

## THE NATIONAL TRUST OF AUSTRALIA (NSW)

### Policy on Mining beneath Dams, Reservoirs and Water Catchments

#### Preamble

In a 2014 report on mining in Sydney's catchments<sup>1</sup>, the NSW Chief Scientist found there was insufficient data available in a coherent form to provide a deep and reliable understanding of cumulative impacts of mining in Sydney's water catchments. Surface to mine hydraulic connection is thought to have occurred in the catchment with the mining of the Wongawilli Seam near the Avon Reservoir in 1982. In December 1982 a water inflow occurred to the mine, with discharge reaching 100,000L/hr, causing considerable damage to the mine.

Thirlmere Lakes situated in the vicinity of the Sydney Water Catchment, but outside of the Water Catchment Special Areas is a set of perched lakes, within the Hawkesbury Sandstone, with a longwall mine approximately 1 km away. The Lakes have historically had a fluctuating water level. Concern was raised in the first decade of the 2000s that the lake levels did not appear to be responding to recently increased rainfall following the end of a drought. The Chief Scientist and Engineer concurred with the Thirlmere Lakes Inquiry's observation that, at present there is not enough understanding of the system to be able definitively to determine the contributions of different causes to the reduced water, and that further monitoring is required, including monitoring of groundwater, surface water and precipitation. More modelling was also required to understand the dynamics of the water in the system and its response to inflow and outflow events. Data collection was needed within the catchment of the Thirlmere Lakes, further afield in the region where the groundwater was understood to be moving and taken, and in the vicinity of the mines.

Threatened species and communities legislation and regulation is one way in which the community assigns importance to environmental features. In NSW this is done through listings under the Threatened Species Conservation Act 1995. Coastal Upland Swamps, which includes swamps of the type found in the Catchment, have been listed under this Act as Endangered Ecological Communities, with longwall mining considered a Key Threatening Process. This listing has been in place since 2002, yet longwall mining has continued to impact swamps in the Catchment. While this listing affords some protection to individual swamps, it does not assist in decisions as to how many swamps can be impacted in the region without noticeable damage to the Catchment's ecosystem as a whole.

On 14 October 2019, an independent panel led by Jim Galvin, a retired UNSW professor of mining engineering, made 50 recommendations<sup>2</sup> on how future mining should be managed under the Upper Nepean and Woronora catchments which account for about 28 per cent of Sydney's water. The panel found subsidence following coal extraction and the subsequent fracturing of the sandstones reaching the surface about 400 metres above may result in water losses of as much as 8 million litres per day. A broader assessment of all mines in the Special Areas - not just the four currently operational mines that the panel examined – could put the loss as high as 42 million litres a day, or as much as 14 per cent of supply from nearby dams.

In March 2020, US Company Peabody Energy received NSW Government approval to mine for metallurgical (coking) coal beneath Woronora Reservoir, a Sydney drinking water dam which supplies 100 per cent of the drinking water for some Sutherland Shire suburbs, and 30 per cent for Northern Illawarra. Woronora Reservoir is part of a system which supplies water to more than 3.4 million people in Greater Sydney. The approval will allow Peabody Energy to use long wall mining machines 450 metres below the earth's surface to excavate along coal seams directly below the dam. While heavy rainfall in the early months of 2020 has almost doubled the water levels of Sydney's dams to around 83 per cent, on 10 May 2020 Woronora Reservoir had the lowest water level at 63.6 per cent of the eleven major Greater Sydney dams and reservoirs.

#### Policy

1. The National Trust opposes mining beneath dam and reservoir water bodies and catchment tributaries as this practice has the potential to threaten water supplies and impact on endangered ecological communities.
2. The National Trust urges the immediate setting up of 'whole of catchment' modelling systems that could assess and predict cumulative impacts, as recommended by the NSW Chief Scientist in 2014.
3. The National Trust urges that the NSW Government establish a standing expert group on Catchment cumulative impacts to provide advice for government instrumentalities, the Planning Assessment Commission and the NSW community and community organisations.
4. The National Trust calls for the preparation of properly independent technical reports as part of the mining application process

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<sup>1</sup> *On measuring the cumulative impacts of activities which impact ground and surface water in the Sydney Water Catchment*, NSW Chief Scientist & Engineer, May 2014

[https://www.chiefscientist.nsw.gov.au/\\_\\_data/assets/pdf\\_file/0007/44485/140530\\_SCA-Report-Final-Combined.pdf](https://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0007/44485/140530_SCA-Report-Final-Combined.pdf)

<sup>2</sup> *Final Reports of The Independent Expert Panel for Mining in the Catchment*,

<https://www.chiefscientist.nsw.gov.au/reports/independent-expert-panel-for-mining-in-the-catchment>, 14 October 2019