

To: Independent Review of the EPBC Act

Public Submission by Mr David J Noonan

Sole Trader, Independent Environment Consultant

Cover Sheet Attached, 14 April 2020.

**Re: EPBC Act “nuclear actions” Case Study on BHP Olympic Dam mine public interest issues**

Dear Independent Review

Please consider this 20-page public submission and set of ten Recommendations. The full scope of the “nuclear action” Matter of National Environmental Significance (MNES) must be retained to protect “the environment”, with “whole of environment” assessments for uranium mining projects.

The submission focuses on operation of the EPBC Act in protection of MNES under the “nuclear actions” trigger and Discussion Paper Q.14 on failings of State roles through a case study on BHP Olympic Dam (OD) copper-uranium mine public interest issues and relevant related considerations.

By time of this Review’s report, BHP Olympic Dam will be the only major operating uranium mine in Australia and will be amidst a flawed ‘accredited assessment’ process in SA for a multi-decade major uranium mine expansion: the “*Olympic Dam Resources Development Strategy*” EPBC 2019/8570.

The OD expansion would nearly double production and increase the amount of water extracted from the Great Artesian Basin up to 50 million litres a day for the next 25 years. This could have serious long-term adverse impacts on Basin flows and on the EPBC listed and culturally significant Mound Springs, a unique and fragile Endangered Ecological Community dependent on intact GAB flows.

The operation of the EPBC Act has failed to protect Olympic Dam workers and failed to even assess the BHP OD “Extreme” consequences category Tailings Storage Facility 6 (EPBC 2019/8465, TSF 6).

Flawed EPBC Act Decision Making means in order of 100 BHP OD workers are exposed to potential loss of life as a consequence of a TSF 6 dam failure over the Approval’s 25 year period of sanctioned ‘Extreme’ tailings dam operations. This practice imposes long term risk with acknowledged dam failure potential to cause “irrecoverable” environmental impacts and costs in order of US\$1 billion.

Inconsistent EPBC Act approval without controlled action assessment of associated Evaporation Pond 6 (EPBC 2019/8526, EP 6) condemns 100’s of protected birds to continue to die annually as a result of BHP operation of EPs, in direct contradiction of EPBC OD Decision Conditions 18-21 set in Oct 2011 on EPBC 2005/2270 to: “*phase out use of Evaporation Ponds as soon as practical*”. Mandating BHP: “*must not construct Evaporation Ponds (for the purpose of the expanded mine)*”.

Decision Making in “Statement of Reasons” are questionable and expose a range of flaws and shortcomings in operation of the EPBC Act. ARPANSA had advised the Department of Environment that both TSF 6 and EP 6 can be considered nuclear actions under Sec.22(1)(e), due to establishment of large-scale disposal facilities for radioactive waste, but both were approved without assessment.

The Cth-SA Bilateral Agreement and assessment accreditation process is not fit for purpose with no legislative or other changes having been made in SA, in take up EPBC Act roles and responsibilities.

In practice, EPBC Act responsibilities to conduct proper assessment and to set conditions to protect MNES on EPBC 2019/8570 are effectively deferred to the SA Minister for Mines in an outdated SA *Roxby Downs (Indenture Ratification) Act 1982* which regulates OD through untenable legal privileges to BHP vested interests. This 1982 Indenture takes precedence over a wide range of due process public interest SA legislation, including the SA *Development Act 1993* and *Mining Act 1971*.

The SA *Development Act* 'accredited assessment' of EPBC 2019/8570 is likely to fail to protect the environment and applicable MNES and to not be comprehensive, transparent or accountable. Due to an array of untenable legal privileges in subservience to the 1982 Indenture; and exemptions set in SA's "Major Project Declaration" to not publicly assess TSF 6 or EP 6 or existing OD "Extreme" TSFs.

The SA assessment process and resultant State Decisions and Conditions of Approval in the case of EPBC 2019/8570 are arguably ridden with actual or perceived conflict of interest in the roles of the State and of the Minister for Mines - who is also the Indenture Minister governing Olympic Dam.

The influence of BHP vested interests to significantly increase GAB water extraction is of concern.

The non-statutory "*EPBC Act Condition-setting Policy*" further aligns the Federal gov. to defer to State Conditions of Approval and not set warranted federal Conditions to properly protect MNES.

I commend the Joint ENGO Recommendations on EPBC 2019/8570 to this Review as demonstrating the required scope of assessment and of pre-conditions to protect MNES in uranium mining at OD.

Recommendations No.1 & No.2 are paramount: For the BHP OD operation to be assessed in its entirety with the full range of project impacts subject to public scrutiny in an EIS level EPBC process. Requiring comprehensive Safety Risk Assessment of all OD tailings and storage facilities, existing and proposed, including assessment of potential "Extreme" consequence tailings dam failures.

All major resource projects regulated by the EPBC Act must be required to have 100% Bond coverage of all Rehabilitation Liabilities - including BHP OD. Since taking over OD in 2005 BHP has failed to do so and must not be allowed to defer on a basis of claimed OD 'life of asset' operations to 2094.

My experience is relevant, including some sixteen years as an Australian Conservation Foundation (ACF) Campaigner 1996-2011; as lead author consultant on Joint ENGO submissions (ACF, Conservation SA, and Friends of the Earth Australia) to three BHP EPBC Act Olympic Dam Referrals in 2019; with 25 years involvement across public interest issues in Olympic Dam mine operations.

Please feel free to contact regarding any aspect of this public submission.

Yours sincerely

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## Recommendations:

1. All major resource projects regulated by the EPBC Act, including BHP Olympic Dam, must be required to have 100% Bond coverage of Rehabilitation Liabilities to protect the environment.
2. To deliver the *Objects* of the EPBC Act the full scope of the “*nuclear action*” Matter of National Environmental Significance must be retained to protect “*the environment*”, including required “*whole of environment*” EPBC Act assessments for uranium mining projects. This applies to the BHP Olympic Dam copper-uranium mine expansion EPBC 2019/8570 and to TSF 6 and EP 6. (p.5)
3. This Review should consider the Joint ENGO Recommendations on BHP Olympic Dam mine expansion EPBC 2019/8570 in demonstrating the required scope of assessment and of pre-conditions to protect the environment and to protect the public interest from the impacts of uranium mining in accordance with the *Objects* of EPBC Act. (p.5)
4. Operations of the EPBC Act in accredited assessments of nuclear actions is demonstrated to be seriously unfit for purpose in the case of BHP Olympic Dam copper-uranium mine expansion EPBC 2019/8570. Assessment of EPBC 2019/8570 should be conducted directly by federal gov. (p.6)
5. To protect MNES: Great Artesian Basin water and EPBC listed culturally significant Mound Springs must not be subject to BHP’s increase in water extraction up to 50 million litres a day for the next 25 years AND must not be left up to an SA assessment process mired in ‘*conflict of interest*’. (p.7)
6. Inconsistent EPBC Decision Making condemns 100’s of protected birds to die annually in BHP OD Evaporation Pond operations in direct contradiction of 2011 EPBC Act Approval Conditions. (p.8)
7. EPBC Decision Making has unacceptably failed to order warranted controlled action assessment of BHP OD Tailings Storage Facility 6 and placed “*the environment*” at risk of long-term impacts. (p.10)
8. Arbitrary EPBC Decision Making on BHP OD TSF 6 in unsubstantiated Department claims that TSF 6 is “*exempt*” from the EPBC Act due to Sec.43A *Actions with Prior Authorisations*, is contrary to BHP’s own acknowledgement that TSF 6 “*falls outside the scope of the 1997 EIS*”. (p.12)
9. EPBC Act Ministerial Decision Making has potentially placed BHP Olympic Dam employees lives at risk by failing to order a comprehensive public environmental impact assessment of TSF 6: (p.13)  
  
BHP Olympic Dam Tailings Storage Facility 6 is a declared “*Extreme*” consequence category tailings dam facility. With potential dam failure acknowledged to cause an extreme scale of consequential impacts, across: deaths of BHP employees in the order of 100 persons; irreversible environmental impacts; and costs in order of US\$1 billion. Ministerial discretion must not place lives at risk.
10. All “*Extreme*” consequence category dams regulated by the EPBC Act require comprehensive public impact assessments processes given the extreme scale of acknowledged dam failure impacts. This applies to all existing BHP Tailings Storage Facilities (TSF 1 – 5) at Olympic Dam. (p.18)

The scope of the EPBC Act must be reviewed and amended if the current Act’s reliance on the ‘likelihood’ of significant impacts is deemed to not require assessment of “*Extreme*” consequence category dam failures & impacts.

## Discussion of Recommendations:

**1. All major resource projects regulated by the EPBC Act, including BHP Olympic Dam, must be required to have 100% Bond coverage of Rehabilitation Liabilities to protect the environment.**

This public interest Recommendation and a case example of BHP Olympic Dam (OD) are before the Productivity Commission “Resources Sector Regulation Study”, see Submission No.1 by D. Noonan<sup>1</sup>.

Please consider a Joint ENGO Briefing Paper (June 2019) “BHP Must Lodge a Bond to Cover 100% of Rehabilitation Liabilities at Olympic Dam”<sup>2</sup> and the detailed Recommendation by these groups (p.3).

The federal Department of Environment “Olympic Dam expansion assessment report EPBC 2005/2070” (Sept 2011) states at 5.1.8 Rehabilitation and Closure, Recommendations<sup>3</sup>, that:

*“Best practice mining standards require a comprehensive closure plan to be in place before mining commences. ...*

*However, as a precautionary measure, to ensure rehabilitation liabilities are fully addressed the Department recommends that the Minister retain the option of requiring a bond on BHP in favour of the Commonwealth for up to the full cost of the rehabilitation liability.”*

This Review should note that the unique radiological risk to the environment presented by BHP OD uranium mine tailings led the federal Department of Environment to also state that: “*post closure environmental outcomes must be achieved indefinitely*”. However, there is still no 100% Bond on OD.

This Review should act on community expectations to *mandate* Rehabilitation Conditions and Bonds:

*“Labor Senators recommend that as a part of the upcoming legislated review of the EPBC Act and/or Labor's commitment to reforming environmental laws, the Commonwealth Government include in the consultation process the proposal to mandate that rehabilitation related conditions, as well as provisions regarding 'care and maintenance', must be applied to mining projects during consideration under the EPBC Act to ensure that approved mines have the lowest possible impact on matters of national environmental significance”<sup>4</sup>*

Please also consider the Mineral Policy Institute input to this Review, “Mining Legacies” section.

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<sup>1</sup> David Noonan B.Sc., M.Env.St., Independent Environment Campaigner, Submission No.1 (28 August 2019), to the Productivity Commission Resources Sector Regulation Study  
[https://www.pc.gov.au/\\_data/assets/pdf\\_file/0004/244786/sub001-resources.pdf](https://www.pc.gov.au/_data/assets/pdf_file/0004/244786/sub001-resources.pdf)

<sup>2</sup> “BHP Must Lodge a Bond to Cover 100% of Rehabilitation Liabilities at Olympic Dam”, a Briefing Paper produced for ACF, Conservation SA and FOE Australia by David Noonan – June 2019.  
<https://nuclear.foe.org.au/wp-content/uploads/ODM-BHP-must-lodge-a-Bond-to-cover-Rehab-Liabilities.pdf>

<sup>3</sup> The federal Department of Environment “Olympic Dam expansion assessment report EPBC 2005/2070” (Sept 2011), 5.1.8 Rehabilitation and Closure, Recommendations.  
<http://epbcnotices.environment.gov.au/entity/annotation/93695ae1-2868-e511-9099-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1555725769068>

<sup>4</sup> Senate Environment and Communication Reference Committee Inquiry into the Rehabilitation of Mining and Resources Projects and Power Station Ash Dams as it Relates to Commonwealth Responsibilities 2019, Final Report, ALP Recommendations.

**2. To deliver the *Objects* of the EPBC Act the full scope of the “nuclear action” Matter of National Environmental Significance must be retained to protect “the environment”, including required “whole of environment” EPBC Act assessments for uranium mining projects. This applies to the BHP Olympic Dam copper-uranium mine expansion EPBC 2019/8570 and to TSF 6 and EP 6.**

Please consider a Joint ENGO Briefing Paper (June 2019) “BHP URANIUM MINING TRIGGERS “PROTECTION OF THE ENVIRONMENT” UNDER THE EPBC ACT”<sup>5</sup>. In assessing BHP uranium mining as a “nuclear action” the federal Department of Environment 2011 Assessment Report (p.5) stated:

*“Mining and processing present a number of risks to environmental values, including risks relating to: Radiation exposure; Regional and local groundwater impacts; Impacts on flora and fauna; Air quality; and Rehabilitation and decommissioning.”*

Environmental values are defined to “mean the physical characteristics and qualities of the environment that contribute to biodiversity conservation, and the social, spiritual and economic health of individuals and society” (Olympic Dam Decision Conditions, Oct 2011, Definitions p.21).

These considerations apply equally to assessment of the 2019 BHP Olympic Dam expansion.

In addition, the federal Department of Environment has made an important recommendation (“Olympic Dam expansion assessment report EPBC 2005/2270”, Sept 2011, 7. Existing operation, p.62) that conditions be applied so that the entire Olympic Dam operation (existing and expanded) is regulated by a single approval under the EPBC Act:

*“Section 134(1) of the EPBC Act allows the minister to attach conditions to an approval of an action to protect the environment or repair or mitigate damage, even where this does not relate directly to the action. Consequently, it is recommended that conditions be applied to the existing operation so that the entire Olympic Dam operation (existing and expanded) is regulated by a single approval under the EPBC Act.”*

There should be no place for BHP vested interests, 1982 Indenture legal privileges and SA “Major Project Declaration” exemptions in assessment of BHP’s 2019 Olympic Dam expansion proposal.

**3. This Review should consider the Joint ENGO Recommendations on BHP Olympic Dam mine expansion EPBC 2019/8570<sup>6</sup> in demonstrating the required scope of assessment and of pre-conditions to protect the environment and to protect the public interest from the impacts of uranium mining in accordance with the *Objects* of EPBC Act.**

Recommendation’s No.1 & No.2 are paramount: For BHP OD operations to be assessed in its entirety with the full range of project impacts subject to public scrutiny in an EIS level EPBC Act process.

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<sup>5</sup> “BHP URANIUM MINING TRIGGERS “PROTECTION OF THE ENVIRONMENT” UNDER THE EPBC ACT”, Briefing Paper produced for ACF, Conservation SA and FOE Australia by David Noonan – June 2019.  
<https://nuclear.foe.org.au/wp-content/uploads/ODM-uranium-mining-triggers-EPBC.pdf>

<sup>6</sup> Joint ENGO Recommendations to Federal government on BHP “Olympic Dam Resource Development Strategy” copper-uranium mine expansion (ACF, Conservation SA and FOE Australia Dec 2019).  
<https://nuclear.foe.org.au/wp-content/uploads/Joint-ENGO-Recommendations-to-Federal-Gov-on-BHP-Olympic-Dam-Mine-Expansion-09Dec2019.pdf>

To protect the environment and the public interest, this requires a comprehensive Safety Risk Assessment of all Olympic Dam uranium tailings and tailings storage facilities, existing and proposed TSF 6 & EP 6, including assessment of potential “Extreme” consequence tailings dam failures.

**4. Operations of the EPBC Act in accredited assessments of nuclear actions is demonstrated to be seriously unfit for purpose in the case of BHP Olympic Dam copper-uranium mine expansion EPBC 2019/8570. Assessment of EPBC 2019/8570 should be conducted directly by federal government.**

The Cth-SA Bilateral Agreement and assessment accreditation process is flawed with no legislative or other changes having been made in SA, while claiming to take up EPBC Act roles and responsibilities.

The federal decision on EPBC 2019/8570 calls for an ‘accredited assessment’ under the SA *Development Act 1993* effectively defers the process to an outdated SA *Roxby Downs (Indenture Ratification) Act 1982* which regulates OD through untenable legal privileges to BHP vested interests.

Please consider a Joint ENGO Briefing Paper (June 2019) “*BHP Legal Privileges in the Olympic Dam Indenture Act 1982 Override SA Laws*”<sup>7</sup>. This 1982 Indenture takes precedence over a wide range of due process public interest SA acts, including the SA *Development Act 1993* and *Mining Act 1971*.

The Productivity Commission Draft Report on Resource Sector Regulation, March 2020, explains<sup>8</sup>:

*“The Roxby Downs (Indenture Ratification) Act 1982 (SA) overrides any inconsistent provisions of other laws, such as licensing, environment, heritage, and freedom of information, in the area of the town and mine. Instead, BHP has the power to make decisions about this legislation independently (in consultation with the SA Government).”*

The ‘accredited assessment’ of EPBC 2019/8570 is likely to fail to protect the environment and applicable MNES and to not be comprehensive, transparent or accountable. Due to an array of untenable legal privileges in subservience to the 1982 Indenture; and exemptions set by the Minister for Mines in the OD “Major Project Declaration” under the *Development Act 1993* to not publicly assess the impacts of TSF 6 or EP 6 or of the existing OD “Extreme” consequence category TSFs.

That the SA Minister for Mines is also the Indenture Minister governing Olympic Dam and oversees this ‘accredited’ assessment, decides the level of assessment and decides the Guidelines, is an actual or perceived conflict of interest that should not be allowed to occur in the operation of the EPBC Act.

The Review should further consider the Mineral Policy Institute submission related sections on these matters: “*Roxby Downs Indenture Act – Case Study*”; and “*Current Olympic Dam developments and assessment: EPBC 2019/ 8570 – Olympic Dam Resource Development Strategy*”.

In effect, the federal government has untenably accredited an outdated 1982 Indenture Act process to govern bilateral agreement EPBC Act assessments of Olympic Dam uranium mining nuclear actions. This compromises delivery of *Objects* of the EPB Act and must be rejected by this Review.

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<sup>7</sup> “*BHP Legal Privileges in the Olympic Dam Indenture Act 1982 Override SA Laws*”, a Briefing Paper produced for ACF, Conservation SA and FOE Australia by David Noonan – June 2019.  
<https://nuclear.foe.org.au/wp-content/uploads/ODM-BHP-legal-privileges-Indenture-Act.pdf>

<sup>8</sup> Productivity Commission 2020. Draft Report - Resources Sector Regulation, page 16, March 2020.

**5. To protect MNES: Great Artesian Basin water and EPBC listed culturally significant Mound Springs must not be subject to BHP's increase in water extraction up to 50 million litres a day for the next 25 years AND must not be left to an SA assessment mired in 'conflict of interest'.**

The influence of BHP vested interests to significantly increase GAB water extraction is of concern.

Rather than the *Objects* of the EPBC Act and an independent federal assessment process, the flawed SA 'accredited assessment' ordered in this case is ridden by conflict of interest and untenable legal privileges and governed by an outdated 1982 mining Indenture over the *Development Act 1993*.

The BHP proposal to increase GAB water extraction to 50 million litres a day for 25 years could have serious long-term adverse impacts on Great Artesian Basin flows and on the EPBC listed MNES and culturally significant Mound Springs, a unique and fragile Endangered Ecological Community dependent on intact GAB flows.

Please consider a Joint ENGO Briefing Paper (June 2019) "*PRE-CONDITIONS TO PROTECT MOUND SPRINGS IN OLYMPIC DAM EXPANSION EIS GUIDELINES*"<sup>9</sup> and the Recommendations provided:

***"Recommendations: Pre-Conditions to protect Mound Springs and explore alternatives to Great Artesian Basin water extraction.***

*The federal Department of Environment assessed Mound Spring protection issues in 2011. At this time the federal Minister set a range of strong EPBC Act Conditions on "Groundwater" and on "Extraction of Water from the Great Artesian Basin".*

*These federal conditions must now be applied in the Guidelines to the required EIS Assessment process across the entire Olympic Dam operation, on both the proposed expansion of mining at Olympic Dam as well as across existing BHP operations, including that:*

- The conditions apply to all activities undertaken by the Approval Holder on the Special Mining Lease and to water extraction from Wellfields A and B in the Great Artesian Basin;*
- The Approval Holder must ensure that the extraction of water from Wellfield A and B in the Great Artesian Basin does not have a significant adverse impact on groundwater dependent Listed Threatened Species or Ecological Communities; and*
- That groundwater drawdown from mining operations will have no significant adverse impact on groundwater pressure in the Great Artesian Basin.*

*The EIS Guidelines must require that BHP present alternatives to any increase in extraction of Great Artesian Basin waters and the associated impact and risks to protected Mound Springs, for EIS Assessment and public scrutiny. The required alternatives must include options to close Wellfield A and to phase out Wellfield B. Such action is also needed to protect the fundamental, important and ongoing Aboriginal cultural heritage associated with the unique and fragile Mound Springs."*

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<sup>9</sup> "*PRE-CONDITIONS TO PROTECT MOUND SPRINGS IN OLYMPIC DAM EXPANSION EIS GUIDELINES*", a Briefing Paper produced for ACF, Conservation SA and FOE Australia by David Noonan – June 2019. <https://nuclear.foe.org.au/wp-content/uploads/ODM-PreConditions-to-protect-Mound-Springs.pdf>

## **6. Inconsistent EPBC Decision Making condemns 100's of protected birds to die annually in BHP OD Evaporation Pond operations in direct contradiction of 2011 EPBC Act Approval Conditions.**

Recent EPBC Act approval without controlled action assessment of BHP Evaporation Pond 6 (EPBC 2019/8526, EP 6) condemns 100's of protected birds to continue to die annually as a result of BHP's vested interest continued operation of Evaporation Ponds at Olympic Dam mine<sup>10</sup>.

This is in direct contradiction of EPBC Olympic Dam Decision Conditions 18-21 set in October 2011 on EPBC 2005/2270 to: *"phase out use of Evaporation Ponds as soon as practical"*; mandating BHP: *"must not construct Evaporation Ponds (for the purpose of the expanded mine)"*.

Decision Making in EPBC 2019/8526 EP 6 (and in TSF 6) is questionable across a number of respects and is under further consideration and may be subject of further requested input to this Review.

ARPANSA advised the Department of Environment that both TSF 6 and EP 6<sup>11</sup> can be considered nuclear actions under Sec.22(1)(e), due to establishment of large-scale disposal facilities for radioactive waste. The "Statement of Reasons" for Decision EPBC 2019/8526 EP 6, states:

**Conclusion 102.** *Based on the advice provided to me from SSB and ARPANSA, I found that the proposed action is a nuclear action under section 22(1)(e) of the EPBC Act as it involves the establishment of a large-scale disposal facility for radioactive waste.*

OD EPs deposit significant radioactive tailings waste over time, which is intended to be left permanently in place. On this basis alone EP 6 should have been required to be assessed.

However, both were separately approved without any controlled action assessment. The federal Minister's decision followed on from the SA Government decision in the *"Olympic Dam Major Projects Declaration"* (SA Gov. Gazette, 14 Feb 2019, p.461-462) to exclude TSF 6 and EP 6 from assessment of BHP's OD major mine expansion, preventing a needed comprehensive assessment.

Both decisions suit BHP vested interests, are contrary to EPBC Act *Objects* and responsibilities to protect MNES, work against transparency and scrutiny, and compromise public confidence.

A Joint ENGO Briefing Paper (June 2019) *"MIGRATORY BIRDS AT RISK OF MORTALITY IF BHP CONTINUES USE OF EVAPORATION PONDS"* provides background<sup>12</sup>. Noting a federal Assessment Report on Olympic Dam *"Impacts of the TSF on fauna and migratory species"* (2011, p.17-18) states:

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<sup>10</sup> *"BIRDS VS BHP: Evaporation ponds at BHP's Olympic Dam mine are killing hundreds of birds"*, The Advertiser newspaper 11 July 2019 <https://www.adelaidenow.com.au/news/south-australia/evaporation-ponds-at-bhps-olympic-dam-mine-are-killing-hundreds-of-birds/news-story/1b886e4946f87fb7a729e201282f5cfb>

<sup>11</sup> Statement of Reasons for a Decision on EPBC 2019/8526 Olympic Dam Evaporation Pond 6 (29 Jan 2020), Paragraphs 11, 75 & 102. <http://epbcnotices.environment.gov.au/entity/annotation/cc577385-2346-ea11-b0a8-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1586070753890>

<sup>12</sup> *"MIGRATORY BIRDS AT RISK OF MORTALITY IF BHP CONTINUES USE OF EVAPORATION PONDS"* a Briefing Paper produced for ACF, Conservation SA and FOE Australia by David Noonan – June 2019. <https://nuclear.foe.org.au/wp-content/uploads/ODM-Migratory-Birds-BHP-Evaporation-Ponds.pdf>

*"The TSF poses the relatively largest threat to fauna (particularly birds) from the project within the SML (Special Mining Lease). The existing tailings facility, which consists of around 400 ha of tailings storage and 133 ha of evaporation ponds, attracts fauna due to its location in the environment. Decant water in the TSF is usually toxic and can result in bird deaths. ...*

*The department agrees with the SAAR that the expanded TSF may adversely affect birds including listed migratory species. ...*

*The EIS notes that bird deaths are generally a result of acid in the evaporation ponds contacting the plumage or sensory organs resulting in drowning."*

Please consider a Joint ENGO submission<sup>13</sup> (June 2019) addressing the impacts of TSF 6 and EP 6 on protected birds and provides Recommendation No.3 as a pre-condition on Olympic Dam operations:

***BHP must stop the use of Evaporation Ponds in order to reduce mortality in protected Bird Species:***

*The federal government must subject the June 2019 BHP Olympic Dam TSF 6 Referral to a public assessment process and require that BHP: "must not construct Evaporation Ponds for the purpose of the expanded mine"; and to: "phase out the use of Evaporation ponds as soon as practical".*

*This is consistent with the federal EPBC Act Assessment and Decision in Fauna Approval Conditions 18-21 (EPBC 2005/2270, Oct 2011) to help protect Matters of National Environmental Significance in Listed Bird Species and 21 Migratory Bird Species found in the area from mortality at Olympic Dam.*

*These conditions must now be applied uniformly across the entire Olympic Dam operation.*

*The federal government must require BHP to prevent and limit impacts and mortality on Listed Bird Species protected under both the EPBC Act and SA National Parks and Wildlife Act.*

I sought a "Statement of Reasons" for EPBC Decision EPBC 2019/8526 EP 6<sup>14</sup>. The Conclusion (Para 72, p.9) shows that the acknowledged key concerns of some 200 public submissions to protect birds from death by contact with EP 6 acidic toxic radioactive waste liquors (Para 6-8, p.2) was discounted due to use of a population basis for assessing the significance of ongoing mortality impacts on birds.

On the apparent basis of this Decision, the annual deaths of 100's of EPBC Act protected birds is now accepted to occur over the long term without even warranting an assessment of mortality impacts.

**Q: How can a 'population basis' threshold test apply to dismiss bird death impacts at OD in 2019, given it did not apply to EPBC Act OD Decision Conditions in 2011 which effectively banned new Evaporation Ponds to protect the same range of birds species from mortality impacts of OD EPs?**

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<sup>13</sup> Joint ENGO submission (ACF, Conservation SA and FOE Australia, lead author David Noonan, June 2019) addressing protection of bird species and impacts of TSF 6 & EP 6 at p.4-5 and Recommendation No.3. [https://d3n8a8pro7vhm.cloudfront.net/auscon/pages/16149/attachments/original/1561529707/Joint\\_ENGO\\_Olympic\\_Dam\\_expansion\\_EPBC\\_submission.pdf?1561529707](https://d3n8a8pro7vhm.cloudfront.net/auscon/pages/16149/attachments/original/1561529707/Joint_ENGO_Olympic_Dam_expansion_EPBC_submission.pdf?1561529707)

<sup>14</sup> See Reference No.11.

## **7. EPBC Decision Making has unacceptably failed to order warranted controlled action assessment of BHP OD Tailings Storage Facility 6 and placed “*the environment*” at risk of long-term impacts.**

In June 2019 BHP Referred EPBC 2019/8465 Tailings Storage Facility 6 (TSF 6) to construct, commission, operate and close an additional major tailings storage facility cell, and associated infrastructure, at the Olympic Dam (OD) mine<sup>15</sup>. In Dec 2019 the Department of Agriculture, Water and Environment (DAWE)<sup>16</sup> decided TSF 6 is not a ‘controlled’ nuclear action under the Act and so did not require an EPBC Act public environmental impact assessment process.

This contentious EPBC Act uranium mining decision followed on from two key SA State government decisions: State Approval to BHP for OD TSF 6 was granted on 26 Nov 2019 in a non-public process; and the SA decision in the “*Olympic Dam Major Projects Declaration*” (SA Gov. Gazette, 14 Feb 2019, p.461-462) to exclude TSF 6 from *Development Act 1993* assessment of BHP's OD major mine expansion, preventing a needed public environmental impact assessment of TSF 6 at the State level.

These decisions suit BHP vested interests and are contrary to EPBC Act *Objects* and responsibilities to protect MNES, work against transparency and scrutiny, and compromise public confidence.

The definition of nuclear actions under the EPBC Act 1999 include: establishing or significantly modifying a nuclear installation, mining or milling uranium ores. ARPANSA advised DAWE on 1 July 2019 that the proposed TSF 6 action can be considered a nuclear action under section 22(1)(e) of the EPBC Act due to the establishment of a large-scale disposal facility for radioactive waste.<sup>17</sup>

DAWE’s failure to order an assessment of TSF 6 as a controlled nuclear action is of serious concern. TSF 6 warranted a ‘*whole of environment*’ public impact assessment process to protect MNES.

The nuclear action protected matter of “*the environment*”, and protected bird species subject to mortality due to TSF 6 operations, are at long-term risk of impacts over TSF 6’s 25 year Approval.

Significant issues and concerns about the status and risk posed by this massive new TSF 6 were raised in public submissions<sup>18</sup>. TSF 6 is intended to be “*larger in area than the CBD of Adelaide – at 285 hectares, and up to 30 metres in height – equal to the height of the roof over the Great Southern Stand at the MCG. BHP states the total footprint area of TSF 6 is intended to be 416 hectares.*”<sup>19</sup>

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<sup>15</sup> BHP Olympic Dam EPBC Referral 2019/8465 Tailings Storage Facility 6 (17 June 2019) [http://epbcnotices.environment.gov.au/\\_entity/annotation/Offd8a29-a590-e911-8f1d-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1585449097156](http://epbcnotices.environment.gov.au/_entity/annotation/Offd8a29-a590-e911-8f1d-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1585449097156)

<sup>16</sup> DAWE EPBC Act Decision (19 Dec 2019), Tailings Storage Facility 6 “is not a controlled action” [http://epbcnotices.environment.gov.au/\\_entity/annotation/d26cc369-d522-ea11-a521-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1585448767449](http://epbcnotices.environment.gov.au/_entity/annotation/d26cc369-d522-ea11-a521-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1585448767449)

<sup>17</sup> DAWE Statement of Reasons EPBC 2019/8465, (29 Jan 2020), p.3 [2019-8465 Statement of Reasons - TSF6.pdf \(2.47 MB\)](#)

<sup>18</sup> Joint ENGO submission to BHP Olympic Dam EPBC Act Referral 2019/8465 TSF 6 (David Noonan, lead author, June 2019) available at ACF website: [https://d3n8a8pro7vhmx.cloudfront.net/auscon/pages/16149/attachments/original/1561529707/Joint\\_ENGO\\_Olympic\\_Dam\\_expansion\\_EPBC\\_submission.pdf?1561529707](https://d3n8a8pro7vhmx.cloudfront.net/auscon/pages/16149/attachments/original/1561529707/Joint_ENGO_Olympic_Dam_expansion_EPBC_submission.pdf?1561529707)

The tailings wastes generated at Olympic Dam Mine (ODM) contain approximately “80% of the radioactivity associated with the original ore”<sup>20</sup> and since mining at the site began in 1988 it is estimated some 180 million tonnes of toxic tailings waste have been produced. TSF 6 tailings waste are intended to be left on the surface at Olympic Dam as a major radiological hazard in perpetuity.

Through 2019 the ACF, Conservation SA and FOE Australia have repeatedly recommended a comprehensive Safety Risk Assessment of all Olympic Dam tailings and tailings storage facilities to determine the long-term (in the order of 10,000 years) risk to the public and the environment from all radioactive tailings produced and stored at ODM as a core part of a required EPBC Act public environmental impact assessment process.<sup>21</sup>

TSF 6 has been proposed because Olympic Dam Mine has reached a point of limited tailings storage capacity, with operations of TSF 4 having been extended and unable to be further extended. TSF 4 should be closed and TSFs 1-4 should be decommissioned. TSF 6 is intended to operate for the next 25 years in tandem with continued operations of TSF 5 in a 60:40 discharge of tailings waste.

Analysis of Office of Water Science (OWS) concerns about tailings leaks and seepage reported in the “Statement of Reasons”<sup>22</sup> for TSF 6 (Jan 2020, p.12) warranted a public impact assessment:

***Seepage and leakage into soil and groundwater***

*89. The Department noted that initial advice provided by OWS states that the primary impact to water resources from TSF6 is the seepage of tailings liquor into the shallow groundwater system, particularly the Andamooka Limestone aquifer and the Tent Hill aquifer. OWS raised the concern that seepage may not be neutralised (in terms of its pH) to the degree claimed by BHP; one possible consequential impact of acidic seepage would be sink hole development in exposed bedrock (and particularly any heavily-weathered bedrock) below any embankment of the TSF 6; and that proposed monitoring and mitigation measures related to structural stability and leakage from TSF 6 are inadequate.*

**Q: How can the core uranium mining role of BHP OD TSF 6, public input concerns of impacts and OWS concerns about tailings leaks and seepage, not require EPBC Act public impact assessment?**

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<sup>19</sup> “BHP SEEK A TOXIC TAILINGS EXPANSION WITHOUT A FULL SAFETY RISK ASSESSMENT”

A Briefing Paper written by David Noonan for ACF, Conservation SA and FOE Australia - June 2019.

<https://nuclear.foe.org.au/wp-content/uploads/ODM-Tailings-Waste.pdf>

<sup>20</sup> 1997 Olympic Dam Expansion Project Environmental Impact Statement, Summary, Tailings radiation control, p.21 <https://www.bhp.com/-/media/bhp/regulatory-information-media/copper/olympic-dam/0000/1997-olympic-dam-expansion-project-environmental-impact-statement/summary.pdf>

<sup>21</sup> See Recommendations No.1 & No.2 in: <https://nuclear.foe.org.au/wp-content/uploads/Joint-ENGO-Recommendations-to-Federal-Gov-on-BHP-Olympic-Dam-Mine-Expansion-09Dec2019.pdf>

<sup>22</sup> “Statement of Reasons” (29 Jan 2020) “Not a Controlled Act” Decision on EPBC 2019/8465 Tailings Storage Facility 6, see Analysis of Office of Water Science p.12:

<http://epbcnotices.environment.gov.au/entity/annotation/1fc85ef8-2546-ea11-b0a8-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1586494901813>

**8. Arbitrary EPBC Decision Making on BHP OD TSF 6 in unsubstantiated Department claims that TSF 6 is “exempt” from the EPBC Act due to Sec.43A Actions with Prior Authorisations, is contrary to BHP’s own acknowledgement that TSF 6 “falls outside the scope of the 1997 EIS”.**

The EPBC Act Decision Making on BHP OD Referral EPBC 2019/8465 Tailings Storage Facility 6 appears arbitrary, are questionable on a number of grounds, and would have been subject to ADJR Judicial Review except for facing costs risks in running a public interest environment protection case.

The Dec 2019 EPBC Decision that BHP OD Referral EPBC 2019/8465 Tailings Storage Facility 6 is not a “controlled action” relies on a Sec.43A Actions with Prior Authorisations claim of “exemption” from the EPBC Act that is made in the “Statement of Reasons”<sup>23</sup> for TSF 6 (DAWE, Jan 2020, p.4-5):

***Related decisions:***

*26. The existing Olympic Dam mine was assessed in 1998, consistent with the now repealed Environmental Protection (Impact of Proposals) Act 1974 (EPIP Act)*

*27. The Environmental Impact Statement submitted to the Department in 1997 to inform the 1998 assessment explained that the Olympic Dam site would include an underground mine, mineral processing plant and associated infrastructure including a network of tailings dams for the management of radioactive waste.*

*28. I considered that the production and storage of tailings would generally be exempt from the operation of Part 3 of the EPBC Act because of section 43A. However, in the referral, BHP expressed the legal situation as follows:*

*While most BAU activities are exempt from the operation of the EPBC Act by operation of the Environmental Reform (Consequential Provisions) Act 1999 (Cth) and the 1997 EIS, [the proposed action] falls outside the scope of the 1997 EIS and so is being separately referred.*

BHP openly acknowledge that TSF 6 “falls outside the scope of the 1997 EIS” yet the Department decides to the contrary: That TSF 6 is covered by a 23 year old EIS assessment which neither included nor envisaged TSF 6, under an earlier era 1974 EPIP Act that was repealed over twenty years ago.

The claim further relies on applicability of transitional arrangements in the “*Environmental Reform (Consequential Provisions) Act 1999 (Cth)*” introduced at the time of passage of EPBC Act into law.

Presumably, DAWE should have definitive legal opinion and positioning on such a fundamental matter as the scope of the EPBC Act, however none is indicated in the “*Statement of Reasons*”.

**If the Department’s claim the TSF 6 is “exempt” from the EPBC Act due to Sec.43A is correct:**

Then the EPBC Act Sec.43A *Actions with Prior Authorisations* (and the “*Environmental Reform (Consequential Provisions) Act 1999*” - if and as required) should be amended so that major new “nuclear action” uranium mining facilities are not considered to be “exempt” based on outdated 1990’s decisions and assessments under long repealed prior 1974 environment legislation that does not reflect or deliver on the EPBC Act *Objects*, standards and process.

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<sup>23</sup> *ibid*

**9. EPBC Act Ministerial Decision Making has potentially placed BHP Olympic Dam employees lives at risk by failing to order a comprehensive public environmental impact assessment of TSF 6:**

**BHP Olympic Dam Tailings Storage Facility 6 is a declared “Extreme” consequence category tailings dam facility. With potential dam failure acknowledged to cause an extreme scale of consequential impacts, across: deaths of BHP employees in the order of 100 persons; irreversible environmental impacts; and costs in order of US\$1 billion. Ministerial discretion must not place lives at risk.**

The first public disclosure by the federal government or by BHP that the proposed Olympic Dam Tailings Storage Facility 6 is a known “Extreme” consequences category dam facility was made in Jan 2020<sup>24</sup>. This was at the very end of the EPBC Act process in DAWE’s “Statement of Reasons” EPBC 2019/8465 TSF 6. This is a fundamental failure of transparency under the operations of EPBC Act.

BHP neglected to mention this important fact in the TSF 6 Referral and thereby denied the public required relevant information to come to an informed view of the impacts of the proposed action.

The public had a right to know that the impacts of a failure of TSF 6 could cause: the deaths of in the order of 100 BHP employees, irreversible environmental impacts and costs in order of US\$1 billion.

BHP took over Olympic Dam in 2005 and operated the copper-uranium mine for a decade without apparent insight to warranted “Extreme” consequences category of all existing and proposed TSFs.

BHP has known of the “Extreme” consequences category of proposed TSF 6 in formal Tailings Safety Audit Reports since at least August 2016<sup>25</sup>. For instance, in a non-public ‘in-house’ formal GHD Audit report to BHP: “*TSF Dam Break Safety Report, ODE4520-RPE-0197, GHD, August 2016*”.

But BHP choose to keep these matter secret from the public until *after* the decision outcome of the TSF 6 EPBC Act process in Dec 2019 and after the SA non-public approval process in Nov 2019.

**This is a damning inditement on the integrity of BHP, on the lack of transparency and lack of a safety culture in Olympic Dam operations, and on serious shortcomings in operation of EPBC Act.**

In the same way, BHP knew of the “Extreme” consequences category of the all of the existing TSF’s at Olympic Dam since at least August 2016 but failed to publicly disclose these facts until June 2019.

For instance, the “*Olympic Dam Tailings Retention System Annual Audit – 2018*” a formal non-public in-house report<sup>26</sup> to BHP by SRK Consulting (Nov 2018) states p.6:

*“The Consequences Categories for TSF cells 1-5 (and the proposed TSF cell 6) were revised as part of the dam break study (GHD, August 2016) to “Extreme”.”*

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<sup>24</sup> “Statement of Reasons” (DAWE, 29 Jan 2020) “Not a Controlled Act” Decision on EPBC 2019/8465 Tailings Storage Facility 6, see the “Public Submissions” section p.2-3, Paragraphs 6-10: [http://epbcnotices.environment.gov.au/\\_entity/annotation/1fc85ef8-2546-ea11-b0a8-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1586494901813](http://epbcnotices.environment.gov.au/_entity/annotation/1fc85ef8-2546-ea11-b0a8-00505684324c/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1586494901813)

<sup>25</sup> BHP Tailings Safety and Audit Reports on Olympic Dam were released under FOI by the SA government in late 2019 to Mark Parnell MLC and analysed by David Noonan in a report to the Greens SA (19 Jan 2020).

<sup>26</sup> SRK’s “*Olympic Dam Tailings Retention System Annual Audit – 2018*” report to BHP was released under FOI.

BHP Environment Management reports to the SA and federal governments fail to cite these matters.

In DAWE's "Statement of Reasons" TSF 6, in discussion of "Public Submissions" (p.2-3), the EPBC Act decision maker acknowledged public concerns over the "extreme risk rating" of TSFs at OD:

*8. I noted that the submissions raised the following issues:*

- **failure of the tailings dam wall in Brazil (further detail below) and the 'extreme' risk rating associated with three tailings dams already at Olympic Dam;**
- *radiation hazard and the need for BHP to undertake a comprehensive risk assessment to determine the long-term (10,000 years) risk to the public and the environment from the radioactive tailings;*
- *impacts to species, including listed threatened species and communities and listed migratory species; and*
- **the Olympic Dam operation should be assessed in its entirety with the full project impact to be subject to public consultation.**

In the case of TSF 6, it is arguable BHP has pursued a 25 year Approval from SA and federal gov's in spite of a recognised risk of fatality to 100 BHP Olympic Dam employees in a potential catastrophic dam failure at TSF 6, instead of finding a safer way to operate OD mine and to do BHP business.

However, EPBC Act Decision Making noted and accepted a BHP 'explanation' and then ignored the failure to disclose key relevant information in the Referral and dismissed the case for assessment:

*9. I noted that BHP explained:*

***The reference to an 'extreme' risk rating associated with three tailings dams already at Olympic Dam was not discussed above. The Australian National Committee on Large Dams (ANCOLD), formed in 1937, is an Australian based apolitical industry body that focuses on disseminating knowledge, developing capability and providing guidance in achieving excellence for all aspects of dam engineering, management and associated issues.***

***ANCOLD assigns "Consequence Categories" to a dam according to the seriousness, and magnitude, of the adverse consequences affecting the community's interests, including environmental effects, which could be expected to result from that dam's failure. In assigning such consequence categories, no account is taken of the likelihood of dam failure. The consequence rating is not a measure of any dam's stability or other risk status. Thus, a dam which meets the highest safety standards, and therefore is highly improbable to fail, can have an extreme Consequence Category.***

***Currently, the TSF6 dam has been given a consequence category of 'extreme' due to the possible loss of life from a (an improbable) loss of containment at full height. The consequence category is used to define the level of surveillance, monitoring, audits and the parameters used for the safe design and management of the proposed facility. The surveillance and design requirements form part of the controls to prevent a failure.***

*BHP state the recommended actions associated with the findings of an internal tailings dam review that was undertaken by BHP following the Samarco Fundao dam failure in Brazil on 5*

*November 2015 have been fully implemented. BHP's TSF 6 Project Team has reviewed these findings and actions and has incorporated all relevant actions. I have considered the design and management measures in place for the proposed project as set out above under the heading 'Seepage and leakage into soil and groundwater'. (bold emphasis added)*

The claims by BHP can only credibly be tested in an EPBC Act public impact assessment process.

BHP has provided no 'explanation' for keeping secret fundamental ongoing risk to the lives of BHP Olympic Dam employees from all existing OD TSFs over a 3 year period August 2016 to June 2019.

Consider the following key passage from a Nov 2017 KCB report<sup>27</sup> to BHP: "*Olympic Dam Tailings Retention System Annual Safety Inspection and Review Rev.1*" (Klohn Crippen Berger, **2.3 Classification – Consequence Category**, p.10):

*"BHP OD has assessed the consequences category of the TSFs according to ANCOLD (2012a,b). A dam break study, which considered 16 breach scenarios of TSFs 1 to 5, was completed by GHD (2016) and indicated a potential for tailings and water flow into the mine's backfill quarry and underground portal. The following conclusions were drawn, as described in BHP OD's Tailings Management Plan (see Section 3.2):*

- *The population at risk (PAR) for a TSF embankment breach is greater than 100 to less than 1000 mine personnel primarily as a result of the potential flow of tailings into the adjacent backfill quarry and entrance to the underground mine.*
- *The financial cost to BHP OD for a tailings dam failure was assessed by BHP OD to be greater than US\$1B, a "catastrophic" loss according to ANCOLD guidelines (2012a,b).*

*Based on these criteria, the TSFs at Olympic Dam have been given a consequence category of "Extreme" to guide future assessments and designs. Note that this is an increase compared to the assessment prior to the FY16 Annual Safety Inspection and Review (Golder Associates, 2016a) which classified TSF 1-4 and TSF 5 as "High A" and "High B", respectively. This is a result of an increased PAR and financial impact in the current assessment."* (bold emphasis added)

The "PAR population at risk" is that of 100 BHP Olympic Dam employees and the cited risk is fatality.

#### **Evidence before the EPBC Act Decision Maker toward a controlled action assessment of TSF 6:**

The public interest requirement for existing and proposed BHP Olympic Dam Tailings Storage Facilities to be assessed under the EPBC Act as "Extreme" consequences category dam facilities has been raised in a range of public submissions to all three of the BHP OD EPBC Referrals in 2019.

Including by members of the Environmental and Natural Resources Law Research Unit and the Public Law & Policy Research Unit, based at the Adelaide Law School, University of Adelaide, to Olympic Dam Referral EPBC 2019/8465 TSF 6 (Principal author Assoc. Prof Dr Peter Burdon, additional comments by Mr. John Podgorelec, Legal Counsel, International Human Rights Law, June 2019):

#### **"Public Consultation ...**

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<sup>27</sup> The KCB "*Olympic Dam Tailings Retention System Annual Safety Inspection and Review Rev.1*" (Nov 2017) report to BHP was released under FOI in SA in late 2019.

A public environment impact assessment would also be appropriate considering the modelled “extreme” risk rating given to three tailings dams (2 active, 1 inactive) at BHP’s Olympic Dam site.<sup>28</sup> As reported in the Australian Financial Review, an “extreme” rating was used to describe a dam that has the “potential to kill more than 100 people, causing extreme loss of infrastructure and leaving the environmental and cultural sites in a state where restoration was impossible.”<sup>29</sup> In light of this, public comment, including consultation with the indigenous peoples, is a prudent and conservative measure.

In addition to this call for public comment, we argue that a final decision about the facility ought to be put on hold until Professor Bruno Oberle has completed his report on the safety of international tailings storage facilities.<sup>30</sup> Professor Oberle was appointed by the International Council of Mining and Metals (ICMM), Principles for Responsible Investment (PRI) and United Nations Environment Programme (UNEP). His review, which was set up in response to the life taking tragedy which occurred at the BHP and Vale S.A. joint venture mine in Brazil in 2015, will establish an international standard for the safe management of tailings storage facilities that can be applied to all tailings dams wherever they are located and whoever operates them. His report is due at the end of 2019.<sup>31</sup>

### **Comprehensive Risk Assessment**

In line with our first submission, we contend that the Government should require BHP to conduct a comprehensive Safety Risk Assessment to determine the future environmental impact of tailings produced at Olympic Dam. At present, the Roxby Downs (Indenture Ratification) Act 1982 (SA) and the South Australian Governments Olympic Dam Major Projects Declaration (hereafter, the Declaration) make risk assessment extremely difficult. BHP is proposing to expand the Olympic Dam mine, to increase production from 200,000 tonnes per annum of copper (tpa Cu) and associated products to up to 350,000 tpa Cu and associated products. This expansion will be assessed as a major project under s 46 of the Development Act 1993 (SA). The environmental impact assessment will cover ‘works to increase capacity of facilities and operations for tailings storage, evaporation ponds, waste rock storage, low grade ore storage and water dams within the Special Mine Lease’ for the mine expansion.<sup>32</sup> However, activities concerning tailings storage and waste are excluded from the assessment if they are an ‘operation’ or ‘discrete project’ associated with enabling production of “up

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<sup>28</sup> BHP “ESG Briefing: Tailings dams.” (June 2019, p.17): [https://www.bhp.com/-/media/documents/media/reports-and-presentations/2019/190607\\_esgbriefingtailingsdams.pdf?la=en](https://www.bhp.com/-/media/documents/media/reports-and-presentations/2019/190607_esgbriefingtailingsdams.pdf?la=en)

<sup>29</sup> Peter Kerr, ‘BHP Says Two Australian Dams May Pose “Extreme Risk”’, The Australian Financial Review, June 7, 2019: <https://www.afr.com/business/mining/bhp-says-two-australian-dams-may-pose-extreme-risk-20190607-p51vk6>

<sup>30</sup> International Council on Mining & Metals, ‘Professor Bruno Oberle to Chair Independent Tailings Review’ (2019) <https://www.icmm.com/en-gb/news/2019/chair-of-independent-tailings-review-announced>

<sup>31</sup> Note: The Report of the “Global Tailings Review” has twice been delayed since. On the priority to “establish an international standard for the safer management of tailings facilities” and the responsibility to apply safer management to “Extreme” consequence category dam facilities, see: <https://globaltailingsreview.org/>

<sup>32</sup> Olympic Dam Major Development Declaration, The South Australian Government Gazette, 14 February 2019, 461-462.

to approximately 200,000 tpa Cu and associated products”, that is, if they are categorised as part of the existing works and not the expansion. Tailings Storage Facility 6 has been included within the latter category, and therefore will not be assessed as part of the mine expansion.<sup>33</sup> We submit that this leads to a piecemeal approach to the environmental assessment of tailings storage at Olympic Dam, which is not consistent with a federal approach of regulating the mine through one EPBC Act approval, covering both existing and expanded operations. It also undermines the opportunity for public participation and scrutiny.

We contend that the Government should require BHP to conduct a comprehensive Safety Risk Assessment to determine the future environmental impact of tailings produced at Olympic Dam. Our submission calls for a comprehensive Safety Risk Assessment is consistent with earlier conditions placed on the mine. In particular, Approval Condition 32 (EPBC 2005/2270) which required that plans for an expanded mine “contain a comprehensive safety assessment to determine the long term (from closure to in the order of 10,000 years) risk to the public and the environment from the tailings storage facility.”<sup>34</sup> The fact that the project did not go ahead does not, in our view, detract from the suitability of these conditions and similar standards have also been set for the Ranger Uranium Mine in the Northern Territory.

Finally, we contend that the Government should prohibit BHP from constructing Evaporation ponds in the future and phase out/rehabilitate those currently in operation. It has been very well documented that evaporation ponds cause significant deaths of Listed Bird Species. For this reason, in 2011 the Federal Government recommended that such dams not be used in the proposed expansion.<sup>35</sup>

A range of these fundamental public interest matters are also before the current Productivity Commission “Resources Sector Regulation Study”. In an over-view article<sup>36</sup> on EPBC regulatory responsibilities to protect Matters of National Environmental Significance in BHP Olympic Dam issues (David Noonan, Independent Environment Campaigner, 28 August 2019):

*“BHP Olympic Dam Tailings: an “Extreme Risk” to Workers and to the Environment”.*

**The lives of 100 BHP employees are at stake in this matter:** The failure of EPBC Act Decision Making to order an assessment of BHP OD TSF 6 is a most serious omission which draws into question the exercise of responsibility in, and discretion of, Ministerial Decision Making under the EPBC Act.

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<sup>33</sup> Enabling activities under the Declaration excluded: “waste treatment, storage and disposal, including but not limited to, Tailings Storage Facility 6, Evaporation Pond 6, and additional cells for the contaminated waste disposal facility.”

<sup>34</sup> See Australian Government, Department of Sustainability, Environment, Water, Population and Communities, 'Expansion of the Olympic Dam Copper, Uranium, Gold and Silver Mine, Processing Plant and Associated Infrastructure (EPBC 2005/2270) <http://epbcnotices.environment.gov.au/entity/annotation/123b43db-2868-e511-9099-005056ba00a8/a71d58ad-4cba-48b6-8dab-f3091fc31cd5?t=1555029462032>

<sup>35</sup> Ibid.

<sup>36</sup> “BHP Olympic Dam Tailings: an “Extreme Risk” to Workers and to the Environment” article attached to [Public Submission No.1](#) (David Noonan, Independent Environment Campaigner, 28 August 2019) at: [https://www.pc.gov.au/data/assets/pdf\\_file/0006/244788/sub001-resources-attachment.pdf](https://www.pc.gov.au/data/assets/pdf_file/0006/244788/sub001-resources-attachment.pdf)

In this case, the decision at best acquiesces to BHP vested interests rather than providing protection of “the environment” as a MNES as required through a ‘controlled action’ public impact assessment.

This is further compounded by the subsequent Decision in the case of EPBC 2019/8570 to order an accredited assessment under the SA *Development Act 1993* of BHP’s Olympic Dam mine expansion.

This was done by DAWE in full knowledge that the existing Olympic Dam “Major Project Declaration” (SA Government Gazette, 19 Feb 2019, p.461) under the *Development Act 1993* had already made the proposed TSF 6 (and EP 6) “*exempt*” from the environment impact assessment process in SA.

Joint ENGO’s formally raised the improper constraint placed by the SA “exemption” of TSF 6 and EP 6 from warranted public environmental impact assessment in 3 EPBC Referral submissions over 2019.

The due application of the precautionary principal under the *Objects* of the Act to acknowledged consequential impact of a dam failure in case of TSF 6 also warrants a controlled action assessment.

The EPBC decision on TSF 6 could have been tested in a public interest ADJR Judicial Review case, except for the hurdle of costs attribution to the instigator of such an environmental protection case.

The Review should consider levelling the EPBC costs playing field so that such cases can be heard.

**10. All “Extreme” consequence category dams regulated by the EPBC Act require comprehensive public impact assessments processes given the extreme scale of acknowledged dam failure impacts. This applies to all existing BHP Tailings Storage Facilities (TSF 1 – 5) at Olympic Dam.**

**The scope of the EPBC Act must be reviewed and amended if the current Act’s reliance on the ‘likelihood’ of significant impacts is deemed to not require assessment of “Extreme” consequence category dam failures & impacts.**

The public interest requirement for existing and proposed Olympic Dam Tailings Storage Facilities to be assessed as “Extreme” consequences category dam facilities is addressed in a range of public submissions to the three 2019 BHP Olympic Dam EPBC Act Referrals, including:

- By Joint ENGO’s ACF, Conservation SA and FOE Australia to EPBC 2019/8570 “*Olympic Dam Resource Development Project*”<sup>37</sup> (Dec 2019);
- And by Joint ENGO’s to EPBC 2019/8526, Evaporation Pond 6, as an ‘associated action’ to the larger proposed TSF 6 nuclear action (Nov 2019);
- By members of the Environmental and Natural Resources Law Research Unit and the Public Law & Policy Research Unit, based at the Adelaide Law School, to EPBC 2019/8465 TSF 6 (Principal author Assoc. Prof Dr Peter Burdon, June 2019).

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<sup>37</sup> Joint ENGO submission to BHP Olympic Dam EPBC Act Referral 2019/8570 “*Olympic Dam Resource Development Project*” (David Noonan, lead author, Dec 2019) available at FOEA website: <https://nuclear.foe.org.au/wp-content/uploads/2019-Dec-final-submission-joint-ENGOS-BHP-Olympic-Dam-EPBC-Referral-2019-8570.pdf>

ACF, FoE Australia and Conservation SA (Dec 2019, p.1) provided the following lead over-arching Recommendations in relation to the Minister’s consideration of BHP’s OD Referral applications.

- *The Olympic Dam operation should be assessed in its entirety in an Environmental Impact Statement (EIS) level public assessment process under the EPBC Act, with the full range of project impacts subject to public consultation.*
- ***A comprehensive Safety Risk Assessment of all Olympic Dam mine tailings and tailings storage facilities is required as part of this EPBC Act EIS level public process. This is particularly important given the identification by BHP of three ‘extreme-risk’ status tailings facilities at Olympic Dam.***

*At a minimum, EPBC Act responsibilities to protect Matters of NES require that the BHP Olympic Dam TSF 6 and EP 6 Referrals must be subject to the rigour and transparency of a single comprehensive public environmental impact assessment process.*

This Joint ENGO’s submission presents serious concerns over BHP intentions and practices at OD:

***“EIS Assessment of the entire Olympic Dam operation including tailings facilities:***

*... BHP intends a further major expansion in tailings output without a prior full Safety Risk Assessment - such an approach is inconsistent with modern environmental practice and community expectation.*

*This is of particular concern given the increased global attention on the risks of catastrophic tailings dam failure following tragic events at the BHP and Vale joint venture mine at Samarco in Brazil in 2015 and the nearby Vale Brumadinho tailings dam collapse in early 2019.*

*BHP’s own tailings taskforce has identified three of the current Olympic Dam facilities with an ‘extreme risk’ status – the highest risk category.*

*The TSF 6 Referral followed a BHP “Tailings Facilities Disclosure”<sup>38</sup> (07 June 2019, p.11-12) stating three Olympic Dam tailings facilities are at the highest “extreme risk” hazard category based on the consequences of a potential catastrophic failure of the radioactive tailings waste facilities.*

*BHP’s “ESG Briefing: Tailings Dams” (June 2019, p.17) states the “Principal Potential Impact” in a ‘most significant failure’ of extreme risk Olympic Dam tailings waste facilities is in “Employee impacts” – with the potential loss of life of BHP employees at Olympic Dam reported at 100.*

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<sup>38</sup> BHP “Tailings Facilities Disclosure: Response to the Church of England Pensions Board and the Council on Ethics Swedish National Pension Funds” (07 June 2019). In April 2019, the Church of England Pensions Board and the Council on Ethics Swedish National Pension Funds wrote to approximately 700 mining firms to request specific disclosures of their tailings facilities. This document contains the BHP response to that request: [https://www.bhp.com/-/media/documents/environment/2019/190607\\_coe.pdf?la=en](https://www.bhp.com/-/media/documents/environment/2019/190607_coe.pdf?la=en)

*The Canadian Dam Safety Guidelines “extreme risk” consequences category shows impacts: at a potential loss of life of more than 100; an extreme loss of infrastructure and economics; and a major permanent loss of environmental and cultural values - with restoration stated to be impossible (In: BHP’s “ESG Briefing: Tailings Dams”, p.10).*

*BHP face profound unresolved safety and environmental protection issues in multiple existing active and inactive “extreme risk” Tailings Storage Facilities at Olympic Dam - including as a formally acknowledged potential risk to the lives of many BHP employees. It is unacceptable and deeply deficient that these serious safety issues are not mentioned by BHP in the TSF 6 or in the associated EP 6 Referrals.*

*The global mining industry and BHP are in serious trouble internationally over catastrophic mine tailings dam failures. In response, the International Council on Mining and Metals (ICMM) has teamed with the United Nations Environment Program (UNEP) to conduct a comprehensive Independent Tailings Review (24 April 2019) to draw up a new international safety standard for the management of tailings storage facilities. ...*

*Safety must be comprehensively assessed across all tailing’s facilities at Olympic Dam, without any restrictions or exemptions provided to BHP’s corporate interests and legal privileges, prior to a decision on any new Tailings Storage Facilities or a proposed expansion of toxic radioactive tailings production.*

*In the public interest, a comprehensive Tailings Safety Risk Assessment must be required from BHP in the Assessment Guidelines and this must be subject to public scrutiny in the EIS process.”*

Following on from tragic events in a catastrophic dam failure at the BHP and Vale joint venture mine at Samarco in Brazil in 2015, BHP decided to instigate new long term “Extreme” consequence tailings dam operations at Olympic Dam in the TSF 6 proposal and to keep secret TSF 6’s “Extreme” rating.

It appears manifest the responsible Minister and DAWE should have ordered a ‘controlled action’ assessment of TSF 6 on a number of grounds including its “Extreme” consequences rating risk to the lives of 100 BHP employees. The reasons this did not occur are most relevant to the EPBC Review.

If it is the case, as purported in the “Statement of Reasons” for TSF 6, that the current Act’s reliance on the ‘likelihood’ of significant impacts is deemed to not require assessment of “Extreme” consequence category dam failures and impacts, then the EPBC Act should be amended to do so.

In this regard, the Mining Policy Institute submission to this Review makes a cogent point:

*“The only plausible scenario in which DAWE could understand the likelihood of an occurrence that would cause the TSF 6 to fail would be through environmental assessment. We suggest that DAWE did not consider this issue or it’s severity with enough rigour.”*

Only through a comprehensive impact assessment could the Minister and DAWE know how likely TSF 6 is to fail over the intended 25 year operating period at Olympic Dam and if the acknowledged most significant “Extreme” consequence risk to life from TSF 6 may eventuate in BHP OD operations.

**In any case, surely the lives of 100 BHP employees warrants an EPBC Act comprehensive Safety Risk Assessment of all Olympic Dam mine tailings and tailings storage facilities, existing and proposed? This Independent Review of the EPBC Act should fully investigate the matter.**