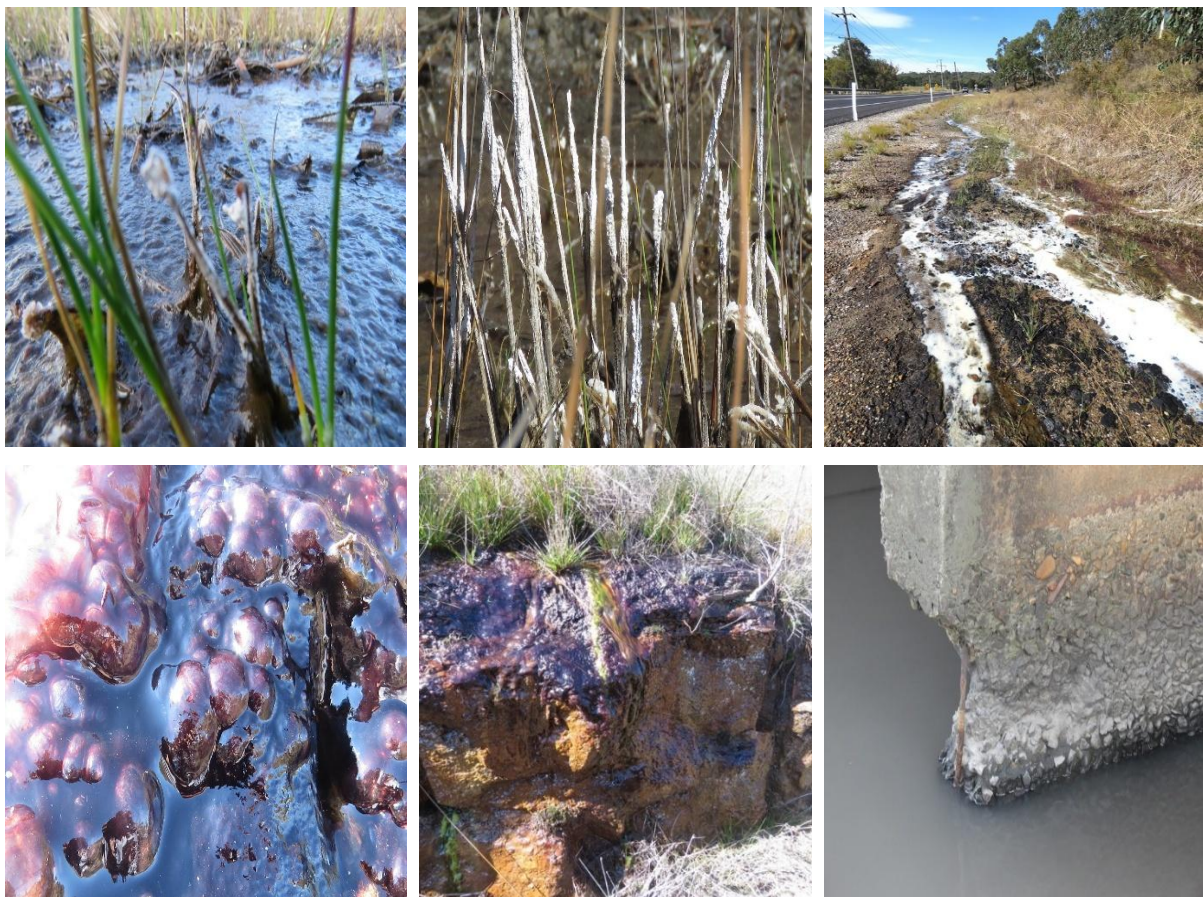
This Audit must recommend a 300 $\mu\text{S}/\text{cm}$ limit for all LDPs in the Upper Coxs River sub-catchment.

8.0 ACID MINE DRAINAGE

WaterNSW has known, or should reasonably be expected to have known, about Acid Mine Drainage (AMD) issues in the Lithgow region and Upper Coxs sub-catchment for many decades.

In 2002 the then NSW Minister for the Environment Bob Debus MP announced a \$300,000 project to rehabilitate a coal waste dump near Lithgow which threatened the water quality of the Coxs River. He acknowledged at the time that AMD posed a threat to the water supply and noted that there are *“around 200 derelict mines in Sydney’s catchment area and 27 active coal mines”*.

AMD was identified in 1998 NSW Soil Services report disturbed by NSW Rail. The RTA identified AMD at Tunnel Hill. AMD was identified at Wallerawang Colliery in a 2004 report. AMD caused concrete-cancer to a bridge adjacent Mt Piper PS (LEG Site 5). IPC Commissioners observed AMD in 2025 near the WCS REA. LEG reported the AMD and salt build-up pictured below beside the Castlereagh Hwy in April 2016.



Photos: Acid Mine Drainage (AMD) and salt accretion adjacent Castlereagh Hwy, Blackmans Flat – 9 April 2016

It is nothing short of Statutory Negligence for WaterNSW to continue to pretend to be unaware of AMD issues that it should reasonably be expected to be aware of in the Upper Coxs sub-catchment.

9.0 INCONSISTENT TURBIDITY LIMITS ON DISCHARGES

There are huge inconsistencies in Turbidity limits for coal mine water discharges across NSW. For example Peabody Metropolitan Mine (EPL 767) has a **3 NTU** Turbidity limit on LDP7 discharges into Camp Gully Creek, whereas Mount Arthur Mine has a **120 NTU** limit into the Hunter River.

The ANZECC (<https://www.waterquality.gov.au/anz-guidelines/guideline-values/default>) upper limit for Turbidity in Inland Waterways is 25 NTU.

LEGs water quality monitoring data 2006 – 2026 is attached, demonstrating that Turbidity exceeded 25 NTU on numerous occasions downstream of local mines and power stations.

For example –

- **Wangcol Creek (LEG Site 5)** – Turbidity exceeded the 25 NTU ANZECC upper limit on virtually every occasion tested since 2006, recording up to 400 NTU. Site 5 is downstream of Mount Piper Power Station (EPL13007) coal stockpile and operational areas. Energy Australia claims it to be a ‘zero discharge’ facility, yet LEG has also recorded large discharges of warm water exceeding the limits of our Electrical Conductivity meter (>2000 uS/cm). For example, in 2007 a POEO licence non-compliance was recorded on EPL766 for ‘*Uncontrolled discharge into Neubecks Creek from Mount Piper cooling tower #1 following blockage of filter screens*’. Note this non-compliance was issued on EPL766 (Wallerawang Power Station), not Mount Piper EPL13007. Note also the name change from Wangcol to Neubeck’s Creek. Coal mine and power station operators deliberately ‘muddy the waters’ by attributing impacts to different Premises, different EPLs, change names of creeks when it suits etc. WaterNSW may be complicit. NOW Gauge 212055 on Neubecks Creek is actually on Wangcol Creek, mapped in the wrong location, and has regularly reported salinity levels much lower than recorded by LEG on particular days, and/or malfunctioned on days when serious pollution incidents occurred. The same applies to NOW 212054 Coxs River Wallerawang PS. EPA regulators may be relying on erroneous data from faulty NOW instruments, whilst ignoring independent monitoring data by Dr Ian Wright, Hunter Environment Centre, LEG etc.
- **Springvale Colliery (EPL3607)** has a 30 NTU limit, regularly exceeded at LEG **Site 4**. Springvale Colliery is the worst POEO Licence offender in the Lithgow area (if not NSW), recording over 1,000 Licence non-compliances between 2000 and 2026.

https://assets.nationbuilder.com/natureorg/pages/4621/attachments/original/1738293846/Centennial_Coal_Report_FINAL.pdf?1738293846

Sediment storage ponds at the pit-top hadn’t been cleaned out for over 10 years. On 23 February 2015 the EPA issued Springvale Colliery with a Penalty Infringement Notice of \$15,000 when coal fines were discharged into a downstream wetland.

- **Clarence Colliery EPL726** - The Clarence Colliery coal-fines spill on 21 December 2023 into the Wollangambe River and GBMWSHA was reported by a bushwalker to LEG, not by Centennial. This is an ongoing issue with mines in the Lithgow area - failure to report incidents of environmental harm. This resulted in the \$815,000 Land & Environment Court prosecution in February 2026 <https://www.epa.nsw.gov.au/news/epamedia/260223-clarence-coal-mine-ordered-to-pay-815-000-following-wollangambe-river-pollution>



Photos: Clarence Colliery coal-fines spill into Wollangambe River – 21 December 2023

This coal-fines spill occurred only a few short years after the collapse of Reject Emplacement Area 3 (REA3) on 2nd July 2015, which released 2,330 tonnes of coal fines into the Wollangambe River and GBMWSHA. The Land & Environment Court imposed penalties totalling \$1,050,000 plus \$106,010 in investigation and legal costs - the single largest fine following prosecution by the EPA.

REA3 was approved by Lithgow City Council in 1993. The collapse of a dam constructed from unconsolidated coarse reject material was clearly foreseeable. The fact REA3 had been full since 2011 and overtopping could occur was clearly foreseeable.

LEG commends the EPAs swift response. But where were WaterNSW? Why always wait for local residents or community groups to report such incidents, instead of going out and finding such damage themselves? Why hasn't WaterNSW prosecuted companies for failing to report incidents of environmental harm? Why hasn't WaterNSW required Real Time Monitoring at all licence discharge points? So many questions as to why WaterNSW were, once again, missing in action.

WaterNSW must review sediment dam and infrastructure conditions on all coal mine EPLs to ensure that they are capable of withstanding increased climate extremes.

WaterNSW must explain why dirty discoloured water is acceptable in the Coxs River but not in Camp Gully Creek. And why it places a higher value on introduced Platypus in Camp Gully Creek than on naturally occurring Platypus in the Coxs River where Charles Darwin first recorded it on 12 January 1836.



Photos: Clarence Colliery Reject Emplacement Area ("REA") 3 collapse on 2 July 2015

- Charbon Colliery EPL528** has a 50 NTU limit for Turbidity. The 2023 Annual Review reported 2900 NTU at LDP3, 58 times higher than the licence limit. And this was not an isolated incident. In 2021 non-compliances were recorded for 'Overflow of Haystack South Sediment Dam' and 'TSS Exceedance'. In 2017 non-compliances for 'Volume of drilling mud and/or muddy waters received from drilling operations exceeded weekly limit'. In 2016 'Exceedance of concentration limits for total suspended solids and turbidity'. In 2015 'Limit exceeded for Total Suspended Solids and Turbidity at LDP002 & LDP003 on several days throughout September'. More non-compliances for Turbidity/TSS occurred in 2014, 2012, 2011, 2005, 2001, and 2000.

Why has WaterNSW allowed ongoing turbidity exceedances at Charbon Colliery for 23 years?

Inconsistent EPL limits for Turbidity at various coal mines in different catchments is more than just a dirty water issue. Turbidity and sediment are important environmental stressors in creeks, rivers, lakes, and wetlands, as it can block gills of aquatic biota, and blanket streams with fine sediment that can change photosynthesis in the waterway (ANZECC, 2001).

For example, the Australian Platypus Conservancy (<https://platypus.asn.au/>) identifies three factors adversely related to Platypus status –

1. Nutrient enrichment, especially elevated levels of Phosphorus in water. Phosphorus promotes algal blooms and low levels of oxygen, causing many aquatic invertebrates to disappear.
2. The amount of suspended solids in surface water. Given that Platypus shut their eyes underwater and feed at night, the adverse impact of suspended solids is unlikely to be due to poor water clarity. Instead it is that unconsolidated fine sediment provides poor habitat for most aquatic macroinvertebrates.
3. The concentration of metal contaminants (lead, zinc, and cadmium) in bottom sediment. High levels of metal contaminants affect freshwater fish and macroinvertebrate diversity and abundance. Direct toxic effects could also occur, for example through bioaccumulation. Because heavy metals bind to bottom sediment, they can remain in the environment long after the primary contamination source has been eliminated.

Numerous areas of dead/damaged peat swamps and dry desiccated creeks above Angus Place, Clarence, and Springvale Collieries are allowing stormwater runoff to mobilise 1000s of tonnes of sediment into the Coxs River, Wollangambe River, Wolgan River, and ultimately the GBMWHA. Why hasn't WaterNSW required remediation of that swamp damage?

Turbidity is a generic pollution issue affecting all aquatic life in NSW, regardless of which catchment. WaterNSW must require statewide standards on EPLs for Turbidity/TSS/TDS, rather than taking an ad-hoc approach to appease individual mines. WaterNSW must protect the environment, not mines.

10.0 ALKALINITY POLLUTION

Coal mines routinely raise the pH or alkalinity of mine water to 'lock up' heavy metals and comply with their EPL limits. However once that water flows offsite and mixes with naturally acidic water downstream, those heavy metals come into solution again, impacting on macroinvertebrates and aquatic life. At Clarence Colliery LDP2 zinc levels were 0.12mg/L at pH 8, but at pH 5 were 255 times higher at 30.6mg/L. EPL licencing should be based on natural conditions of receiving waters, total and dissolved analysis of water & pollutant loads in sediments to assess accumulated contamination.

11.0 TEMPERATURE POLLUTION FROM COAL MINE WATER DISCHARGES

LEG has recorded temperatures in mine water discharges up to 14 degrees warmer than background levels, particularly obvious during winter. This applies equally to power station discharges. eg.

- Springvale/Angus Colliery LDP4 & 5 – LEG recorded water temperatures of 22 degrees in winter when local creeks were only 8 degrees, or 14 degrees warmer. (**LEG Site 29**)
- Invincible Colliery LDP1 – water temperature of 20.1 degrees on 18/7/2007 when the Coxs River upstream was 7.9 degrees on 18/7/2007, or 12.2 degrees warmer. (**LEG Site 27**)
- Wallerawang Power Station No.8 cooling tower blowdown “Tortuous Watercourse” (**Site 23**)
- Clarence Colliery discharge into Wollangambe River (**Site 33**) – Belmer et al found the LDP2 discharge increased water temperature in the Wollangambe River by more than 2.5° C.
<https://researchers.mq.edu.au/en/publications/coal-mine-water-pollution-and-ecological-impairment-of-one-of-aus/>

This is of particular concern for the Gardens of Stone SCA and GBMWA, which are cool-climate high-altitude refuges from climate change for a range of threatened species found nowhere else.

Unnaturally warmed water has direct and indirect impacts on aquatic life. Trout can't breed in water temperatures above 23 degrees. Macroinvertebrates, frogs, and skinks are affected. Dissolved Oxygen levels are lower, salinity is higher, and algal blooms and disease spread increase in warmer water.

WA has Water Quality Protection Guidelines for Mine dewatering - ‘Discharge water should not cause the receiving water temperature to vary by more than 2°C from its seasonal background temperature’. <https://www.wa.gov.au/system/files/2022-04/WQPG-11-Mine-dewatering.pdf>



Photo: Springvale LDP5



Photo: Springvale LDP4



Photo: Invincible LDP1



Photo: Baal Bone LDP3

WaterNSW should set similar conditions to those applying in Western Australia on all EPLs for coal mine water discharges in NSW.

12.0 MANGANESE POEO LICENCE LIMITS IN MINEWATER DISCHARGES

Clarence Colliery EPL726 has had the Filterable Manganese limit raised from 0.05 mg/L to 0.1 mg/L in September 2007, and again to 0.5 mg/L in July 2010. Clarence Colliery had previously been issued with Penalty Notices of \$1500 in 2004 and in 2012 for breaching POEO Licence Manganese limits.

The current 0.5 mg/L EPL limit is 10x higher than NHMRC recommendations for drinking water, which state that Manganese concentrations "*should not exceed 0.05 mg/L, measured at the customer's tap. Water authorities are encouraged to keep manganese concentrations as low as possible, preferably below 0.02 mg/L. Based on health considerations, the concentration of manganese in drinking water should not exceed 0.1 mg/L human health guideline limit*".

Clarence Colliery pumps in excess of 15ML/day of partially-treated minewater from LDP2 into the Wollangambe River and GBMWA. The chemical make-up of this minewater is significantly altered compared to natural background levels, with higher Salinity, Zinc, Nickel, Manganese, Cobalt, and more. Complaints date back to the 1980s about slippery black biofilm caused by iron and manganese deposits on rocks downstream from Clarence Colliery in the Wollangambe River and GBMWA.

Lithgow residents have been drinking some of Clarence Colliery's contaminated minewater for years. Centennial are now proposing to pump all this manganese-contaminated mine water to Lake Wallace, and Lithgow will apparently have to source all its drinking water from there in future.

Why are NSWWater, the EPA, and NSW Health allowing these dangerously high manganese levels?

13.0 ARSENIC POEO LICENCE LIMITS IN MINEWATER DISCHARGES

The Australian Drinking Water Guidelines recommend a maximum of 0.01 milligrams per litre of water of Arsenic for health purposes <https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>

Springvale LDP009 recorded POEO non-compliances on EPL3607 for Arsenic exceedances –

- In 2016 - Minor exceedance of Arsenic and EC at LDP 9 on several occasions.
- In 2015 - Copper and Arsenic on one occasion at LDP 9.
- In 2014 - Minor exceedance of licence discharge limit for Arsenic, EC, Cu & turbidity at LDP 9 on several occasions.
- In 2013 - Minor exceedances of pH, TSS, turbidity, total Aluminium, filtered Arsenic, filtered Copper and Zinc concentration limits at various discharge points. EPA issued PIN for turbidity exceedance at LDP 9 on 30 May 2013.

This is disturbing, because LDP009 was discharging into the Coxs River upstream at that time.

Even more disturbing is that Angus Place MOD 5 & 8 (withdrawn) proposed to discharge an additional 10ML/day of minewater via Springvale LDP1 into Wangcol Creek. Dr Ian Wright opined in 2024 that *“based on information provided in the Modification Report, and the GHD Water Assessment Report, I have calculated that the arsenic load discharged at LDP001 will increase from <12.88g of arsenic per day under existing conditions, to between 77.28 g/day (scenario 3), 90.16 g/day (scenario 1 and 2). Under all of the future predicted scenarios (from Table 2.3 in GHD Water Assessment Report) the daily load of arsenic released from LDP001 would increase, relative to the existing arsenic load. The concentrations of arsenic in the above three scenarios are above the ANZECC arsenic guideline (trigger value) for 99% protection of aquatic ecosystems (ANZECC, 2000, Table 3.4.1). In my opinion, this would be harmful to stream and river biodiversity.”*

The above demonstrates that Arsenic exceedances in minewater have occurred in the past, and pose both a human health and environmental risk in local waterways.

WaterNSW should investigate ways to reduce Arsenic exceedances, and revise POEO Licence limits.

14.0 NICKEL AND ZINC EXCEEDANCES IN MINWATER DISCHARGES

Legacy pollution from Canyon Colliery into the Grose River and GBMWHA has been ongoing since closure in 1997. Zinc and nickel levels up to 500x above guideline limits have been recorded, toxic to aquatic life. Wright, I. and Burgin, S. (2009), 'Comparison of sewage and coal-mine wastes on stream macroinvertebrates within an otherwise clean upland catchment, Southeastern Australia', *Journal of Water, Air and Soil Pollution*, vol 204, no 40634, pp 227 – 241. www.smh.com.au/environment/sustainability/disused-mine-leak-is-killing-life-in-river-20080504-2atg.html

Clarence Colliery EPL726 has total Zinc limit at LDP2 of 1.5 mg/L, almost 200 times higher than the WQG trigger value of 0.008 mg/L for zinc to protect 95% of species (ANZECC/ARMCANZ 2000).

Despite this obscenely high EPL limit, non-compliances for Zinc exceedances still occurred at Clarence Colliery in 2012 and 2017, most recently in the August 2024 Enviro Monitoring Report.



Photo: Contaminated mine water discharge from Canyon Colliery into Jinki Gully and GBMWHA – 5 May 2015

There is no EPL limit for Nickel on Clarence Colliery EPL726, despite regular exceedances of the ANZECC limit of 0.011 mg/L, and WHO drinking water guideline limit of 70 µg/L (0.001 mg/L).

This is a serious concern for Lithgow residents, who are forced to drink Clarence Colliery's nickel-contaminated minewater. In 2008 NSW Health released a Public Health Bulletin (*Vol. 19(9–10) 2008 NSW Public Health Bulletin pages 170 – 173*) reporting on Nickel contamination in drinking water of a fictitious NSW town named "Sampleton", which was Lithgow. Local GPs had reported outbreaks of dermatitis, eczema, and rashes especially in babies for many years. Nickel-allergic dermatitis is the most likely explanation. Lithgow's basic sand-filter water treatment plant cannot remove Nickel.

The *Clarence Colliery Discharge Investigation* (2015 Office of Environment & Heritage) identified that the current LDP002 discharge adds annually, on average, 1140 tonnes of Salt, 195 tonnes of Sulfur, 3 tonnes of Iron, 1.8 tonnes of Manganese, 440 kg of Zinc and 380 kg of Nickel to the Wollangambe R.

The WaterNSW/EPA approach to this has been, firstly, to allow Clarence Colliery to raise pH levels of the discharge well above naturally acidic background levels. The pH at LDP2 discharge has been up to 9, compared to a natural pH range of 4 - 6. This higher pH locks-up Nickel so it is less soluble allowing Clarence Colliery to comply with its EPL. However as soon as that discharge mixes with naturally acidic water downstream, this Nickel and zinc comes into solution again, and is toxic to aquatic life. At pH 8 zinc levels were 0.12mg/L, but at pH 5 were 255 times higher at 30.6mg/L.

Secondly, Centennial are seeking to transfer all Clarence Colliery minewater out of the Wollangambe River into the Coxs River and Sydney Drinking Water Catchment. This will create even greater problems, because the Coxs River is already heavily polluted with a cocktail of heavy metals and other contaminants from coal mines, power stations, Wallerawang STP, and other sources. In trying to clean up one area, WaterNSW are creating far greater human health risks in another area.

EPL licencing must be based on natural conditions of receiving waters. Licencing should include both total and dissolved analysis of water and pollutants in sediment to assess historic accumulated contamination. Acceptable human health EPL limits must be regulated for Nickel and for Zinc.

15.0 BORON, CADMIUM, CHROMIUM, FLUORIDE, HEXAVALENT CHROMIUM, COBALT, LEAD

POEO Licence exceedances for all these heavy metals have been recorded at local coal mines. POEO Licence non-compliances for Selenium & Hexavalent Chromium have been recorded on Springvale EPL 3607 at LDP4 & LDP5, heavy metals that are not usually associated with coal mine water. LEG could go on in ad nauseam about each individual substance and non-compliance. But the EPA and WaterNSW are fully aware of those, because the EPA actually issued those non-compliances. WaterNSW cannot continue to cover-up these serious human health risks, and must review licence limits.

16.0 SOLCENIC FLUIDS

Solcenic water-soluble hydraulic oils are used in vast quantities in longwall mines. These fluids comprise a proprietary formulation of mineral oil, alcohol, poly glycol, inorganic salt, organic acid salt, and triazine biocide. The triazine component acts as a biocide decomposing into **formaldehyde**.

LEG recorded the Solcenic spill below at Angus Place Colliery on 11 June 2018. Centennial had not reported it to the EPA. Centennial subsequently advised the EPA *"Once observed in Pollution Control Dam No1 an unknown volume was pumped to underground storage"* (ie. dumped down underground mine workings), as was Brine-waste from the Temporary Reverse Osmosis (RO) plant in 2018. The EPA did not record a non-compliance for this incident on EPL467. Yet another legacy pollution issue.

Previously LEG recorded Solcenic discharges into Narrow Swamp, East Wolgan Swamp and hence the Wolgan River from Springvale/Angus Place Colliery LDP4 & 5 on Newnes Plateau.



Photo: Solcenic spill Angus Place Colliery – June 2018



Photo: Solcenic discharge LDP5 into Wolgan River

Solcenic oils are similar to fracking fluids and emulsifiable metal working fluids, which have been associated with respiratory disorders, work related asthma and allergic and irritant skin disorders. The National Pollutant Inventory identifies Formaldehyde as *"highly toxic to aquatic life - the fish, shellfish and other creatures in our rivers, lakes, and oceans"*.

National Pollutant Inventory (NPI) 2022/23 data lists 471 facilities as sources of Formaldehyde in Australia, however none are listed in the Lithgow LGA. Coal mines including Benalla, Mount Arthur, Mount Pleasant, Mount Thorley, and Moolarben Mines are listed, but no Lithgow mines.

Why aren't Springvale, Angus Place, and Airly longwall mines listed as formaldehyde sources on the NPI? Why have former longwall mines at Baal Bone Colliery and Invincible Colliery not been listed?

In addition, some years ago Pine Dale Mine used formaldehyde-contaminated wood-waste from Borg Panels (chipboard mills) in Oberon for mine site rehabilitation. Where were WaterNSW/EPA???

Why hasn't WaterNSW included EPL limits for Solcenic, formaldehyde, and all potentially harmful breakdown/decomposition pollutants in ground and surface water at Lithgow longwall mines?

17. DELIBERATE BRINE WASTE CONTAMINATION OF MINE VOIDS

In 2018 the Department for Mining (aka NSW Planning) approved a Temporary desalination plant at Angus Place Colliery, including approval for the disposal of brine waste back underground (06_0021 MOD 5). Angus Place Colliery since lodged MOD 5 & 8 (withdrawn) proposing to pump this very same brine-contaminated mine water untreated into Wangcol Creek and hence the Coxs River.

The mind boggles as to why WaterNSW continually allow legacy pollution issues such as this to continually be created??? No contaminated water should be dumped down old mine workings.

18. SILCRETE - PART B DIPHENYLMETHANE DIISOCYANATES

Clarence Colliery recently commenced trials spraying a two-part Silcrete compound on the walls and roofs of the 908 and 818 Panels. Part B of that Silcrete mix includes diphenylmethane diisocyanates, for which the MSDS states '*Do not allow to enter drains*' and '*may be a hazard to aquatic life*'.

Is this creating yet another legacy groundwater pollution issue not regulated by POEO Licences? Is WaterNSW keeping a track of all the new chemicals being used by mines in the catchment?

19. BIOSOLIDS/SEWAGE SLUDGE

There have been several proposals to trial sewage sludge for rehabilitation on open-cut mine sites. The mining industry claims everything will be fine, the EPA remain silent, residents are potentially exposed to odours and other health risks, and water quality and natural environments are placed at risk from PFAS, nitrogen and phosphate pollution, high alkalinity, increased algal blooms, and more.

Waste disposal companies regard mine sites as a great place to dump all manner of waste. Weak legislation and oversight are allowing this. WaterNSW must protect the environment, not industry.

20. COAL COMBUSTION/COAL REJECT FIRES/COAL SEAM FIRES/UNDERGROUND HEATING

Coal seam and coal reject dump fires have been regular occurrences in the Lithgow region for many decades, including at Hermitage Colliery, State Mine, Vale of Clywdd No. 1, Baal Bone Colliery etc. Underground fires at Cullen Valley Mine (formerly Tyldesley Mine) have been ongoing for almost 60 years. Most recently four (4) odour complaints were reported in the Castlereagh Coal CCC Minutes of April 2024. <https://ccoal.com.au/wp-content/uploads/2024/06/ccm-minutes-april-2024.pdf>

Incomplete coal combustion not only generates airborne toxins but also water pollutants. Examples include sulfur dioxide, nitrogen oxides, particulates, PAHs, VOCs, dioxins, furans, Arsenic, Mercury, Hexavalent Chromium, Cobalt, Copper, Nickel, Zinc, Selenium, Cadmium, and Lead.

Underground heating kills intact native vegetation and mine rehabilitation plantings, resulting in subsidence and deep smouldering holes that pose a safety hazard for bushwalkers.



Photo: Coal-waste fire State Mine Gully Photo: Coal seam fire – Cullen Valley Photo: Rehab damaged by coal fire

The Department for Mining (aka NSW Planning) continues to approve extensions to this mine claiming impacts can be managed. But coal heating hasn't been 'managed' for 60 years, and is never likely to be.

WaterNSW must stand up to NSW Planning, protect the health of water consumers, local residents, bushwalkers, and the environment by imposing strict POEO Licence conditions and Pollution Reduction Programs, and use stop-work orders until coal combustion issues have been satisfactorily resolved.

21. WASTE DISPOSAL AT MINE SITES / CONTAMINANTS OF EMERGING CONCERN (CECs)

Waste disposal companies will continue to regard old mine sites as a great place to dump all manner of wastes unless WaterNSW and the EPA remain vigilant. A few examples include -

- PFAS at levels 67,500 times higher than recommended drinking water guidelines were recorded in the Bellubula River in 2024 downstream of a composting facility and a Council landfill;
- Contaminants of Emerging Concern (CECs) - substances historically excluded from routine monitoring and regulatory frameworks - such as pharmaceuticals and personal care products (PPCPs), disinfection by-products, persistent organic pollutants, and heavy metals like mercury. Microplastics are known to adsorb heavy metals, persistent organic pollutants (POPs), and pharmaceutical compounds, increasing their environmental risk.
- Formaldehyde-contaminated wood-waste from Borg factories in Oberon has previously been dumped at Pine Dale Mine in Blackmans Flat;
- Tyres continue to be buried at mines sites, with associated combustion & legacy pollution risks;
- Asbestos waste dumping has occurred at one local former mine site, and must be prohibited.

WaterNSW must place a moratorium on the dumping of all waste on former mine sites without a full EIS, to prevent new legacy pollution issues for the Catchment being created.

22. IMPROVED CROSS-AGENCY COLLABORATION

Failure to report Threatened Species on mine sites, failure to report damage to endangered swamps, failure to report Aboriginal Heritage Sites on mine sites, failure to report damage to creeks & waterfalls failure to report pollution incidents – all have been common occurrences at mines in the Lithgow area.

However it is difficult for the community to know whether these incidents have previously been reported by mining companies to relevant agencies, and difficult to find out which is the relevant NSW department to contact. And even when one agency is contacted, others pretend to be unaware.

And often when issues are reported, no response is received. For example many of the pollution incidents mentioned in this submission were reported to various agencies, but official responses have been few and far between. In 2024 LEG went to an enormous effort mapping and documenting 25 previously unrecorded/unreported incidents of mine subsidence damage above Clarence Colliery, sent it to Federal and State Environment Ministers, but to date have not received any response.

WaterNSW could help simplify this process by ensuring improved cross-agency collaboration.

23. MODIFICATION APPLICATIONS BEING USED TO AVOID NORBE AND FULL EIS SCRUTINY

WaterNSW are fully aware that coal mines, power stations and quarries have been using Modifications to avoid the Neutral or Beneficial Effect on Water Quality Assessment (NorBe Test) and full EIS scrutiny, and are fully aware of the water quality implications for the Coxs R catchment. Just some are –

- MOD 4 – Walker/Wallerawang Quarry Biodiversity Reclassification (DA344-11-2001-Mod-5)
- MOD 5 – Water transfer from Angus Place (SSD-5579-Mod-5)
- MOD 7 - Western Coal Services (WCS) (SSD-5579) Proposed Modification 7
- MOD 7 - Clarence Colliery (DA504-00-Mod-7). Modification to extraction Plan
- MOD 8 – Water Transfer to Western Coal Services (MP06_0021-Mod-8)
- MOD 9 - Angus Place Approval Lapse Date
- MOD 10 – Residuals increase Springvale Water Treatment Plant (SSD-7592 & SSD-5579)
- MOD 10 - Angus Place Coal Mine (Angus Place) (MP06_0021) Modification 10
- MOD 11 - Water management during MPPS outages
- MOD 11 – Springvale Water Treatment Plant (SSD-7592-Mod 11)
- MOD 12 - New licenced discharge point for treated mine water
- MOD 12 - Springvale Water Treat Plant (SWTP) (SSD-7592) Proposed Modification 12

Community groups, Local, State and Federal Government agencies including Water NSW have been overwhelmed by a barrage of Modification applications, all trying to avoid proper scrutiny of a full EIS or to comply with the Neutral or Beneficial Effect on Water Quality Assessment (NorBE Test).

WaterNSW has statutory and duty-of-care obligations to **make NSW Planning aware in the strongest possible terms** that this current situation is intolerable, because it makes it impossible for WaterNSW to meet its Operating Licence requirements and regulatory obligations to sustainably manage water resources in NSW for the benefit of current and future generations.

24. 'THE FLAW OF AVERAGES' – REAL TIME MONITORING IS REQUIRED

Mine EPLs only require monitoring of pollution loads from licenced discharge points once a month, or sometimes only 4 times per year. Pollutant levels are 'averaged out' to make everything look fine for a particular month, however on bad days pollutant levels can be lethal for aquatic life.

Real-time Monitoring equipment is readily available, inexpensive, and NSWWater/the EPA must require such equipment to be installed on all POEO Licenced discharge points.

25. FAILURE TO RECORD/REPORT THREATENED SPECIES

LEG has on numerous occasions recorded Threatened Species listed under the Commonwealth EPBC Act and/or NSW BCA in active mine leases which had not been recorded/reported in EISs, or recorded in the Lithgow LGA on the NSW Government Bionet Atlas, ALA, AVH or other biodiversity databases.

For example the first ever records in the Lithgow LGA for *Kunzea cabbagei* (Vulnerable EPBC Act & NSW BCA) were recorded by LEG in 2015. Virtually all *Xerochrysum palustre* (Vulnerable EPBC Act) in the Lithgow LGA were recorded by LEG in 2020 in areas it had previously not been recorded in multiple EISs and Flora Assessments for Angus Place Colliery, Springvale Colliery, and Baal Bone Colliery.

Pultenaea glabra (Vulnerable EPBC Act & NSW BCA) and the newly described *Pultenaea tenebrosa* & *Pultenaea furcata* were first recorded by LEG in the Angus Place and Clarence Colliery mine leases where multiple previous EISs and Flora Assessments over many years failed to record/report them.

In April 2011 LEG recorded *Persoonia marginata* (Vulnerable EPBC, NSW BCA) at Cullen Valley Mine, where Coalpac Pty Ltd failed to report/record it in EPBC Referrals to the Commonwealth; Preliminary Coalpac application 2010; Flora Assessments for Exploration Program (Borehole CP113 to CP129) February 2010; Flora Surveys for Cullen Valley Lease Extension (DA-200-5 2003) April 2003; or Flora Surveys for Feldmast Coal Project in 1997, in breach of the EPBC and BCA. *Persoonia marginata* is also widespread in the Baal Bone Colliery mine lease, however wasn't recorded/reported in numerous EISs, Flora Assessments, or other Planning documents over many decades for that mine.

The first records for *Hibbertia cistiflora* subsp. *quadrastaminea* (Endangered EPBC Act) on Newnes Plateau were recorded by LEG in the Clarence Colliery & Springvale lease - never identified in EISs.

LEG recorded the Eastern Pygmy Possum (Vulnerable NSW BCA) in the Angus Place West proposal area where it had not previously been recorded/reported in multiple EISs over many decades.

Commersonia prostrata (Endangered EPBC Act & NSW BCA) on Newnes Plateau is still not listed on the Bionet Atlas, despite being recorded there over 15 years ago on AVH & ALA. Nor *Carex klaphakei* (Endangered) NSW BCA in Marrangaroo Creek swamp. The NPWS recently failed to identify *Banksia penicillata* (Endangered EPBC & NSW BCA) in the GoS Glamping Resorts EIS. The List goes on.

The point being that consultants from outside the area rely on the NSW Government Bionet Atlas when undertaking desk-top searches for Threatened Species when preparing EISs. How can they possibly know what to search for and avoid unless the Bionet Atlas is accurate and up to date???

LEG has raised this very same issue with NSW Planning in virtually every submission we have ever made on multiple DAs over the past 20 years. Yet no action has ever been taken.

Water NSW should include a recommendation in this Audit that Proponents and/or Consultants must be Prosecuted for failing to record/report Threatened Species in EISs/EPBC Referrals/Statement of Environmental Effects/Biodiversity Assessment Reports/Flora Assessments.

26. FAILURE TO REPORT POLLUTION INCIDENTS

LEG has provided numerous examples above where mining companies failed to report pollution incidents, and it was only due to community vigilance that these incidents were detected at all.

The Clarence Colliery coal-fines spill into the Wollangambe River on 20 December 2023 was reported by a local bushwalker to LEG, who passed it on to the EPA. LEG commends Bathurst EPA staff who responded so quickly just 2 days prior to the prolonged Xmas break. But where were WaterNSW?

And this not only relates to mining companies. The Catchment Audit 2022 reported the 13,000 litre Caustic Soda Spill from Wallerawang STP in August 2019, which was not reported by Lithgow Council until a neighbouring property owner reported it to the EPA some 2 months later in October 2019.

Why didn't NOW212054 Coxs @ Wallerawang PS detect a pH spike between August – October 2019 coinciding with that 13,000 litre Caustic soda spill? Why didn't WaterNSW take immediate action?

A chronic culture of non-compliance perpetuated by the mining and power generation industries for decades has permeated all areas of activity in the LGA and wider region. Unless WaterNSW formally acknowledge and act upon this, the mining industry will continue to push the boundaries of legally, socially, and environmentally acceptable behaviour. Relying on individuals and volunteer groups to report pollution incidents, swamp and other subsidence damage is too little too late. WaterNSW, the EPA, DCCEEW and DEWHA must be more proactive, get out here, and find this damage themselves.

27. FAILURE TO COMPLY WITH WEED MAPPING RECOMMENDATIONS OF PAST AUDITS

LEG has recorded numerous weed species previously not recorded in the Lithgow LGA before on the Bionet Atlas. LEG recently recorded the first-ever Crofton Weed (*Ageratina adenophora*) and Cape Gooseberry (*Physalis peruviana*) records in the LGA near the Coxs River Six Foot Track. Prickly Pear (*Opuntia sp.*), Tree of Heaven (*Ailanthus altissima*), Thornapple (*Datura stramonium*), Tutsan (*Hypericum androsaemum*), and other serious weeds are not listed on the Bionet Atlas as occurring in that area.

The first ever record for *Solanum sisymbriifolium* in the Lithgow LGA was recorded by LEG in 2021 at Marrangaroo. The NSW Government Bionet Atlas still does not contain a single record for this serious weed in the Lithgow LGA, despite outside Consultants relying on the Bionet Atlas in preparing EISs.

The recent Lake Lyell Pumped Hydro EIS failed to identify the WONS weeds Gorse (*Ulex europaeus*) and Scotch Broom (*Cytisus scoparius*) along the riparian zone of Lake Lyell, in breach of biosecurity duties and legal requirements under the *Biosecurity Act (2015)* NSW. Nor the aquatic plant Eelweed (*Vallisneria australis*) or 30 other aquatic plants. The EIS failed to identify serious plant dieback diseases *Phytophthora cinnamomii* and *Austropuccinia psidii* likely to spread due to soil disturbance.

Despite specific advice from NSW Water, DPE Water, NSW Fisheries, and NSW Agriculture on the SEARs for Lake Lyell Pumped Hydro stressing the importance of the riparian zone of Lake Lyell, the 28 Volume 6000 page EIS failed to conduct any flora & fauna surveys along the 33km riparian zone, and restricted the search effort to the immediate disturbance footprint only.

LEG could list dozens more weeds not listed on Bionet Atlas in the Lithgow LGA. WaterNSW are fully aware that weeds can out-compete native vegetation, and that aquatic weeds can adversely impact water quality. That is why previous Audit recommendations sought improved weed mapping & control.

So how is it that our small group can record so many weed species not previously recorded in the Lithgow LGA before, and not listed on the NSW Government Bionet Atlas as occurring in the LGA?

Water NSW must –

- Require the NSW Bionet Atlas to update its records regularly from ALA, AVH, and other sources;
- Improve desktop searches for range-extensions of weeds across the catchment, including ALA, AVH, and other biodiversity databases;
- Conduct more frequent on-ground searches of the riparian zone for weeds and aquatic plants;
- Prosecute Proponents and Consultants for failing to identify Weeds of National Significance (WONS), Prohibited, Notifiable, Noxious and other categories of weeds, diseases, and aquatic plants in EISs, SOEEs, Biodiversity Assessment Report (BDARs), and Flora Assessments.

28. THE PURPOSE-BUILT SPRINGVALE WATER TREATMENT PLANT HAS BEEN UNDER-UTILISED

NSW Parliamentarians and the NSW public were misled that the 2017 SWTP approval would eliminate 42ML/day of contaminated minewater from Angus Place/Springvale Mine being dumped into the Cocks River, and be beneficially reused by Mount Piper Power Station. And were misled into believing Thompsons Creek Reservoir had an unlimited capacity to magically store all excess Angus/Springvale minewater indefinitely until required by MPPS. Yet up to 47% of that minewater was never 'stored' nor 'beneficially reused', but dumped via unlicensed points into Thompsons Creek and Lake Wallace. WaterNSW must ensure that the SWTP is fully utilised, and those illegal discharges are fully licenced.

29. MINE DEWATERING INCREASES SUBSIDENCE RISKS

The dewatering of underground mines has been identified as the main cause for a number of serious mine subsidence events in the past.

https://www.researchgate.net/publication/325562642_Effects_of_dewatering_flooded_abandoned_room-and-pillar_mines_on_surface_subsidence

Locally this issue was raised at the Lithgow City Council meeting and in the Lithgow Mercury in 2010.

<http://www.lithgowmercury.com.au/news/local/news/general/a-watery-grave/1949152.aspx>

In 2010 Lithgow City Council proposed to pump out old Oakey Park Mine works to 'drought-proof' Lithgow. However Delta Electricity (then NSW Government owned) provided a report stating that mine dewatering increases subsidence risks. The risk for individual residential areas, industrial areas, and critical railway areas ranged from tolerable to extreme. The project was abandoned.

Mine dewatering subsidence impacts are likely to extend well beyond Centennial mine footprints on Newnes Plateau into the Greater Blue Mountains World Heritage Area (GBMWH).

WaterNSW must consider impacts of mine dewatering on subsidence, and justify ongoing dewatering of abandoned coal mines such as Angus Place Colliery and Newcom Colliery where recent damage has occurred to an Aboriginal Heritage cave art site adjacent old Longwall and Bord & Pillar workings.

30. CLARENCE SANDS – ILLEGAL PUMP IN FARMERS CREEK SWAMP, GARDENS OF STONE SCA

In October 2025 while conducting regular threatened species monitoring LEG volunteers sighted a pump extracting water from Farmers Creek Swamp (an endangered Newnes Plateau Shrub Swamp) in the Gardens of Stone SCA. GoogleEarth revealed a track/pipeline extending from this point to Clarence Sands. LEG reported it to info@environment.nsw.gov.au, but has not yet received a reply.

WaterNSW should investigate the legality of this water extraction by Clarence Sands from an endangered Newnes Plateau Shrub Swamp in the Gardens of Stone SCA.

CONCLUSION

Attached is the Lithgow Environment Group water quality monitoring data 2006 – 2026 comprising:

- An Excel database containing LEGs selection of the most relevant water monitoring data;
- A PDF file containing GPS coordinates and descriptions for LEG water monitoring sites;
- A KML link below showing the location of LEG water monitoring sites on GoogleEarth.
https://earth.google.com/earth/d/1_25t3gI7falzW3COhx3nShiAD98jUilu?usp=sharing

The data and information provided remains the intellectual property of Lithgow Environment Group.

It must not be shared by Eco Logical Australia or WaterNSW with any third party unless expressly authorised in writing by LEG. If this data is used in this Audit, then LEG must be acknowledged.

Thankyou for this opportunity to provide comments.

Yours faithfully

Chris Jonkers BSc ANU
Lithgow Environment Group Inc
lithgowenviro@gmail.com
PO Box 3081 Bowenfels 2790 NSW
<https://lithgowenvironment.au>
(1) [Lithgow Environment \(@info_leg\) / Twitter](#)



REFERENCES

- [Springvale Water Treatment Facility Modification | Independent Planning Commission](#)
- <https://www.nationaltribune.com.au/coal-mine-pollution-still-surg-ing-into-sydney-drinking-water-despite-clean-up-notice/>
- [Platypus vanish from river where Charles Darwin pondered evolution - ABC News](#)
- <https://www.abc.net.au/news/2023-11-07/water-contamination-lithgow-coal/103067856>
- <https://www.smh.com.au/environment/conservation/colossal-pollution-spikes-in-sydney-s-drinking-water-catchment-20260127-p5nxgc.html>
- https://www.abc.net.au/news/2019-12-01/sydney-dams-being-contaminated-with-metallic-sludge/11751202?utm_source=abc_news_web&utm_medium=content_shared&utm_campaign=abc_news_web&utm_content=mail
- <https://4nature.org/projects/damaging-lithgow-coal-mines/challenging-coal-mine-pollution-of-sydneys-drinking-water/>
- <https://www.abc.net.au/news/2025-09-11/damning-report-into-handling-of-pfas-contamination-sydney-water/105763308>
- <https://www.abc.net.au/news/2025-02-13/pfas-blue-mountains-blood-testing/104917304>
- <https://www.abc.net.au/news/2025-04-10/nsw-epa-traces-belubula-river-pfas-contamination/105159960>
- <https://www.abc.net.au/news/2026-02-07/pfas-contamination-investigation-ourimbah-creek-catchment-nsw/106037472>
- <https://www.abc.net.au/news/rural/2021-10-16/contamination-concerns-over-90km-wastewater-pipeline/100352866>
- <https://www.lithgowmercury.com.au/story/7648730/lithgow-residents-to-boil-water-before-consuming-it/>
- <https://www.9news.com.au/national/lack-of-data-a-risk-to-sydney-s-water/84016fab-81fd-4fbb-92d8-e7987439b66e>
- [Water regulation worries laid bare in new audit - Government News](#)
- <https://www.epa.nsw.gov.au/Your-environment/Water/managing-water-pollution-in-nsw/sydney-drinking-water-catchment-industry-activity-map>
- <https://www.abc.net.au/news/2016-05-09/mine-expansion-could-put-sydney-drinking-water-at-risk/7396980>
- <https://www.abc.net.au/listen/programs/pm/health-fears-speed-up-lithgow-water-tests/1354580>
- <http://riverssos.org.au/2010/11/23/toxic-waste-in-towns-drinking-water/>

- <https://www.smh.com.au/environment/sustainability/plant-still-polluting-river-beyond-guidelines-20100419-spef.html>
- <https://www.smh.com.au/environment/pollution-index-reveals-the-hidden-costs-of-electricity-20100402-rjy0.html>
- <https://www.smh.com.au/environment/health-fears-for-lithgow-residents-amid-coal-boom-20100605-xlr8.html>
- <https://www.mininghistory.asn.au/journal-volume-10-2012/>
- <https://www.abc.net.au/news/2024-01-04/mass-fish-kill-of-redfin-near-blue-mountains/103283880>
- <https://www.australianmining.com.au/toxic-coal-mine-discharge-affects-blue-mountains/>
- <https://researchportalplus.anu.edu.au/en/publications/selenium-bioaccumulation-and-biomagnification-in-lake-wallace-new/>
- <https://researchsystem.canberra.edu.au/ws/portalfiles/portal/69579604/EN22032.pdf>
- <https://researchers.mq.edu.au/en/publications/speciation-of-arsenic-and-selenium-in-coal-combustion-products/>
- <https://nswdpe.intersearch.com.au/nswdpejsui/bitstream/1/14357/1/2010-audit-sydney-drinking-water-catchment-volume-1-main-report-10973.pdf>
- www.smh.com.au/environment/sustainability/disused-mine-leak-is-killing-life-in-river-20080504-2atg.html
- <https://www.smh.com.au/environment/sustainability/labor-knew-about-toxic-water-threat-20090618-cm02.html>
- <https://www.nationaltribune.com.au/caustic-soda-discharge-costs-lithgow-city-council-543-000-after-epa-action/>
- <https://www.miragenews.com/2011-lithgow-water-chemical-concentration-media-1256211/>
- <https://www.waterquality.gov.au/anz-guidelines/guideline-values/default>
- https://assets.nationbuilder.com/natureorg/pages/4621/attachments/original/1738293846/Centennial_Coal_Report_FINAL.pdf?1738293846
- <https://www.epa.nsw.gov.au/news/epamedia/260223-clarence-coal-mine-ordered-to-pay-815-000-following-wollangambe-river-pollution>
- <https://www.planningportal.nsw.gov.au/major-projects/projects/lake-lyell-pumped-hydro-energy-storage>
- <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-12-new-licenced-discharge-point-treated-mine-water>

- <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-11-water-management-during-mpps-outages>
- <https://www.planningportal.nsw.gov.au/major-projects/projects/springvale-water-treatment-facility>
- <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-10-residuals-transfer-increase>
- <https://www.planningportal.nsw.gov.au/major-projects/projects/springvale-wtf-mod-6-receipt-water-angus-place>
- <https://www.planningportal.nsw.gov.au/major-projects/projects/mod-8-extend-interim-water-management-strategy-time-frame>
- <https://platypus.asn.au/>
- <https://www.wa.gov.au/system/files/2022-04/WQPG-11-Mine-dewatering.pdf>
- <https://www.nhmrc.gov.au/about-us/publications/australian-drinking-water-guidelines>
- <https://ccoal.com.au/wp-content/uploads/2024/06/ccc-minutes-april-2024.pdf>
- <https://apps.epa.nsw.gov.au/prpoeoapp/>
- <https://atlas.bionet.nsw.gov.au/>
- <https://www.ala.org.au/>
- <https://www.inaturalist.org/places/australia>
- <https://avh.chah.org.au/>
- https://www.researchgate.net/publication/325562642_Effects_of_dewatering_flooded_abandoned_room-and-pillar_mines_on_surface_subsidence
- <http://www.lithgowmercury.com.au/news/local/news/general/a-watery-grave/1949152.aspx>
- <https://lithgowenvironment.au>