

# Bowdens Silver Mine Submission

The Platypus – as synonymous with Australia as the Kangaroo and Koala, yet more inciting of marvel and wonder. It's strange and ethereal appearance is one that is entirely unique to our sunburnt land and is so spectacularly unique that upon discovery by Europeans it was believed to be the product of a hoax. But a hoax it is not. Eastern Australia has been home to the platypus long before European settlers, Indigenous Australian's and even the megafauna. With the discovery of a 122-million-year-old fossil in southeastern Australia, we know that platypus' has been an Australian resident since the age of the dinosaurs. Significantly, this means that Australia is home to the oldest living family of mammals on the planet. Similarly, the platypus and the echidna are the only monotremes on the planet. Such claims are commanding of great respect; respect that all Australian's should uphold with humbled awe. It is only right that we as Australian's understand the honour and responsibility that comes with having power over an environment that supports this ancient and iconic animal.

The platypus is also of great cultural significance. Due to its tenacious and peaceful nature, the monotreme has been adopted as the emblem for the Australian Federal Police. And likewise, in 1971 the platypus was instated as the emblem for the state of NSW.

As someone who has lived on the Lawson Creek since childhood, I have had the privilege of multiple platypus sightings as I played along the waterway. These sightings were moments of great excitement and wonder. It is because of this that I feel so strongly about protecting these mysterious and rare creatures, whose home we share.

The native habitat of the platypus is in the rivers, streams and lakes of eastern Australia, especially the river systems west of the Great Dividing Range. Lawson Creek, which will be the most significantly impacted by the Bowden's Silver Mine, is one such platypus habitat. Sadly, platypus populations are facing extinction as a direct result of man-made changes to the environment and consequently, habitat degradation. Examples of these harmful human actions include water extraction resulting in reduced water availability and dam construction. However, it is not only the survival of current platypus populations at risk of premature demise, but also the ability for those populations to grow. The reproductive success of platypus' is heavily dependent on the availability of nutritious food which in turn is influenced by the quality, volume and overall health of the waterway. In addition, female platypus' are much more likely to suffer when forced to compete with the larger and venomous

male. These animals will slowly starve to death in the absence of sufficient water volumes. Though platypus burrows are located out of water, this in no way means that they are equipped to survive away from water for extended periods of time. By leaving their home waterway in search of a more suitable habitat, the platypus puts itself at extreme risk – supposing they don't perish due to heat stress, the next fatal concern is predators. As the Lawson Creek is bordered by farmland, predators such as foxes, cats and dogs; are common and will kill indiscriminately whether wild or tame.

The marvelous and symbolic platypus is vanishing before our eyes. Due to worsening droughts, climate change and human destruction and permanent remodeling of the natural environment, research predictions are dire. It is predicted that between 47-73% of the platypus population will be destroyed within the next 50 years based on current projections. NSW government scientists and ecologists warn that the areas of highest concern are the Hunter, New England and Central West. Already, local extinction is evident as the population distributions in 41.1% of sub catchments had reported no sightings in the past 10 years; and both NSW and Victoria have water systems where platypus' are now considered extinct. If the Central West is not exceptionally careful it will inevitably be swept along the same devastating path as the Wimmera region in western Victoria where 20-30 years ago platypus' were abundant and a common sight. That was until a combination of drought and water extraction for irrigation dramatically altered the river flow of the Murray-Darling Basin. Now, all platypus populations have disappeared from the basin except for one small waterway. Like elsewhere in NSW, the Mudgee region is prone to dry spells and after the harsh peak of drought of 2019-2020 in which the Lawson Creek uncharacteristically dried up, it is obvious that the water supply of the creek cannot be taken for granted. It is therefore inconceivably arrogant to downplay the effects that extracting 780 megalitres by the Bowdens Mine will inevitably have on the creek system.

Moreover, the Lawson Creek will further suffer from the seeping of toxic chemicals into the waterway via run off and underground leaching. As seen in Melbourne, declines in platypus abundance is correlated to increases in toxic metal concentrations in the water. Here dissolved nitrogen and phosphorus, and the presence of zinc, lead and cadmium in the sediment were found to result in fewer platypus. The Bowdens Silver Mine will predominantly produce Lead (42% - 95,000 tonnes) and Zinc (57% - 130,000 tonnes) while the less threatening sounding Silver will only make up a tiny fraction (1% - 1,880 tonnes). There is a real risk that these elements may end up in the Lawson Creek via leaching. It is also believed that the levels seen in the Melbourne example was the result of these substances being taken up by aquatic insects – the platypus' main food source. Therefore, it is evident that

the local platypus population will be at high risk of suffering due to contaminated water.

As the platypus protection status is currently near threatened it is poignant to note section 2.4 of the Biodiversity Conservation Act 2016 No 63:

2.4 Damaging habitat of threatened species or ecological community:

(1) a person –

(a) who damages any habitat of a threatened species or threatened ecological community, and

(b) who knows that it is the habitat of any such species or community, is guilty of an offence.

<https://www.legislation.nsw.gov.au/~view/act/2016/63>

It is critical that the status: near threatened, not be devalued but instead be seen as the crucial point beyond which we will not allow to occur.

Thus, Bowdens Silver Mine is a clear and direct threat to an Australian icon. The presence of the platypus in the Lawson Creek should not be taken for granted and should be treated with the utmost caution. The platypus is an ancient and fantastic creature, the likes of which are seen no where else on the planet. Who are we to decide whether the platypus' existence is worthwhile? We have chosen to honour this animal by immortalising it in our emblems and the image we project of ourselves as a society – does this not mean it is deserving our protection? Bowdens Silver Mine has decided on its answer – no.

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