

Enquiries: Jane O'Malley
Our Ref: 060_2022_0801
Your Ref: 2022/09213
File Ref: CM_CS_100



2 August 2022

Referrals Gateway
Department of Climate Change, Energy, the Environment and Water
Submitted via: Tracey.Scroop1@awe.gov.au

Dear Ms Scroop

EPBC Act reference No. 2022/09213 – Alcoa Pinjarra Alumina Refinery – Recommend Controlled Action

The Peel-Harvey Catchment Council Inc. (PHCC) appreciates the opportunity to lodge this submission.

PHCC is a community based, Natural Resource Management (NRM) regional body working across the Peel-Harvey NRM Catchment, covering over 1.1 million hectares of the Serpentine, Murray, Hotham, Williams and Harvey River catchments. With funding provided through the Australian Government's National Landcare Program, PHCC's current projects support a suite of activities and actions that closely align with the Peel-Harvey NRM Strategy, *Bindjareb Boodja Landscapes 2025* and the Australian Government's Threatened Species Recovery Plans and Conservation Advice. The focus is working with the community, landholders and other relevant stakeholders to improve the status of native vegetation, health of waterways and trajectory of a range of threatened species, including threatened Black Cockatoos across the Peel-Harvey Catchment. Given these interests, PHCC is lodging this submission to the Department of Climate Change, Energy, the Environment and Water.

It is noted that the proponent has stated that under the category of Ramsar Wetlands, the proposal is not considered a Controlled Action, and under the Category of Threatened Ecological Communities and Threatened Species the proposal is considered a Controlled Action.

Due to the impacts to Matters of National Environmental Significance (MNES) and impacts on a Wetland of International Importance - Peel-Yalgorup System Ramsar 482, PHCC requests that the proposal be considered a **Controlled Action under the Environmental Protection and Biodiversity Conservation Act EPBC Act 1999 (EPBC Act)** in addition to the assessment to be undertaken by the EPA. The proposal is a major development that will significantly affect the Jarrah Forest interim Australian Bioregion, a unique ecoregion in the global biodiversity hotspot of south west of Western Australia.

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*We acknowledge the Noongar people as Traditional Custodians
of this land and pay our respects to all Elders past and present*

Proposal 2022/09213 falls within the Peel-Harvey Catchment, and will involve the development of “water storage ponds and associated borrow pits to the west and south of the existing residue area, respectively water storage ponds and associated borrow pits will cover a disturbance area of approximately 299 ha (Refinery Disturbance Footprint) and involve clearing of up to 89 ha of native vegetation and plantations.” It is noted in Section 3.2 of the Proponent’s documentation “The eastern portion of the Refinery Development Envelope lies on the Darling Scarp and is adjacent to the NJF [Northern Jarrah Forest] subregion which comprises a large, relatively contiguous extent of fauna habitat with a high native fauna diversity”.

The Northern Jarrah Forest of south west Western Australia has been included in a list of Australia’s ten most endangered landscapes as assessed by a team of 26 leading ecologists from the Innovative Research Universities of Australia, “*we identify the 10 major terrestrial and marine ecosystems in Australia most vulnerable to tipping points, in which modest environmental changes can cause disproportionately large changes in ecosystem properties*” (Laurence *et al.* 2011, - see: <https://www.sciencedirect.com/science/article/abs/pii/S000632071100036X>).

The PHCC is therefore of the opinion that an independent review of the Northern Jarrah Forest and threats that it faces including threats from climate change but also other activities including mining development is warranted, beyond this referral.

In addition to the adverse impacts on the ecology and biodiversity of the Northern Jarrah Forest, PHCC requests that the following impacts and aspects of the proposed actions in Alcoa’s current referral are considered, and that the proposal should be regarded as a Controlled Action and subject to Public Environmental Review:

1. Impacts on a Wetland of International Importance - Peel-Yalgorup System Ramsar 482

The PHCC challenges the claim made by the proponent in Section 4.1 of the referral document that the proposal “is unlikely to cause significant indirect impacts to the Peel-Yalgorup System”.

The proposed activities are located within the upstream catchment of the Peel-Yalgorup Wetland System. This system was designated as Wetlands of International Importance under the Ramsar Convention on Wetlands in 1990 as Global Ramsar Site 482.

Based on the Ecological Character Description of the Peel-Yalgorup Ramsar Site (Hale and Butcher 2007) the system meets six criteria for listing as a wetland of international importance, including *Criterion 1: The site includes the largest and most diverse estuarine complex in south-western Australia (i.e. the Peel-Harvey Estuary) and also particularly good examples of coastal saline lakes and freshwater marshes.*

In 2018, the Australian Government implemented the National Landcare Program / Regional Land Partnerships (NLP/RLP), a \$450 million investment over five years to deliver its national environmental priorities. One of the primary outcomes set by the Australian Government through this program was that *by 2023, there is a restoration of, and reduction in threats to the ecological character of Ramsar Sites, through implementation of priority actions.* Through the NLP/RLP, the

Australian Government recognised the importance of actions both in the Ramsar Upstream Catchments as well as within the boundaries of the Ramsar Site. For the Peel-Yalgorup Ramsar Site, the entire Peel-Harvey Catchment was designated as the Ramsar Upland Catchment (see the maps at <http://erin.maps.arcgis.com/apps/MapSeries/index.html?appid=c2606f315ee74d899c4f7ae478c29ccc>). The PHCC therefore contends that, as a logical extension, actions which may have adverse effects on the environmental and ecological values of the Ramsar upstream catchments may also have adverse effects on the ecological character of the Ramsar Site itself. The Peel-Harvey Estuary has already been identified as an at-risk estuary by the Western Australian State Government primarily due to nutrient enrichment of its waters and sediments from nutrient-rich water and sediment flowing down from the catchment – see <https://www.water.wa.gov.au/water-topics/estuaries/regional-estuaries-initiative>.

A change in ecological character is defined as the human-induced adverse alteration of any ecosystem component, process and/or ecosystem benefit/service (Ramsar Convention 2005). Four components and processes have been identified as being important in maintaining the ecological character of the Peel-Yalgorup Ramsar Site, namely climate, geomorphology, hydrology and water quality (Hale and Butcher 2007, PHCC in prep). We believe that the **proposed actions may have an adverse impact on both the hydrology and water quality of the Ramsar Upstream Catchment**. This contention is supported by the determination of the Western Australian Environmental Protection Authority (EPA 2020), albeit in relation to the protection of drinking water sources that *“The proposed mining areas lie over the catchment areas of developed reservoirs that are used for drinking water, which may lead to impacts on Inland Waters”*.

Given the close proximity of the proposed expansion areas to the catchment of the Murray River which provides the majority of the freshwater flows to the Peel-Harvey Estuary, the proposed actions may also adversely impact the water quality and water flow to the estuary, and thereby the ecological character of the Peel-Yalgorup Ramsar Site. Scientific research has shown us that the estuary is already suffering under existing impacts and management issues of poor water and sediment quality, treatment and disposal of dredge spoil, declining groundwater quantities and quality, declining surface flows in streams and rivers due to climate change, physical disturbance of birds, loss of aquatic and terrestrial flora, loss of habitat for birds and aquatic fauna and pressures from recreational and commercial fishing (for example Valesini *et al.* 2019).

The previous referral of this proposed action (Alcoa of Australia Limited’s proposal (Assessment Number 2253)), and the subsequent decision by the Commonwealth Government, has already established the requirement to assess impacts on the Peel-Yalgorup System. Despite the proponent’s original statement in July 2020 that the consideration of the Peel-Yalgorup System was “not relevant” to this controlled action, the subsequent decision by the relevant Commonwealth Department on 4 September 2020 required the proponent to include this MNES as a relevant controlling provision.

The PHCC’s position is that the proponent cannot reasonably assert that direct or indirect impacts on the Ramsar site are unlikely, and thus as part of Controlled Action, the proponent must be required to assess the direct and indirect impacts. The cumulative impacts on the values of the Peel-Yalgorup

Ramsar Site, in particular the Peel-Harvey Estuary, from the afore-mentioned existing pressures, in combination with the additional impacts of the proposed expansion of the mining and refining operations must also be considered in this assessment.

2. Threatened Species (multiple impacts)

Regarding the statement in the proponent's referral document, "The Proposed Action is likely to impact Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*), Baudin's Cockatoo (*Calyptorhynchus baudinii*) and Forest Red-tailed Black Cockatoos (*Calyptorhynchus banksii naso*), and may impact Chuditch (*Dasyurus geoffroii*), Carters Freshwater Mussel (*Westralunio carterii*), Australian Bittern (*Botaurus poiciloptilus*) and Australian Painted Snipe (*Rostratula australis*)."

"The Proposed Action is expected to cause direct impacts to approximately 85.3 ha of quality to very high quality Black Cockatoo foraging habitat, which represents approximately 1.2 per cent of potential foraging habitat within 5 km of the Refinery Development Envelope. The Proposal is expected to cause loss of 167 potential breeding trees, 60 per cent of them Marri, including seven trees with hollows suitable for nesting by Black Cockatoos."

"The Proposed Action will clear approximately 43 ha of potential habitat for Chuditch. The Proposed Action will clear approximately 2 ha of potential habitat for Carters Freshwater Mussel, Australasian Bittern and Australian Painted Snipe. The Proposed Action will involve clearing of approximately 43 ha of native vegetation that has the potential to cause direct impacts to the listed flora Purdie's Donkey-orchid (*Diuris purdiei*), Selena's Synaphea (*Synaphea* sp. Fairbridge Farm (D. Papenfus 696)) and Dwellingup Synaphea (*Synaphea stenoloba*), which have a low to moderate likelihood of presence though no plants have been recorded in surveys of the Refinery Disturbance Footprint."

The Australian Government has approved Recovery Plans for:

- Carnaby's Cockatoo (*Calyptorhynchus latirostris*), 2013
- Forest Black Cockatoo (Baudin's Cockatoo *Calyptorhynchus baudinii*) and Forest Red-Tailed Black Cockatoo (*Calyptorhynchus banksii naso*), 2008
- Chuditch (*Dasyurus geoffroii*), 2012

Each of the Recovery Plans make reference to habitat clearing and disturbance as a key threatening process to these species. In particular the PHCC draws your attention to the quote from the Carnaby's cockatoo (*Calyptorhynchus latirostris*) Recovery Plan;

"Clearing for mining that results in the loss of eucalypts with nest hollows will result in a loss of breeding habitat for a significant time and so is likely to impact the species. Eucalypts do not grow large enough to provide nest hollows for Carnaby's cockatoo for at least 100 to 200 years (Saunders et al. 1982; Rose 1993; Whitford and Williams 2002) and despite any revegetation that seeks to replace breeding tree species, any loss of breeding trees or habitat could be considered equivalent to permanent clearing of these breeding trees." page 17. See

<https://www.environment.gov.au/system/files/resources/94138936-bd46-490e-821d-b71d3ee6dd04/files/carnabys-cockatoo-recovery-plan.pdf>

Furthermore, offsetting residual impacts and rehabilitation post-mining may be ineffective for these species. The Western Australian EPA has found that where there has been significant residual impacts from development, frequently offsets for the species has contributed to the overall reduction in the area of its habitat (Department of Water and Environmental Regulation 2019). There are concerns associated with the standard of the rehabilitation that has occurred and likely to occur post-mining. There are suggestions that the rehabilitation which has previously taken place has not taken into account the drier climate of the region. PHCC is of the opinion that the proponent ought to be required to demonstrate the impact of proposed rehabilitation on the groundwater. Further to this the inquiry into the Waroona bushfires of 2016 (“The Reframing Rural Fire Management – Report of the Special Inquiry into the January 2016 Waroona Fires” considered the impact of rehabilitation from mining on bushfires and identified an opportunity, (Opportunity No. 3) for “*The Department of Parks and Wildlife and the Forest Products Commission to explore policy options for mechanical thinning of forest, including mining rehabilitation forest, for the purpose of bushfire mitigation*”. (See:

[https://naturaldisaster.royalcommission.gov.au/system/files/exhibit/RCN.900.014.0120.pdf , p110\)](https://naturaldisaster.royalcommission.gov.au/system/files/exhibit/RCN.900.014.0120.pdf , p110)

The species below have also been identified as being impacted by the proposal:

- Carters Freshwater Mussel (*Westralunio carterii*)
- Australasian Bittern (*Botaurus poiciloptilus*)
- Australian Painted Snipe (*Rostratula australis*)

Carters Freshwater Mussel (*Westralunio carterii*)

***Westralunio carterii* is South West WA's only freshwater mussel.** Because very little information on the biology, abundance and distribution of *W. carterii* exists, researchers at Murdoch University have begun work to identify the mussel's life cycle and growth rates, environmental tolerances to salinity, temperature and drought, as well as updating and monitoring the species distribution and population information

(<https://web.archive.org/web/20180116002504/http://musselwatchwa.com/index.html>)

The species has Red List status: "Facing a high risk of extinction in the wild in the medium-term future"- The species *W. carterii* was nominated for addition to the International Union for Conservation of Nature (IUCN) Red List on 26 July 1999, which has resulted in the current listing as vulnerable(VU) by the IUCN (IUCN, 2009). An animal is Vulnerable when it is not Critically Endangered or Endangered but is facing a high risk of extinction in the wild in the medium-term future. The listing also has an annotation stating that it needs updating (IUCN, 2009). This species is listed as a Priority Fauna with a ranking of Priority 4 (P4) by the Department of Environment and Conservation of WA (DEC). A P4 species is defined as Rare, Near Threatened and other species in need of monitoring (DEC).

The Australasian Bittern (*Botaurus poiciloptilus*) is listed as endangered under the EPBC Act. The addendum to the Ecological Character Description for the Peel-Yalgorup Ramsar Site notes that “although there are historical records for the EPBC listed endangered Australasian bittern (*Botaurus poiciloptilus*) from the Ramsar site, the last record was in 1986, the recovery plan for the species in Western Australia notes that: “conservation management of Lake Mealup (including Typha control)

by the Lake Meallup Preservation Society and natural regeneration at Lake McLarty may provide habitat suitable for Australasian bitterns, potentially resulting in their return to this wetland system.” (Department of Biodiversity, Conservation and Attractions 2018). The Australian Painted Snipe (*Rostratula australis*) – listed as Endangered under the EPBC Act is not an international migratory species, however, would also be impacted by this proposal.

3. Level of Community Interest

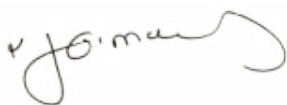
The previous referral of this proposed action (Alcoa of Australia Limited’s proposal (Assessment Number 2253)) had significant community interest through the EPBC assessment process. There were 1732 submissions with 91% of these as “Assess through a Public Environmental Review”.

4. Findings of 2021 State of the Environment Report

Australia's State of the Environment report (Australian Government 2021, <https://soe.dcccew.gov.au>) was released on 19th July 2022 with dire warnings on the health of our environment and threatened species, both at regional and national levels. The report found land, biodiversity, waters and climate to be in poor and declining condition over the past 5 years due to pressures of climate change, habitat loss, invasive species and mining. Since the previous report in 2016, 202 new species have been listed as nationally threatened, with the majority of threatened species either not showing improvements or further decline. Australia has lost more mammal species than any other continent, and has one of the highest rates of species decline in the developed world due to habitat destruction and invasive species. The report found abrupt changes in some ecosystems, with the Jarrah Forests in WA being one of 19 now showing signs of collapse or near collapse. New large scale clearing proposals, such as that submitted by the Proponent for large scale mining expansion are not congruent with threatened species’ Recovery Planning, are not environmentally sustainable and do not meet principles of intergenerational equity. The current proposal is therefore at odds with the objective of halting environmental decline, improving the trajectory of threatened species, and improving the health of the climate, water and land.

Please do not hesitate to contact me on (08) 6369 8800 or email admin@peel-harvey.org.au if you would like any further information.

Yours sincerely



Jane O'Malley
Chief Executive Officer

Attachment 1: References

Attachment 1: References

Australian Government, 2021. Australian State of the Environment - see <https://soe.dcceew.gov.au/>

EPA, 2020 - Public record pursuant to s39(1) of the Environmental Protection Act 1986 – see https://www.epa.wa.gov.au/sites/default/files/Extract_of_determination/CMS17836%20-%20Chairmans%20Determination.pdf

Department of Water and Environmental Regulation (2019) *Review of the Western Australian environmental offsets framework*, Final Report, Joondalup Western Australia 6027, https://www.wa.gov.au/system/files/2021-10/Review_of_the_WA_environmental_offsets-framework.pdf

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Ramsar Convention, 2005. Resolution IX.1 Annex A. A Conceptual Framework for the wise use of wetlands and the maintenance of their ecological character.

Valesini, F., Hipsey, M., Eyre, B., Kilminster, K., Plummer, P., Elliott, M., Hallett, C., Huang, P. Busch, B., Wells, N., Hennig, K., Cronin-O'Reilly, S., Reshid, M., Krumholz, O., Horsley, J., Trinh, J., 2019. Balancing estuarine and societal health in a changing environment: Summary Report ARC Linkage Project LP150100451, accessed online at https://github.com/AquaticEcoDynamics/Peel_ARC/blob/master/Documents/1.%20Summary%20Report/Peel%20ARC%20Summary%20Report%20v2%2020200624.pdf