

Ref: **Petition No. 098 - Protect Lake Jasper**

Committee Clerk
Standing Committee on Environment and Public Affairs

Thank you for providing me with the opportunity to address the concerns raised in the petition.

The petition raised a number of issues, namely

- To protect Lake Jasper from any type of application for a mining lease
- Land previously excised from D'Entrecasteaux National Park to be reinstated as part of the National Park
- The area has significant cultural heritage and environmental values that would be destroyed by mining

The area of concern was previously excised from D'Entrecasteaux National Park in 1996 is part of the Gingilup-Jasper Wetlands.

With a surface area of 4 sq. km. Lake Jasper is one of Western Australia's few large freshwater lakes that is relatively undamaged by human activity. The Lake is a near pristine component of the Gingilup-Jasper Wetlands System of freshwater lakes, marshes and shrub-swamps.

Lake Jasper is a major nursery area for freshwater fishes and frogs and harbours a unique array of plant species. Scientific surveys of the area have ranked Lake Jasper third among the 27 south coast wetlands for species diversity and abundance. Some birds using the Lake are covered by the Japan/Australia or China/Australia Migratory Bird Agreements. (Roger P. Jaensch, *Waterbirds in Wetlands on the South Coast of Western Australia, Summer 1991-2.1992*, Wildlife Research Centre, CALM, Woodvale, WA).

Referring to potential threats to waterbirds by sand mining activities in the catchment areas of Lake Jasper and Lake Quitjup, Jaensch reports that: *Lowering of depth by as little as 30-50 cm in spring or early summer would probably dry out large areas of shrub thickets and tall or low sedges, thereby rendering the wetlands unsuitable for breeding by the little bitterns and most other waterbird species. This result would be unacceptable at Lake Jasper in particular because it is ranked third amongst the 27 wetlands in terms of number of species found breeding.*

The area Strategic Sands proposes to clear and mine falls within Lake Jasper's winter-spring floodzone, an area that is a surface water catchment for Lake Jasper.

A mine adjacent to Lake Jasper at this location would disrupt natural surface flow into the Lake and any unseasonal high rainfall event could result in the transfer of mine wastes, which include radioactive sediments, into the Lake itself.

A study on the hydrology of the Lake Jasper area identified a connection between the groundwater, surrounding surface water and the Lake. Lake Jasper's surface water and groundwater recharge area occurs to the north and west of the Lake corresponding with the proposed mine area. (Dr. J. V. Turner et al, *CSIRO Groundwater - Lake Water Interactions near Lake Jasper, D'Entrecasteaux National Park (1996)*)

(Dr J V Turner et al, *CSIRO report – Hydrological Impacts of Mineral Sand Mining at Jangardup*) provides detailed information about the drawdown of groundwater at the former Jangardup mineral sands mine from mining operations. The report found that groundwater drawdown was up to 0.5 metres to a distance of 1.5km. Strategic Sands' proposed mine would operate 300 metres from Lake Jasper and in the centre of the Gingilup-Jasper wetlands. Given the identified connection between Lake Jasper and the shallow/superficial groundwater aquifer a similar drawdown would have significant negative impacts on Lake Jasper and the surrounding Gingilup-Jasper Wetlands.

Strategic Sands' proposed mine will essentially cut the Gingilup-Jasper Wetland ecosystem in half permanently damaging the ecology as complete rehabilitation will not be possible due to the altering of soil structure and composition. The surface and groundwater hydrology will be drastically altered and the ecological connectivity significantly damaged through the Gingilup-Jasper Wetland area. Therefore, there is the potential for the proposed mine to have significant negative impacts on Lake Jasper.

Dust from mining activities could also be deposited into the Lake and surrounding wetlands. The former mineral sands mine at Jangardup was recorded as carrying out emergency discharges of large amounts of contaminated water off-site.

Such activity near Lake Jasper would result in contaminated wastewater being discharged into the D'Entrecasteaux National Park (Gingilup-Jasper Wetlands or Lake Jasper itself).

The State's Environment Protection (South West Agricultural Zone Wetlands) Policy outlines the protection of wetlands requires activities that would degrade or destroy wetlands should be prevented such as

- discharging water into wetlands or excessive pumping or drainage of water from wetlands;
- carrying out excavation or mining operations in wetlands;
- damaging or clearing emergent or fringing native vegetation of wetlands;

The former Jangardup mineral sand mine, which ceased production in 2004, has a sulphuric acid groundwater plume moving off-site through the superficial aquifer. This was confirmed by the Environment Minister in a recent Parliamentary Question (*Questions on Notice 12 Feb 2019 No. 1785*). Jangardup is the second mineral sands mine to create a sulphuric acid groundwater plume in the south-west. BHP's Beenup mineral sands mine had to close down after only two years of operation due to so much sulphuric acid being created by the mining process the mining became untenable. The sulphate plume emanating from the former Beenup mine is approximately 1.5km from the Scott River, *extract from Hansard [COUNCIL - Wednesday, 11 September 2002] p735b-735b* and acknowledge that the plume will one day reach the Scott River, within the Scott National Park. The geologic conditions at Beenup and Jangardup, acid sulphate soils, are very similar to that through the Gingilup-Jasper Wetlands adjacent to Lake Jasper. When acid sulphate soils are disturbed by mining activity they oxidize and create the sulphuric acid groundwater plumes such as the plumes now present at these two minesites.

A Directory of Important Wetlands in Australia (Australian Nature Conservation Agency 1993) identifies Lake Jasper together with the Gingilup Swamps as a wetland system of National Significance.

Listing of Sensitive Areas or River Systems within the Category 2 Drainage Basins, (Fisheries WA, 2000) notes the importance of the Lake Jasper wetlands. *Reason - Contains a number of high conservation status streams that link via Lake Jasper to the most important fish habitat in the south west, the Scott Coastal Plain and the D'Entrecasteaux National Park.*

The Lake Jasper region is of important archaeological significance. The WA Museum has completed a study of Australia's only known underwater prehistoric Aboriginal site at Lake Jasper. It has been dated at up to six thousand years old. Research by C F Dortch and J M Godfrey in *Australia Archaeology* 31 December 1990 recorded 7 Aboriginal sites on the floor of Lake Jasper.

Lake Jasper sits within the very popular D'Entrecasteaux National Park and its main recreation site will be affected by industrial noise, dust, highly visible lights and wildlife disturbances, which will destroy the values the area was acknowledged as containing and preserved for.

As part of the Reserves Bill in 1996, which excised the area from the National Park and downgraded it to a C Class Reserve, the then State Government promised to return the land to its original National Park tenure if the mine (Cables Sands original proposal) did not proceed. On Thursday, 27 June 1996 the then Mines Minister Norman Moore stated in Parliament the Government's commitment that in the event that mining did not take place for environmental or other reasons, the land excised from the D'Entrecasteaux National Park would be reincluded into the National Park by way of a future Reserves Bill. Since then State Government's have failed to live up to this commitment. The area continues to be of high ecological value.

In a recent letter from The Premier Mark McGowan to Andy Russell of the D'Entrecasteaux Coalition. The Premier stated "I am also aware of the environmental and cultural sensitivities of the Gingilup-Jasper wetland system, and community concern for how a proposed mining operation could affect Lake Jasper and D'Entrecasteaux National Park. Changing the purpose or class of reserves involves addressing a range of matters, including native title and stakeholder input. Noting this, I can advise that processing of the mining lease application has been suspended while a greater understanding of the issues is obtained, and our intention is to reinstate this area into D'Entrecasteaux National Park".

Yours sincerely Donald Clarke