



Committee Secretary
Senate Environment and Communications Committee
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Dear Senate Environment and Communications Committee

**RESPONSE TO QUESTIONS ON NOTICE RAISED DURING INQUIRY INTO THE
REHABILITATION OF MINING AND RESOURCES PROJECTS AS IT RELATES TO
COMMONWEALTH RESPONSIBILITIES PUBLIC HEARING ON 7 MARCH 2018**

Thank you for the opportunity to speak to the Government of Western Australia's written submission to the Senate Environment and Communications Committee (the Committee) at the public hearing in Perth on 7 March 2018.

During the public hearing, several questions on notice were posed to the Government of Western Australia. Please find responses to these questions in the below attachments.

The Government of Western Australia would be pleased to provide additional information to the Committee if required.

Yours sincerely

Phil Gorey | Acting Deputy Director General
Resource and Environmental Regulation
01 May 2018

Q1. Senator Lines: Do you know Alcoa's current stems per acre, or hectare for rehab?

Though the density of stems per hectare varies across the site and is dependent upon the age of the rehabilitation, Alcoa's current target is 1,000 trees per hectare, which reflects levels in unmined forest.

Q2. Senator Lines: Would you have what it was at the highest rate?

Mining and rehabilitation in Western Australia and at the Huntly operations has occurred progressively over an extended period. During this time, rehabilitation standards, technical knowledge and accepted industry best practices have progressively evolved. Accordingly, the Government of Western Australia's rehabilitation expectations have also progressively developed.

The highest rate was an average of approximately 3,000 seedlings per hectare, which occurred in the early 1990's.

Q3. Senator Lines: Their stems at the moment seem to be, in the rehab area, overpopulated. I'm wondering what the state is saying to Alcoa about that?

Forest establishment involves planting a high number of trees initially. Tree numbers reduce over time through natural attrition or human intervention (thinning). An overstocked forest can be remediated by thinning, whereas an understocked forest is more complicated to correct.

The Government of Western Australia and Alcoa have developed agreed rehabilitation completion criteria for the jarrah forest based on adaptive management principles. The criteria are reviewed periodically and contain multiple sets of criteria designed for application to different eras of rehabilitation. The criteria have been developed through a whole-of-government working group.

The Government of Western Australia does not have any immediate concerns in relation to the number of stems at Huntly Mine. The management of rehabilitated areas is the responsibility of Alcoa until Alcoa proposes to relinquish its completion and responsibilities for each rehabilitated area to the State. When this occurs, the Government of Western Australia expects Alcoa to have met the rehabilitation completion criteria. In some cases, treatment of rehabilitated areas to meet completion criteria may be required and could be effected through silvicultural thinning of overstocked areas and some of the completion criteria specify this. The Government of Western Australia is able to work with Alcoa and the Forest Products Commission to facilitate commercial or non-commercial thinning, and in doing so would ensure that these operations do not compromise Alcoa's ability to meet completion criteria in treated areas.

Q4. Chair: Would you be able to give us on notice a list of the projects that are covered under the state agreement acts?

Please see the list of all State Agreement Acts provided at **Attachment 2** as well as further context regarding State Agreement Acts below.

Resource related State Agreements are subject to the *Environmental Protection Act 1986* and aspects of the *Mining Act 1978* and other State and Commonwealth legislation.

The Government of Western Australia has requested all State Agreement projects to prepare Mine Closure Plans in accordance with the Guidelines for Preparing Mine Closure Plans (2015) developed jointly between the Department of Mines, Industry Regulation and Safety (DMIRS) and the Environmental Protection Authority. These projects also provide annual environmental reports to Government.

Q5. Chair: I don't know how easy it would be to tabulate, but whether they've got financial security would be an interesting one, and, in particular—I don't want you to have to give us a PhD thesis!—what the rehabilitation requirements are. It's clear what the requirements are for the ones that are under the MRF, whereas, for these other ones, which are some of the most significant ones, the requirements are a bit shrouded in mystery.

The following resource related State Agreement Acts have varying levels of financial security:

- *Iron Ore (FMG Chichester Pty Ltd) Agreement Act 2006*
- *Iron Ore Processing (Mineralogy Pty Ltd) Agreement Act 2002*
- *Iron Ore (Hamersley Range) Agreement Act 1963*
- *Iron Ore (Robe River) Agreement Act 1964*
- *Western Mining Corporation Limited (Throssell Range) Agreement Act 1985*
- *Onslow Solar Salt Agreement Act 1992*
- *Dampier Solar Salt Industry Agreement Act 1967*
- *Alumina Refinery Agreement Act 1961*
- *Collie Coal (Griffin) Agreement Act 1979*

Rehabilitation risk from State Agreement projects is managed via various processes including:

- statutory assessment processes of development proposals (a component of which are the measures for the protection and rehabilitation of the environment);
- annual environment reporting;
- site inspection visits;
- the early preparation of Mine Closure Plans across the mining industry (regardless of whether projects operate under a State Agreement or other legislation); and
- the imposition of bank guarantees/performance bonds where they are warranted.

Western Australian State Agreements

State Agreement
<i>Alumina Refinery Agreement Act 1961</i>
<i>Alumina Refinery (Pinjarra) Agreement Act 1969</i>
<i>Alumina Refinery (Wagerup) Agreement and Acts Amendment Act 1978</i>
<i>Alumina Refinery (Worsley) Agreement Act 1973</i>
<i>Wundowie Charcoal Iron Industry Sale Agreement Act 1974</i>
<i>Collie Coal (Griffin) Agreement Act 1979</i>
<i>Collie Coal (Western Collieries) Agreement Act 1979</i>
<i>Western Mining Corporation Limited (Throssell Range) Agreement Act 1985</i>
<i>Diamond (Argyle Diamond Mines Joint Venture) Agreement Act 1981</i>
<i>Goldfields Gas Pipeline Agreement Act 1994</i>
<i>Ord River Hydro Energy Project Agreement Act 1994</i>
<i>North West Gas Development (Woodside) Agreement Act 1979</i>
<i>Barrow Island Act 2003 (which incorporates the Gorgon Gas Processing and Infrastructure Project Agreement)</i>
<i>Natural Gas (Canning Basin Joint Venture) Agreement Act 2013</i>
<i>Tailings Treatment (Kalgoorlie) Agreement Act 1988</i>
<i>Iron Ore (FMG Chichester Pty Ltd) Agreement Act 2006</i>
<i>Iron Ore (Channar Joint Venture) Agreement Act 1987</i>
<i>Iron Ore (Hamersley Range) Agreement Act 1963</i>
<i>Iron Ore (Hamersley Range) Agreement Act Amendment Act 1968</i>
<i>Iron Ore (Hope Downs) Agreement Act 1992</i>
<i>Iron Ore (Mount Bruce) Agreement Act 1972</i>
<i>Iron Ore (Rhodes Ridge) Agreement Authorisation Act 1972</i>
<i>Iron Ore (Robe River) Agreement Act 1964</i>
<i>Iron Ore (Wittenoom) Agreement Act 1972</i>
<i>Iron Ore (Yandicoogina) Agreement Act 1996</i>
<i>Iron Ore (Goldsworthy-Nimingarra) Agreement Act 1972</i>
<i>Iron Ore (McCamey's Monster) Agreement Authorization Act 1972</i>
<i>Iron Ore (Marillana Creek) Agreement Act 1991</i>
<i>Iron Ore (Mount Goldsworthy) Agreement Act 1964</i>
<i>Iron Ore (Mount Newman) Agreement Act 1964</i>

<i>Iron Ore (Murchison) Agreement Authorization Act 1973</i>
<i>Iron Ore Processing (Mineralogy Pty Ltd) Agreement Act 2002</i>
<i>Mineral Sands (Eneabba) Agreement Act 1975</i>
<i>Mineral Sands (Cooljarloo) Mining and Processing Agreement Act 1988</i>
<i>Mineral Sands (Beenup) Agreement Act 1995</i>
<i>Nickel (Agnew) Agreement Act 1974</i>
<i>Poseidon Nickel Agreement Act 1971</i>
<i>Oil Refinery (Kwinana) Agreement Act 1952</i>
<i>Dampier Solar Salt Industry Agreement Act 1967</i>
<i>Evaporites (Lake MacLeod) Agreement Act 1967</i>
<i>Leslie Solar Salt Industry Agreement Act 1966</i>
<i>Onslow Solar Salt Agreement Act 1992</i>
<i>Shark Bay Solar Salt Industry Agreement Act 1983</i>
<i>Uranium (Yeelirrie) Agreement Act 1978</i>
<i>Cement Works (Cockburn Cement Limited) Agreement Act 1971</i>
<i>Silicon (Kemerton) Agreement Act 1987</i>
<i>Railway (Roy Hill Infrastructure Pty Ltd) Agreement Act 2010</i>
<i>Railway and Port (The Pilbara Infrastructure Pty Ltd) Agreement Act 2004</i>