Friends of the Gippsland Lakes

From the mine to the Gippsland Lakes

Hazelwood mine rehabilitation and the Gippsla
Lakes Ramsar Site

Community briefing, 21 October 2026



Golden bell frog (Vulnerable) Photo: R. Bilney

FRIENDS OF THE GIPPSLAND LAKES

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What happens at Hazelwood ends up in the Lakes

20 to 30 GL a year, piped to the void

Hazelwood pit lake
637 GL, filled over about 10 to 16 years depending on fill rate and climatic conditions

about 70 km from Hazelwood to the Ramsar site



to Lakes Victoria and King, and Bass Strait

Morwell River flows above 2.4GL a day

discharge out – will this ever happen?

Moondarra Reservoir on the Tyers River
fill water bought here

Morwell River joins the Latrobe
the pit lake connects here

Rosedale gauge
where the State measures flow

Lower Latrobe wetlands
Sale Common, Dowd and Heart Morass

Lake Wellington
first of the Gippsland Lakes

57%
of Lake Wellington's fresh water comes from the Latrobe, more in dry years.

129 GL a year
is the Latrobe's existing environmental water shortfall, on the EES's own figures.

Forever
Once full, the lake evaporates more than it gains: 2.7 to 8.2 GL a year of top-up, with no end date.

Sources: FoGL Supporting evidence A.4, C.1, C.2, C.26; EES Chapter 4 Table 4-4; TR D p. 175; Annex 1 section 1.3.

A connected pit lake sends its water downstream

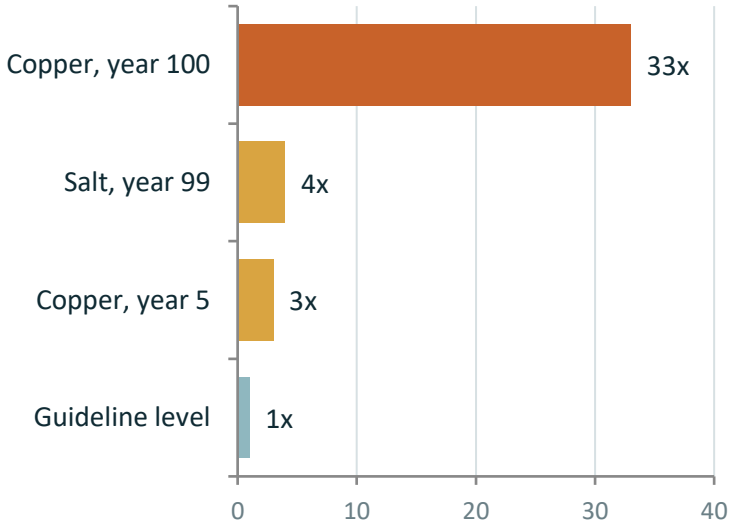
Floods in, discharge out
Takes Morwell flows above 2,400 ML a day. Once full, discharges over a weir on 6 to 17 per cent of days, 1.7 to 6.4 GL a year.
Severely diminished

Metals and nutrients rising
Aluminium, copper and zinc exceed the aquatic guideline in every scenario. The lake is predicted to turn eutrophic. Mercury is not modelled at all.

A gate with no numbers
The outlet gate is closed by default, but its only stated criteria are pH, salt and turbidity. No metal, no nutrient. Nothing stops the gate opening on water above guidelines.

Receiving waters already carrying a load
Heart Morass carries mercury and a PFAS consumption advisory. Lake Wellington is eutrophic and bloom prone. Copper in the wetlands is the one pathway the EES rates above low risk.

How far above the aquatic guideline the lake water is predicted to be



Sources: FoGL Supporting evidence C.26 to C.29; EES TR C1 Tables 10-4 and 10-10; TR D Attachment 3.3; RSMP 2024. Salt is TDS against the river objective.

A Ramsar wetland of international importance

60,015 ha
Australia's largest estuarine lagoon system

6 of 9
Ramsar criteria met

20,000+
waterbirds regularly supported

1%
of the world's Chestnut Teal, Fairy Tern and Little Tern

Waterbirds
Black swans, teal, pelicans, ibis and cormorants; important breeding colonies at Sale Common and Dowd Morass.

Threatened birds
Endangered: bar-tailed godwit, common greenshank. Vulnerable: fairy tern, hooded plover, Latham's snipe, sharp-tailed sandpiper.

Threatened frogs
Growling grass frog and green and golden bell frog, both nationally vulnerable; the bell frog bred in Heart Morass in 2021.

Fish and wetland plants
Fish spawning and nursery grounds; reed beds, paperbark swamp forest, saltmarsh and three threatened plants.



Australasian bittern
Endangered. Found at Sale Common in 2020. The proponent's own ecologists call these wetlands "unquestionably" critical habitat.

Photo: Imogen Warren, CC BY-SA 4.0

Sources: EES Chapter 25 Table 25-4 (Ramsar criteria); FoGL Supporting evidence D.6, D.11, D.12; Hale 2024; RSMP 2024 p. 25; GLIBA 2026 pp. 83, 117.

Gippsland Lakes wetlands are important drought refuges



Freckled ducks, endangered in Victoria, move to coastal wetlands when the inland dries out. Photo: R.Bilney

The Lakes are listed under Ramsar for the refuge they provide in adverse conditions. BirdLife East Gippsland's twelve-year survey shows what that means in practice.

More birds after a dry year

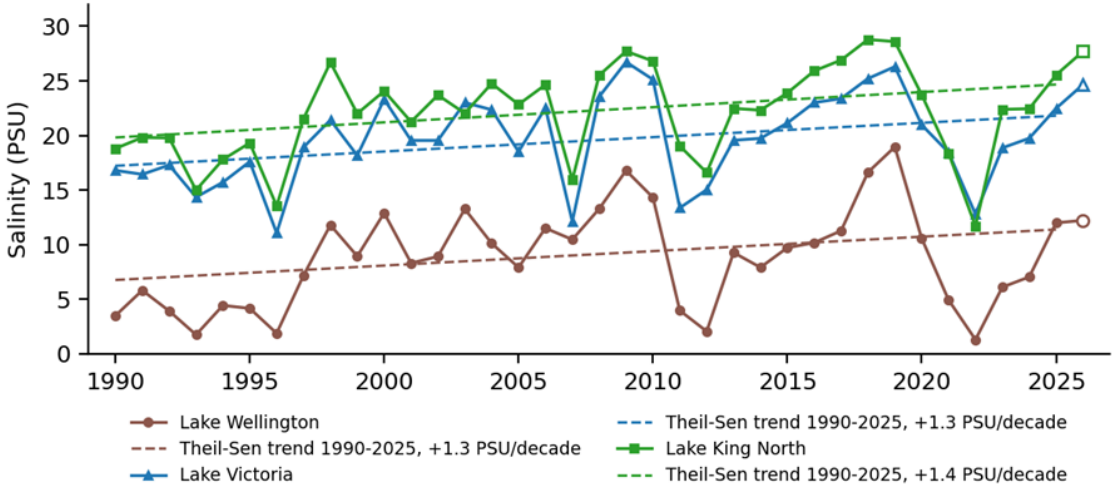
Duck and herbivore numbers on the Lakes rise when rainfall in the previous 3 to 12 months was low, the reverse of the pattern across eastern Australia.

The water loss bites hardest in dry years

The project's effect on Lake Wellington is 0.1 ppt in a wet year and 1.8 ppt in the dry year of 2019, when the lake already sat at three times its salt threshold. The water is diverted exactly when the refuge is most needed.

Sources: BirdLife East Gippsland, GLIBA 2026 pp. 6-7, 13; Hale 2024, p. 3; FoGL Supporting evidence D.8A, D.10B; EES TR D Attachment 3.2.

Getting saltier, right across the Lakes



Yearly median surface salinity at EPA's monitoring sites, 1990 to 2026 (2026 to May, hollow markers). Dashed lines show the long-term trend.

Not just dry years

Even allowing for how much river water came in, the Lakes are 1.8 to 3.3 PSU saltier than in the 1990s, and rising at every main-lake site.

Turning marine

Lake Victoria's water column is becoming uniformly marine. Lake Wellington's salinity is rated poor by the State.

The birds show it

Freshwater species such as the Australasian grebe are declining, salt-tolerant species like chestnut teal, shelduck and great pied cormorant are increasing, "consistent with the increasing salination" of the site.

Sources: EPA Victoria fixed-site data to May 2026; FoGL Supporting evidence Annex 1 sections 1.2 and 1.4; 2021 Environment Report; GLIBA 2026.

A health check, 2026

Salt

Poor

Lake Wellington over its threshold in 2024/25 and 2025/26; Lake King North over its threshold this year.

Nutrients

Over limit

Total nitrogen above threshold every year since 2018/19. Phosphorus over in four of the last five years; 2025/26 median 105 tonnes against a limit of 62.

Algal blooms

Recurring

At least ten blooms in the main lakes since 2001. This year a Karlodinium bloom killed fish at Loch Sport; seafood advice still in place in June..

Wetlands

Declining

Salt wedge pushed up past the wetland inlets. Paperbarks declining at Dowd Morass, common reed in marked decline, Sale Common went 18 months dry in the last drought, half its limit..

Ramsar limits

Met, barely

No limit exceeded in 2022, but black swans sat exactly at their limit, and Sale Common salinity could not be assessed for lack of data.

Monitoring

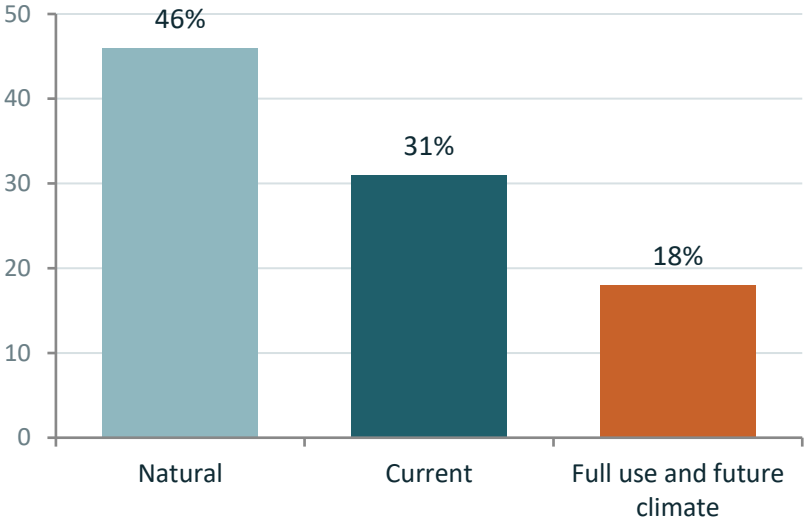
Thinning

EPA sampling cut to alternate months in June 2025. Lake Wellington's bottom water unsampled since 2018; Lake Reeve since 2023.

Sources: FoGL Supporting evidence Annex 1 sections 1.2, 1.5, 1.7; D.7, D.7A; Hale 2024; RSMP 2024 pp. 31, 49 to 50; DEECA bloom update 3 June 2026.

Less fresh water in, more sea water pushing up

Share of months in which Lake Wellington gets a flushing flow (over 130 GL a month)



25 to 75%	less streamflow in the rivers, 1997 to 2014 compared with 1975 to 1997
About 50%	of the years since 1990 have been drought, much of it extreme (CSIRO)
71% shortfall	15 of 21 years since 1997 in which the Latrobe's minimum environmental water demand went unmet. Before 1997 it was 3 of 22.
+87%	more very-low-flow days by 2060, with 18 per cent fewer high-flow days (CSIRO, high emissions)
1.5 to 2.3 yrs	between extreme sea-level events at Lakes Entrance by 2050, for an event that was once one in 100 years

Sources: State EEA 2020 Table 8; EES Chapter 8 p. 8-4; DELWP 2020 p. 24; CSIRO 2022 pp. 56, 60, 62 to 63; FoGL Supporting evidence C.2, C.7, C.9A, C.10A, D.9A.

What less freshwater does to a Ramsar wetland

Lake Wellington is flushed less often

Salinity and nutrients build up: more blooms, less habitat for freshwater plants and the birds that use them.

The EES's own benchmark: two years without a flush has "significant ecological consequences".

The sea pushes further up the river

The salt wedge now reaches past the points where water is let into the wetlands. Paperbark and reed are declining: the bittern's and frogs' habitat.

Already recorded in the State's Ramsar management plan as a major long term threat.

The wetlands stay dry for longer

Under the current limits, Sale Common may not stay dry for more than 36 months, and Dowd and Heart Morass for more than 60.

The EES never calculates how long the wetlands stay dry.

The State's own 2020 study: harvesting floods to fill pit lakes "will potentially lead to a change in the ecological character of the Gippsland Lakes Ramsar Site".

Sources: EES Chapter 25, p. 25-14; RSMP 2024; Hale 2024; State EEA 2020, p. 43; FoGL Supporting evidence C.19, D.3, D.4, D.4A, D.7A.

A fixed take from a shrinking river, forever

Three times the old use, with no rules

Up to 30 GL a year, about three times the power station's net use, under a private contract. No cap, no season, no low-flow floor, no end date. Loy Yang's entitlement has all four.

It harvests the floods that reset the lake

The connected option takes Morwell flows above 2,400 ML a day. In one winter, 2022, 34 GL of flood water went into the void. High flows are the only way salt and nutrient buildup in Lake Wellington get flushed out to sea.

Climate and the take compound

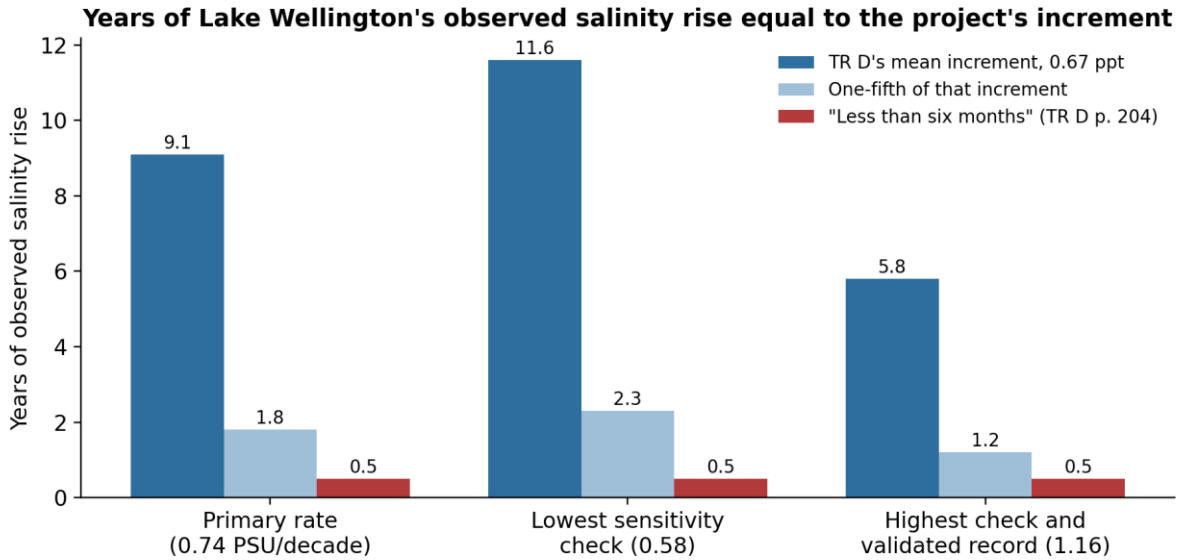
CSIRO finds drought and extraction "act synergistically". Half the years since 1990 were drought; the EES set its dry-climate results aside. Three mines draw on one river, with no combined scenario.

No one will see it

The smallest change lake monitoring can detect is 1.7 to 1.9 PSU, nearly three times the project's increment. The licences behind the top-up expire in 2030 and 2035.

Sources: FoGL Submission findings 3, 6, 11, 12, 14; Supporting evidence B.8 to B.12, C.9A, C.10A, C.17A, G.13; Annex 1 section 1.8.

"Less than six months" is six to twelve years



Source: EPA fixed-site data 1990 to 2026, flow-adjusted (Annex 1, section 1.4); TR D Attachment 3.2 p. 4 and p. 204.

Less than 6 months

What the EES says, with no working shown (TR D p. 204).

0.74 PSU a decade

How fast Lake Wellington is really getting saltier, once river flow is allowed for.

6 to 12 years

What the project's own 0.67 ppt increment equals at that rate. Not months.

Sources: TR D s 8.2.3, p. 204 and Attachment 3.2, p. 4; EPA Victoria fixed-site data 1990 to 2026, flow-adjusted, in FoGL Supporting evidence Annex 1 section 1.4; D.8A.

The same rules as the other mines, and protection for the Lakes

The same rules as Loy Yang

Cap the take at historic use, 10.3 GL a year, June to October only, none when the Latrobe is low, under a Water Act instrument.

No Morwell River connection

Refuse the interconnection and any licence to harvest flood flows, as the Commonwealth's scientific committee recommended.

Environmental water first

Deliver the promised Latrobe and Tyers environmental water before any take above the cap. Top up the lake with manufactured water, such as highly treated recycled water from the Gippsland Water Factory, not the river.

Active protection

Flow triggers at Rosedale, the Swing Bridge and the wetlands; annual Ramsar assessment; independent audit; no discharge above strongest contaminant level limits.

Points to emphasise in your submission

1 No new water take

No water for the pit lake beyond what the power station historically used.

2 Use manufactured water

Recycled water from the Gippsland Water Factory, treated so it can't harm the lake or the river.

3 No connection to the rivers

No plumbing between the pit lake and the Morwell River or Eel Hole Creek, so no overflow.

4 Only skim big floods, if any flood water is taken at all

Only from floods bigger than a 1-in-20-year event, at a restricted rate, so Lake Wellington still gets its flushing flows.

5 No new groundwater licences

Especially on the east side, where pumping could affect Rosedale's and Sale's water supplies.

6 Replace the lost water

The pit lake returns nothing to the river. Seek changes to the Thomson Reservoir bulk entitlements to make up for it.

Submissions close 11.59 pm, Monday 2 November 2026, via Engage Victoria

Sources

Hazelwood Rehabilitation Project EES (ENGIE, 2026)

Chapter 4: Project description; Chapter 8: Climate change; Chapter 25: Matters of national environmental significance

Technical Report C1: Lake Water Balance and Water Quality (RGS, July 2026)

Technical Report D: Catchments, Rivers and Wetlands, with Attachments

Attachment VI: Response to IESC Advice (AECOM, August 2026)

Commonwealth and State

IESC (2025) Advice 2025-162 on the Hazelwood Rehabilitation Project

Hale, J. et al. (2020) Latrobe Valley Regional Water Study: Ecological Effects Assessment, DELWP

DELWP (2020) Latrobe System Water Availability Technical Report, Latrobe Valley Regional Rehabilitation Strategy

Mine Land Rehabilitation Authority (2022) Hazelwood Rehabilitation Investigation Report

Gippsland Lakes Ramsar site

Hale, J. (2024) Addendum to the Ecological Character Description for the Gippsland Lakes Ramsar Site, DEECA

East Gippsland CMA (2024) Gippsland Lakes Ramsar Site Management Plan

East Gippsland CMA (2021) Gippsland Lakes Environment Report

Science and monitoring data

CSIRO (2022) Vulnerability of the Gippsland Lakes Ramsar Site and its catchment to bushfire and climate change (Kirono et al.)

Healey, C. (2026) Species Richness and Abundance of Wetland Birds in the Gippsland Lakes: the First Twelve Years of the GLIBA Project 2012 to 2023, BirdLife East Gippsland

EPA Victoria, Gippsland Lakes water quality data 1990 to 2026 (Marine Fixed Site Network, to May 2026)

DEECA Water Measurement Information System, Latrobe River at Rosedale (site 226228)

DEECA (2026) Gippsland Lakes algal bloom update, 3 June 2026

Friends of the Gippsland Lakes (2026)

Submission to the Hazelwood Rehabilitation Project EES: Submission in brief, and Supporting evidence (full page references in Exhibit 5)

Photos

Green and golden bell frog; freckled ducks: R. Bilney

Australasian bittern: Imogen Warren, CC BY-SA 4.0, via Wikimedia Commons