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Public Submission to BHP's EPBC Act Referral 2019/8570 "Olympic Dam Resource Development Strategy" copper-uranium mine expansion

9th December 2019

The proposed BHP "Olympic Dam Resource Development Strategy" (OD-RDS) copper-uranium mine expansion, and BHP's proposed major new Tailings Storage Facility 6 (TSF 6) Referral 2019/8465 and associated Evaporation Pond 6 (EP 6) Referral 2019/8526, present significant environmental and public health implications.

In particular, in relation to protection of Matters of National Environmental Significance (NES), to mine water consumption with impacts on the Great Artesian Basin and on the unique and fragile Mound Springs, and to radioactive risks and impacts.

Uranium mining at BHP's Olympic Dam mine is a controlled "*nuclear action*" and "*Matter of National Environmental Significance*" under the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act): "*this means that it is necessary to consider impacts on the whole environment*" ([federal Department of Environment](#), Sept 2011, p.4).

Our organisations, ACF, FoE Australia and Conservation SA, welcome this opportunity to comment and draw your attention to the following over-arching recommendations in relation to your consideration of BHP's 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.

- The EIS Assessment Guidelines must apply standards of Objects D of the Commonwealth-South Australia Assessment Bilateral Agreement.
- BHP must stop the use of Evaporation Ponds to reduce mortality in protected Bird Species, in accordance with EPBC Act fauna assessment conditions set in 2011.

- Pre-Conditions to protect Mound Springs and to explore alternatives to Great Artesian Basin water extraction must be required by the EIS Assessment Guidelines.
- BHP must lodge a Bond to cover 100% of rehabilitation liabilities at Olympic Dam.
- A Nuclear Events Risk Analysis is needed to address uranium sector social license issues.
- Repeal BHP legal privileges overriding SA laws, standards and due process.
- The EIS Guidelines need to explicitly require investigation and recommendations on key issues, including:
 - On Aboriginal heritage issues.
 - The efficacy of existing occupational health and safety and radiological protection regimes.
 - Electricity Supply, Diesel Fuel Use and Public Subsidy, and Greenhouse Pollution issues
 - A feasible no-uranium sales alternative for Olympic Dam.
 - The UN Secretary General’s Recommendation for a net cost impact assessment of uranium mining.

Thirteen more detailed Recommendations by our organisations, supported by a set of seven Key Issue Briefing Papers, are provided later in this submission.

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

The integrity of environmental protection requires that the entire Olympic Dam operation be made subject to impact assessment and public consultation so that regulatory conditions can be uniformly applied to protect “the environment” in a manner consistent with the federal EPBC Act.

The proposed copper-uranium mining expansion at Olympic Dam and the proposed major new TSF 6 and EP 6 facilities must be assessed in accordance with an important Recommendation by the federal Department of Environment (“[Olympic Dam expansion assessment report EPBC 2005/2270](#)”, Sept 2011, 7. Existing operation, p.62), 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”.

To exclude, or to fail to apply, environmental assessment and public consultation on fundamental environmental impacts of uranium mining at Olympic Dam is contrary to the public

interest. For instance, the federal government must not approve major new TSF 6 or EP 6 facilities on the basis of limited non-independent BHP provided referral input.

The fact the federal government has held over a decision on BHP Olympic Dam TSF 6 Referral (from mid-year) and on the recent EP 6 Referral provides an opportunity to deliver on EPBC Act responsibilities to order a much-needed comprehensive EIA process that addresses both the TSF 6 and EP 6 applications.

Our organisations urge you in the strongest terms to take up this EPBC Act environmental protection responsibility and publicly and properly assess BHP's TSF 6 and EP 6 proposals. This is required in order to be consistent with previous federal recommendations and contemporary community expectations.

BHP must not be allowed to 'game' the EPBC Act Referral system with multiple limited Referrals to try and avoid the scope of a needed comprehensive public environmental impact assessment.

Please refer to our [Joint ENGO public submission to EPBC Act Referral 2019/8465 TSF 6](#) and to our Joint ENGO public submission to associated EPBC Act Referral 2019/8526 Evaporation Pond 6 for further formal input on behalf of our organisations - including the Key Issue Briefings containing more detailed Recommendations.

There must be no restrictions or exemptions placed on the required EPBC Act Environmental Impact Statement (EIS) level assessment process for this proposed mining expansion.

BHP's corporate interests and existing legal privileges in South Australia must not be allowed to constrain warranted federal assessment of this 'nuclear action' copper-uranium mine expansion.

The SA governments "*Olympic Dam Major Projects Declaration*" (14 Feb 2019) seeks to set up an unacceptable two-tiered mining and regulatory system at Olympic Dam to suit BHP's interests.

For instance, the SA Declaration would exclude existing mining "*such as waste treatment, storage and disposal*", along with significant new "*enabling activities*" including the proposed major new "*Tailings Storage Facility 6 and Evaporation Pond 6*", from proposed Guidelines that will set the scope and extent of the required EIS Assessment process.

Contrary to the public interest, this Declaration seeks to prevent environmental assessment and public consultation on fundamental environmental impacts of uranium mining at Olympic Dam.

The recent amendment to the Declaration to provide for a joint assessment of OD-RDS between SA and the Commonwealth retains these unacceptable exemptions in favour of BHP.

These approaches are contrary to EPBC Act responsibilities, compromise the integrity of public environmental impact assessment and work against transparency, scrutiny and stakeholder and wider community confidence.

As federal Minister for the Environment your EPBC Act responsibilities to matters of NES in this assessment, and the standards required under Objects D of the Cth-SA Assessment Bilateral Agreement, must not be directed or restricted by the position taken by the SA State jurisdiction.

Olympic Dam tailings present a significant, near intractable, long-term risk to the environment.

Tailings contain around 80% of the radioactivity associated with the original ore and retain a suite of toxic radioactive decay chains, as well as around one third of the uranium from the ore.

BHP should be required to demonstrate a plausible plan to isolate radioactive tailings mine waste from the environment for at least 10,000 years in line with the federal government's environmental requirements at the Ranger uranium mine in the Northern Territory.

Since 1988 Olympic Dam has produced around 180 million tonnes (Mt) of radioactive tailings that are intended to be left in extensive above ground piles on-site, effectively forever.

In comparison, the Ranger uranium mine has produced around 120 Mt of tailings to 2018 which are required to be disposed to a former mine pit.

BHP's radioactive tailings waste facilities at Olympic Dam are extensive and cover an area totalling 960 hectares or 9.6 km² - an area far larger than the Melbourne CBD of 6.2 km².

In this area water sprays are used to limit tailings dust release and potent radioactive radon gas is released to the atmosphere.

Multiple Tailings Storage Facilities (TSF) at Olympic Dam mine have reached 30 metres height at the centre of the tailings piles. This is the height of a ten-storey building and equal to the height of the roof over the Melbourne Cricket Ground's "*Great Southern Stand*". TSF 4 already covers an area over 100 times the playing area of the MCG.

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](#) (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.

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. This important report and the new tailings storage safety standards were due at the end of 2019.

It is unacceptable that BHP are seeking federal environmental approval for TSF 6 prior to availability of the new ICMM and UNEP international safety standard for the management of tailings storage facilities. Failure to be directly informed by best international practise risks TSF 6 becoming another “extreme risk” facility.

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.

The EIS Assessment Guidelines must adopt [the federal government’s Olympic Dam Approval Condition 32 Mine Closure \(EPBC 2005/2270, Oct 2011\)](#) as a requirement on BHP for a comprehensive Safety Risk Assessment covering all radioactive tailings at Olympic Dam, including that the tailings plan (p.8) must:

“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”

In recognition that tailings risks are effectively perpetual, Condition 32 Mine Closure (p.8) requires environmental outcomes: *“that will be achieved indefinitely post mine closure”*.

The EPBC Act Assessment Guidelines and the comprehensive Tailings Safety Risk Assessment must also be consistent with the environmental standards set by the federal government in 1999 to regulate the Ranger uranium mine in Kakadu (Northern Territory), *“to ensure that:*

- i) *The tailings are physically isolated from the environment for at least 10,000 years;*

- ii) *Any contaminants arising from the tailings will not result in any detrimental environmental impact for at least 10,000 years.*

There is an obligation for these Guidelines to mandate application of the “*high environmental standards*” set out in Objects D of the [Commonwealth-SA Assessment Bilateral Agreement](#).

Protection of Matters of NES – phase out of Evaporation Ponds to limit bird deaths:

This Commonwealth-SA Assessment Bilateral Agreement (signed 25/09/2014) is to ensure that Matters of National Environmental Significance (NES) are protected as required under the EPBC Act, with high quality assessments of impacts, and to ensure that:

“authorized actions do not have unacceptable or unsustainable impacts on Matters of NES”.

Applicable Matters of NES which must be assessed and protected as required under the EPBC Act at Olympic Dam include Listed Bird Species and protected Mound Springs, along with the natural flows of Great Artesian Basin waters on which the unique and fragile Mound Springs depend, and “the whole of the environment” as the three BHP Referrals are nuclear actions.

Listed Migratory Birds are at significant unnecessary risk of mortality due to BHP’s continued use of Evaporation Ponds. However, the SA Olympic Dam Major Project Declaration seeks to exclude major new “*Tailings Storage Facility 6 and Evaporation Pond 6*” and resultant ongoing and long term impacts from the Assessment Guidelines.

The most recent federal assessment of Olympic Dam operations set [Fauna Approval Conditions 18 - 21 \(EPBC 2005/2270, Oct 2011\)](#) to protect Listed Bird Species and 21 Listed Migratory Bird Species found in the area from impact and mortality. These conditions required that BHP:

“must not construct Evaporation Ponds (for the purpose of the expanded mine)” (C.19);

And to: *“phase out the use of Evaporation Ponds as soon as practical” (C.21)*

However, acting directly contrary to the effect of these federal EPBC Act assessment conditions from 2011, BHP now propose a further major new Evaporation Pond 6 at Olympic Dam.

To protect Matters of NES, BHP must now be made to comply with these Conditions to prevent and limit mortality to protected Bird Species, in existing Olympic Dam operations, in any proposed major new TSF and EP facilities and in-regard to the proposed expansion in mining operations – *“as soon as practical”*.

Giving effect to these Conditions is prudent, possible and in the public interest.

In routine weekly monitoring (2017-18) some 222 dead birds were observed, including 39 Banded Stilts. These birds are instead supposed to be protected under federal EPBC Act and SA *National Parks and Wildlife Act* obligations.

BHP report: *“Overall, there has not been a significant increase or decrease in the number of alive and dead birds observed at the TRS from FY12 to FY18”*. BHP’s record fails to show improvement.

The actual number of bird mortalities is higher than the observed reports as impacted birds that leave the site are dying elsewhere and many birds drown in the acid mine waste waters of BHP's Evaporation Ponds. These fauna deaths are unnecessary given BHP could phase out use of EP's.

In exercising your EPBC Act responsibilities you should not be directed or restricted by the SA Olympic Dam Major Projects Declaration which seeks to exclude the required EIS process from assessing a major new Evaporation Pond No.6, with resultant impacts in mortality to protected birds. The current SA approach presents EP 6 as an "*enabling activity*" to suit BHP interests.

This approach is contrary to EPBC Act responsibilities and to the standards set out in Objects to the Cth-SA Bilateral Assessment Agreement, to do so would compromise the EIS Assessment and work against transparency, scrutiny and contemporary community expectations.

Protection of Matters of NES – unique and fragile Mound Springs and GAB waters:

Protection of the unique Mound Springs requires that the federal EIS Assessment Guidelines on this BHP "Major Projects" mining expansion reflect the protection, coverage and standards of the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and of Objects D to the "*Commonwealth-South Australia Assessment Bilateral Agreement*".

The EIS Assessment Guidelines must require the proponent BHP to demonstrate that proposed actions in this Olympic Dam mine expansion "*do not have any unacceptable or unsustainable impacts*" (Objects D, Cth-SA Assessment Bilateral Agreement) on Mound Springs.

All relevant federal EPBC Act decision conditions in this area must be adopted as pre-conditions in the EIS Assessment Guidelines.

The protection of Mound Springs as a Matter of NES encompasses a range of Environmental Impact Assessment, science and ecology, Great Artesian Basin (GAB), Aboriginal cultural heritage and public interest considerations. These occur across federal and state responsibilities and their consideration needs to be built into the EIS Assessment Guidelines.

As a listed "*Endangered Ecological Community*" under the EPBC Act the Mound Springs are categorised as: "*facing a very high risk of extinction in the wild in the near future (indicative timeframe being the next 20 years)*".

These unique and fragile Mound Springs are under significant pressure from BHP's ongoing extraction of GAB waters and face the threat of BHP increasing this rate of water extraction.

BHP has stated: "*Potential impacts include a localised reduction in aquifer pressure which has the potential to reduce GAB spring flow and pastoral bore flows.*" (BHP presentation "Olympic Dam Resource Development Strategy", Key Aspects Groundwater, April 2019)

That is an under-statement. BHP intends to increase extraction of GAB waters to an annual average rate of 50 million litres a day (Ml/d), up from the current maximum of 42 Ml/day. The current figure was set by the SA government back in 1997 in a now long outdated assessment.

This planned increase in water extraction and use lacks an evidence basis, threatens the unique Mound Springs and is profoundly inconsistent with contemporary community expectation.

In 2011 the federal government set a range of strong [EPBC Act Conditions](#) on “Groundwater” and on “Extraction of Water from the GAB” to help protect the Mound Springs.

These federal conditions must now be applied in the SA Guidelines to the EIS Assessment, on both the proposed expansion of mining at Olympic Dam AND on 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 GAB;
- The Approval Holder must ensure that the extraction of water from Wellfield A and B in the GAB 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 GAB.

ACF, FoEA and Conservation SA have long maintained that Wellfield A must close as soon as possible and extraction at Wellfield B must be capped and phased out to protect the unique and fragile Mound Springs.

Such action is also needed to protect the fundamentally important ongoing Aboriginal cultural heritage associated with the Mound Springs.

Please see the Joint ENGO Key Issue Briefing Paper “*Pre-Conditions to protect Mound Springs in Olympic Dam expansion EIS Assessment Guidelines*” (Dec 2019) appendix to this submission.

The EPBC Act EIS Guidelines must require BHP to present alternatives to any proposed increase in extraction of precious GAB waters and the associated impact risks to Mound Springs, for formal assessment and public scrutiny.

The required alternatives must include options to close Wellfield A and to phase out Wellfield B.

BHP must lodge a Bond to cover 100% of rehabilitation liabilities at Olympic Dam:

BHP has avoided paying a mine rehabilitation bond at Olympic Dam, by far the largest and most influential mining operation in South Australia, and now faces a significant long-term liability.

BHP must ensure this long-term rehabilitation liability is not left as a legacy cost to the public.

The SA State government has failed in its responsibility to secure and impose a “*non-negotiable*” unconditional advance bond on BHP for 100% of the rehabilitation liabilities at Olympic Dam.

The federal government can require BHP to provide a bond to meet the full cost of rehabilitation liabilities at Olympic Dam, irrespective of whether or not SA acts on its responsibilities in this regard.

The Guidelines to the EIS Assessment need to require a statutory 100% unconditional bond on BHP to address the estimated rehabilitation liabilities across the entire Olympic Dam operations.

This would require BHP to present a costed Mine Closure Plan including a Tailings Disposal Plan based on the pre-requisites required by a comprehensive Safety Risk Assessment of all Olympic Dam mine tailings.

The required bond and needed rehabilitation studies must now fully address coverage of the three existing “extreme risk” tailings waste storage facilities declared by BHP in June 2019.

These studies and the proposed bond arrangement must be subject to public scrutiny in the EIS process prior to the approval or advance of any new Tailings Storage Facilities or expansion of radioactive tailings output.

To assess public interest feasible alternatives to BHP’s proposed project configuration:

Both state and federal laws recognise the need to properly assess feasible alternatives to a proponent’s preferred project configuration. This is a required part of due process in the public interest to facilitate informed public participation and decision making in an Environmental Impact Statement (EIS) process.

There are three key public interest feasible alternatives to BHP’s Olympic Dam mine configuration that must be properly assessed in this EIS process to be consistent with both previous recommendations and contemporary community expectation:

- Phase out use of Evaporation Ponds to protect Listed Bird Species from mortality impacts, as recommended by a federal Department of Environment assessment and required by EPBC Act conditions set in 2011;
- Exploration of alternate provision of mine process water to that of BHP’s proposal to continue and significantly increase extraction of Great Artesian Basin fossil waters for a further 25 year period. This is needed to help protect the Mound Springs and associated ongoing Aboriginal cultural heritage rights and interests; and
- The need to assess a feasible no-uranium sales alternative for Olympic Dam. This is a required assessment of BHP’s social license to operate and BHP’s primary duty of care to demonstrably assess the benefits in lower ionizing radiation exposures to workers. A further benefit of this approach is the potential for significant water savings.

The Olympic Dam expansion involves a highly contested and publicly controversial industrial nuclear activity in uranium mining. ACF, FoEA and Conservation SA have long maintained that existing Olympic Dam operations and any proposed mine expansion should not sell uranium.

A peer reviewed report by Dr. Gavin Mudd (Dec 2010) investigated the viable key project alternative to not process uranium oxide at Olympic Dam and concluded that it is technically possible to:

“process Olympic Dam ore without uranium recovery by removing the acid leach step for tailings and not purifying the uranium during the hydrometallurgical processing of Cu concentrate liquors (ie. only recovering Cu from this step). ...

This leaves all uranium and its associated radioactive decay products to deport to the tailings. In reality, this will only mean a very minor change to the radioactivity of the tailings – which must be managed as low level radioactive waste in any case.”

The feasible alternative mining configuration to not process uranium oxide at Olympic Dam exhibits a range of potentially significant environmental benefits in water and energy savings and means lower radiation exposures.

BHP has a primary duty of care to demonstrably assess the benefits in lower ionizing radiation exposures to workers.

Our organisations strongly recommend the EIS Guidelines require an assessment of the key feasible project alternative for no uranium processing at Olympic Dam and direct the proponent BHP to properly assess the lead duty of care benefits in reduced worker radiation exposures.

Further, the efficacy of existing occupational health and safety and radiological protection regimes should be investigated with findings made to improve SA mining standards and Olympic Dam practices. Public disclosure of Olympic Dam dose exposure records is required for transparency and in accordance with a long standing federal Parliamentary Inquiry recommendation by the “*Senate Select Committee on Uranium Mining and Milling*” in 1997.

A Nuclear Events Risk Analysis is needed to address uranium sector social license issues:

[Australian uranium fuelled the Fukushima nuclear disaster](#). The federal government must now act on the recommendation of the [UN Secretary General’s Nuclear Safety and Security Report](#) (Sept 2011, p.14) and require “*an in depth assessment of the net cost impact*” of uranium mining.

The EIS Guidelines should further require a full Nuclear Events Risk Analysis across the nuclear fuel chain as part of addressing BHP’s social license to operate in relation to the sale of uranium.

A federal Department of Environment Assessment Report (Sept 2011, p.57) acknowledged “[Nuclear Security and Safety](#)” as lead public concerns over the export of uranium from Olympic Dam, stating:

“Around a quarter of the public submissions received on the DEIS raised concerns about the export of uranium from Olympic Dam and the associated nuclear security and safety risks.”
(Note: some four thousand public submissions were received)

It is pivotal that these concerns are explicitly addressed in the required public assessment of BHP's proposed Olympic Dam copper-uranium mine expansion.

Repeal BHP legal privileges overriding SA laws, standards and due process:

Olympic Dam mine is governed in SA by the outdated *Roxby Downs (Indenture Ratification) Act 1982* and Indenture. This archaic arrangement grants extensive legal privileges to BHP for the entire Olympic Dam operation and “*takes precedence over*” and allows exemptions from a wide range of contemporary relevant SA laws, standards and due process.

Our organisations, ACF, FoEA and Conservation SA have long called for the repeal of the outdated 1982 Act and Indenture that applies to an area of over 12,000 km² in SA.

There is a strong public interest priority to repeal the existing overrides of the *Aboriginal Heritage Act 1988*, the *Environment Protection Act 1993* and the *Natural Resources Management Act 2004* (incorporating ground water issues).

BHP's Indenture based legal privileges take precedence over the *Aboriginal Heritage Act 1988*, applying a modified 1979 Act to suit the miner's vested interests, with “*the consent*” of BHP required for any change to this situation.

This is a striking example of unacceptable corporate self-interest overriding the public interest, a deplorable situation which successive SA State governments have failed to remedy.

For instance, it is unacceptable for applications from BHP to ‘*damage, disturb or interfere with*’ Aboriginal cultural heritage sites across the Indenture area to be decided by the Mines Minister.

The Guidelines for the EIS Assessment process on BHP's proposed 2019 Olympic Dam mining expansion project should require investigation of Aboriginal heritage issues across the entire Olympic Dam operation, with the EIS Assessment Report to make relevant recommendations.

An array of Indenture exemptions, overrides and legal privileges raise further public interest concerns over the integrity and independence of the environmental impact assessment process and on real or perceived conflicts of interest in government decision making.

The entire Olympic Dam operation, both existing and any proposed expansion, should to be assessed and regulated under the objects and provisions, standards and procedures and other due process requirements of relevant SA legislation and fully subject to conditions under the federal EPBC Act.

ACF, FoEA and Conservation SA call on BHP to agree to surrender and forego the outdated 1982 Indenture Act legal privileges across the entire Olympic Dam mine operation.

A responsible modern company should act in a manner consistent with contemporary community expectation and best of sector practice – this is not the case at Olympic Dam.

Recommendations:

1. The Olympic Dam operation be assessed in its entirety in an EIS level public process under the EPBC Act, with the full range of project impacts subject to public consultation

Given that uranium mining at Olympic Dam is a controlled “*nuclear action*” and Matter of National Environmental Significance under the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), the integrity of environmental protection requires that the entire Olympic Dam operation be subject to impact assessment so that regulatory conditions can be applied “*to consider impacts on the whole environment*”.

This is consistent with a key Recommendation by the federal Department of Environment (“[Olympic Dam expansion assessment report EPBC 2005/2270](#)”, Sept 2011, 7. Existing operation, p.62):

“... 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”.

This 2019 BHP proposed mining expansion must trigger an EIS level Environmental Impact Assessment and public consultation across impacts of the entire Olympic Dam operation.

2. 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

In the public interest, the Federal EIS Assessment Guidelines must require a comprehensive Safety Risk Assessment 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 Olympic Dam. This approach is consistent with [federal EPBC Act Approval Condition 32 Mine Closure, Oct 2011](#).

This comprehensive Safety Risk Assessment of tailings must be subject to public scrutiny in the EIS process prior to the approval or advance of any new Tailings Storage Facilities or the proposed expansion of toxic radioactive tailings production.

Federal standards have been set at the Ranger uranium mine in the NT “to ensure that:

- i) The tailings are physically isolated from the environment for at least 10,000 years;*
- ii) Any contaminants arising from the tailings will not result in any detrimental environmental impact for at least 10,000 years.”*

This prudent approach and requirement must also be applied at Olympic Dam.

At a minimum, EPBC Act responsibilities to protect Matters of NES require that BHP’s Tailings Storage Facility 6 and associated Evaporation Pond 6 Referrals must be subject to the rigour and transparency of a single comprehensive public environmental impact assessment process.

3. The EIS Assessment Guidelines must apply standards of Objects D of the Commonwealth-South Australia Assessment Bilateral Agreement

There is an obligation for the Guidelines to this EIS Assessment to require application of Objects D in the [Commonwealth-SA Assessment Bilateral Agreement](#) (signed 25 Sept 2014), which states that:

“The parties will work cooperatively so that Australia’s high environmental standards are maintained by ensuring that: ...

b. Matters of National Environmental Significance (NES) are protected as required under the EPBC Act;

c. there are high quality assessments of the impacts of proposals on Matters of NES; and

d. authorized actions do not have unacceptable or unsustainable impacts on Matters of NES.”

Applicable Matters of National Environmental Significance that must be assessed and protected as required under the EPBC Act, include: *“the environment”* (the whole environment) consequent to uranium mining as a controlled *“nuclear action”*; Listed Bird Species and Migratory Bird Species subject to impact and mortality from BHP’s Tailings Storage Facilities and Evaporation Ponds; and protected Mound Springs along with the natural flows of fossil Great Artesian Basin waters on which the unique and fragile Mound Springs depend.

4. BHP must stop the use of Evaporation Ponds in order to reduce mortality in protected Bird Species, in accordance with EPBC Act fauna assessment conditions set in 2011.

The finalized EIS Assessment Guidelines must 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 protect Matters of National Environmental Significance in Listed Bird Species, and 21 Listed 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 Guidelines must require BHP to prevent and limit impacts and mortality on Listed Bird Species protected under both the EPBC Act and the SA *National Parks and Wildlife Act*.

5. Pre-Conditions to protect Mound Springs and to explore alternatives to Great Artesian Basin water extraction must be required by the EIS Assessment Guidelines

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 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 impacts 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.

6. BHP must lodge a Bond to cover 100% of Rehabilitation Liabilities at Olympic Dam

The Guidelines to the required EIS Assessment must mandate a statutory 100% unconditional bond is secured to cover estimated rehabilitation liabilities to ensure that the full costs of remediation and decommissioning at Olympic Dam.

Given that this bond has not been secured by the SA State government in the first instance, it must alternatively be secured directly by the federal government under the EPBC Act.

The Guidelines must require BHP to conduct relevant studies and release full contemporary cost estimates of mine rehabilitation, decommissioning and remediation work with respect to full rehabilitation liabilities across Olympic Dam operations for public consultation in the EIS process.

These studies must include a costed Mine Closure Plan and Tailings Disposal Plan to be based on the prerequisites required by a comprehensive Safety Risk Assessment of all Olympic Dam mine tailings.

Modern environmental practice and community expectations require the Guidelines to set a comprehensive Safety Risk Assessment to determine the long-term (in the order of 10,000 year) risk to the public and the environment from all radioactive tailings produced and stored at Olympic Dam.

This approach is consistent with [federal EPBC Act Approval Condition 32 Mine Closure, Oct 2011](#).

Further, the federal government standards for disposal of radioactive ore tailings at the Ranger uranium mine need to be applied to Olympic Dam to ensure consistency with current best of sector approaches, in particular regarding the “*Environmental Requirements, Management of Tailings*” (1999) requirement “to ensure that:

- i) *The tailings are physically isolated from the environment for at least 10,000 years;*
- ii) *Any contaminants arising from the tailings will not result in any detrimental environmental impact for at least 10,000 years.”*

These studies and contemporary costings in rehabilitation liabilities across the entirety of Olympic Dam operations are essential to determine the value of a bond to meet the full cost of implementation of BHP’s rehabilitation liabilities and to best ensure that none are left to the public as a long-term legacy cost.

These studies and the proposed bond arrangement must be subject to public scrutiny in the EIS process prior to any new Tailings Storage Facilities or expansion of radioactive tailings output.

Australia has a poor track record on mine rehabilitation, particularly in the uranium sector. It is imperative that the Olympic Dam project does not build on this history of under-performance and cost shifting. The continuing allocation of public funds to address inadequate earlier rehabilitation at Rum Jungle in the NT is a salient case here.

7. EIS Guidelines to investigate and recommend on Aboriginal heritage issues

The Guidelines for the EIS Assessment process on BHP’s proposed 2019 Olympic Dam mining expansion project should require investigation of Aboriginal heritage issues across the entire Olympic Dam operation, with the EIS Assessment to make relevant recommendations.

This should include investigations on the lead set of public matters raised on Indigenous issues and summarised in the [SA Assessment Report, Chapter 12: Effects on communities](#) (SAAR, p.369, Sept 2011) during assessment of BHP’s previous Olympic Dam mine expansion project:

- *“The impact of the Indenture on BHP’s statutory obligation to consult with traditional owners, and the level of protection they receive;*
- *Additional detail on measures undertaken and proposed by BHP to protect cultural heritage and to consult with relevant groups;*

- *The cultural significance of the Mound Springs and Great Artesian Basin to Aboriginal people;*
- *Concern that Aboriginal people would inherit radioactive land and waters when the mine closed and that they should be included as stakeholders to be consulted post-closure.”*

8. Efficacy of existing occupational health and safety and radiological protection regimes

An assessment of the efficacy of existing occupational health and safety and radiological protection regimes, including:

Implementation of key Inquiry Recommendation No.5 by the “*Senate Select Committee on Uranium Mining and Milling*” ([Ch.4 Occupational Health and Safety, 1997](#)) to ensure public disclosure of Olympic Dam dose exposure records:

“The Olympic Dam indenture agreement should be amended or repealed to ensure that the public has access to all dose records in a form which does not allow individual identification (except individual records which remain the property of the individual).”

9. Electricity Supply, Diesel Fuel Use and Public Subsidy, and Greenhouse Pollution issues

The Guidelines should require BHP to properly present and assess key Feasible Project Alternatives on:

- The primary electricity supply measure of toward 100% Renewable Energy for the Olympic Dam electricity demand (after first allowing for priority provision of energy efficiency measures), including the energy use in the mine water supply and associated pumping;
- The option for BHP to progressively replace diesel fuel usage with electrification based on 100% Renewable Energy across Olympic Dam operations;
 - In the interim BHP should provide for full greenhouse gas abatement on diesel fuel usage
- The public interest option for BHP to agree to give up and forego the diesel fuel rebate public subsidy across Olympic Dam operations;
 - In the interim BHP should to agree to provide an equivalent financial amount toward additional greenhouse gas abatement measures
- The public interest option of the federal government withdrawing the diesel fuel rebate public subsidy for mining companies as big polluters
- BHP to take full responsibility for all non-NGER (National Greenhouse and Energy Reporting Act) annual greenhouse gas emissions across Olympic Dam operations by:

- providing a full assessment of abatement measures for all direct and associated emissions, and a formal commitment to substantially reduce these emissions;
- agreeing that Scope 3 purchased electricity from non-NGER sources should be purchased as 100% Green Power new renewable energy to fully abate these emission impacts;
- BHP to make specific commitments and optimised project design decisions to progressively realise the Paris Agreement goal for net zero emissions, using all available abatement measures to minimise the extent of existing and proposed emissions, with project design and abatement measures to be presented and committed to in a time bound way - and not just left to a 'goal' of realisation by circa 2050 after decades of BHP greenhouse pollution across Olympic Dam operations
- Provision of Capital Costs for the expansion project and Modelling for key Feasible Project Alternatives, including comparative and quantified economic assessment, should be provided to properly facilitate informed public consideration of the expansion project and of key Feasible Project Alternatives

10. The need to assess a feasible no-uranium sales alternative for Olympic Dam

The EIS Guidelines set by or required by the Federal government should direct the proponent BHP to properly assess:

- A [No Uranium Sales](#) approach as a feasible alternative project configuration. This would see no uranium removed from the mine site, with all uranium retained on-site and discharged to the tailings waste system. This assessment would explore potential savings in water, electricity and chemicals, economic costs and benefits, radiation exposures, nuclear safety and related issues;
- BHP has a primary duty of care to properly assess the benefits in potentially significant lower ionizing radiation exposures to workers by not processing uranium oxide at Olympic Dam.

11. The UN Secretary General's Recommendation for a net cost impact assessment of uranium mining

Following the Australian uranium fuelled Fukushima nuclear crisis in 2011 the United Nations conducted a detailed nuclear industry review that has important implications for Australia's uranium sector, including the recommendation that:

"An in-depth assessment of the net cost impact of the following is required: ...

- *Local Impacts of Mining. There are concerns regarding the impact of mining fissionable material on local communities and ecosystems."* (Paragraph 70, p.14)

“High-level Meeting on Nuclear Safety and Security convened by the Secretary-General. United Nations system-wide study on the implications of the accident at the Fukushima Daiichi nuclear power plant. [Report of the Secretary General](#) (Sept 2011, SG/HLM/2011/1)”

Consideration of any BHP expansion proposal should include this in-depth impact assessment.

12. A Nuclear Events Risk Analysis is needed to address uranium sector social license issues

A full Nuclear Events Risk Analysis examining the life cycle impacts of the nuclear fuel chain is needed. This would include an assessment of the potential economic consequences for the proposed project and the potential for loss of BHP’s social license to operate in sale of uranium across the following potential nuclear events and issues:

- Nuclear accidents, including in use of Australian origin nuclear materials and uranium (as occurred at the Fukushima nuclear disaster on 11 March, 2011);
- Continued unresolved nuclear waste management and consequences for Australian origin nuclear materials derived from the use of BHP Olympic Dam uranium;
- Adequacy of state and federal transparency and accountability on nuclear issues, including a review of the state *Roxby Downs (Indenture Ratification) Act 1982*;
- Assessment of the impact of sustained high-level water extraction from the Great Artesian Basin, including impacts on the Mound Springs ecological community;
- Assessment of the adequacy of nuclear regulation in customer countries for Olympic Dam uranium. This is particularly needed given the concerns over inadequate regulation in some of those countries (e.g. China, India) and the wide recognition that inadequate regulation was a fundamental cause of the 2011 Fukushima nuclear disaster, which was directly fuelled by Australian uranium;
- Potential nuclear terrorist actions or threats;
- Nuclear proliferation, the diversion of nuclear materials and the threat of use or the actual use of nuclear weapons.

13. Repeal BHP legal privileges overriding SA laws, standards and due process

The Australian Conservation Foundation, Friends of the Earth Australia and Conservation SA call for the repeal of outdated unacceptable legal privileges in the *Roxby Downs (Indenture Ratification) Act 1982* held by the proponent BHP over the Olympic Dam mine operations.

The entire Olympic Dam operation, existing and any proposed expansion, should be assessed and regulated under the objects and provisions, standards and procedures and other due process requirements of contemporary relevant legislation of the South Australian Parliament.

There is a strong public interest imperative to repeal the Olympic Dam Indenture Act 1982, especially the overrides of the *Environment Protection Act 1993*, the *Aboriginal Heritage Act 1988* and the *Natural Resources Management Act 2004* (incorporating ground water issues).

The Australian Conservation Foundation, Friends of the Earth Australia and Conservation SA call on BHP to surrender its outdated Olympic Dam Indenture Act legal privileges as a clear corporate commitment to compliance with best of sector practice.

BHP should surrender and forego the outdated and unacceptable legal privileges in the *Roxby Downs (Indenture Ratification) Act 1982* over the Olympic Dam mine.

BHP should agree to be governed by contemporary public interest laws and standards and due process in SA across the entire Olympic Dam mine operation. This includes existing operations, any future proposed “*enabling activities*” and the current 2019 BHP proposed Olympic Dam copper-uranium mining expansion project.

Key Issue Briefings:

BHP uranium mining triggers “*Protection of the Environment*” under the EPBC Act

BHP seek a Toxic Tailings Expansion without a comprehensive Safety Risk Assessment

Migratory Birds at Risk of Mortality if BHP continues use of Evaporation Ponds

Pre-Conditions to protect Mound Springs in Olympic Dam expansion EIS Guidelines

BHP must lodge a Bond to cover 100% of Rehabilitation Liabilities at Olympic Dam

The need to assess a feasible alternative: No-Uranium Sales from Olympic Dam

BHP legal privileges in the Olympic Dam Indenture Act 1982 override SA laws

Joint ENGO Key Issue Briefing Papers on BHP's proposed expansion of the Olympic Dam copper-uranium mine are available at: nuclear.foe.org.au/olympic-dam

Author: David Noonan, on behalf of ACF, FoE Australia and Conservation SA.



PRE-CONDITIONS TO PROTECT MOUND SPRINGS IN OLYMPIC DAM EXPANSION EIS ASSESSMENT GUIDELINES

Briefing written by David Noonan for the Australian Conservation Foundation, Friends of the Earth and Conservation SA

For more information on BHP's proposed expansion of the Olympic Dam mine visit nuclear.foe.org.au/olympic-dam

December 2019

Protection of the unique Mound Springs requires that the federal EIS Assessment Guidelines on this BHP "Major Projects" mining expansion reflect the protection, coverage and standards of the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and of Objects D to the "*Commonwealth-South Australia Assessment Bilateral Agreement*".

All relevant federal EPBC Act decision conditions in this area must be adopted as pre-conditions in the EIS Assessment Guidelines.

The protection of Mound Springs as a Matter of National Environmental Significance under the EPBC Act encompasses a range of Environmental Impact Assessment, science and ecology, Great Artesian Basin (GAB), Aboriginal cultural heritage and public interest considerations.

These occur across federal and state responsibilities and their consideration needs to be built into the EIS Assessment Guidelines.

If the SA government is to undertake this environmental assessment on behalf of the Commonwealth there is an obligation for the EIS Assessment Guidelines to explicitly recognise and mandate Objects D in the [Commonwealth-SA Assessment Bilateral Agreement](#) (signed 25 Sept 2014), stating that:

"The parties will work cooperatively so that Australia's high environmental standards are maintained by ensuring that: ...

b. Matters of National Environmental Significance (NES) are protected as required under the EPBC Act;

c, there are high quality assessments of the impacts of proposals on Matters of NES; and

d. authorized actions do not have unacceptable or unsustainable impacts on Matters of NES."

Mound Springs are a protected Matter of National Environmental Significance (NES) under the EPBC Act.

As a listed Endangered Ecological Community under the EPBC Act, Mound Springs are categorised as:

“facing a very high risk of extinction in the wild in the near future (indicative timeframe being the next 20 years)”

See: <http://www.environment.gov.au/biodiversity/threatened/communities/about#howec>

Listing of Endangered Ecological Communities is a form of landscape or systems level protection.

See the Mound Springs listing: [*“The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin”*](#), including at 11.3 South Australia.

The EIS Assessment Guidelines must require the proponent to demonstrate that proposed actions in this Olympic Dam Major Project *“do not have any unacceptable or unsustainable impacts”* on Mound Springs, which are protected under the EPBC Act as Matters of NES (Controlling Provision Sec. 18 & 18A) and under the agreed Objects D provisions of the Commonwealth - South Australia Assessment Bilateral Agreement in this case.

Applying 2011 federal conditions to protect Mound Springs in EIS Assessment Guidelines:

The federal government set relevant [Approval Conditions \(EPBC 2005/2270, Oct 2011\)](#) on an earlier project expansion application based on a planned open pit mine operation. This project was cancelled by BHP in 2012 after the collapse of the global uranium price following the Australian uranium fueled Fukushima nuclear crisis.

The scope of a number of relevant 2011 federal EPBC Act Approval Conditions (1, 22, 24, 27, 28, 29, 81) should form pre-conditions in any EIS Guidelines agreed by the Commonwealth and be applied as minimum required standards of environmental protection in this 2019-2020 EIS Assessment process.

Importantly, in 2011 the federal government set the scope of a number of relevant conditions on groundwater extraction from the Great Artesian Basin (GAB) to apply to *“all activities”* across existing Olympic Dam operations and across proposed Olympic Dam expansion operations.

However, the [“Olympic Dam Major Projects Declaration”](#) (SA Government Gazette, 14 Feb 2019, pages 461-462) has sought to limit the 2019 EIS Assessment Guidelines to *“exclude”* existing operations and resultant impacts, up to a level of copper production of 200,000 tonnes per year.

If Environmental Impact Assessment is to be credible and effective, and for this EIS Assessment to honour the EPBC Act obligation to protect Mound Springs as Matters of NES, the EIS Guidelines must address GAB water extraction and Mound Spring conservation issues across *“the entire action”* and not impose any arbitrary limitation on the 2019-2020 EIS Assessment process.

As the “*Olympic Dam Major Projects Development Declaration*” notes, the current Olympic Dam groundwater extraction operations from the GAB were last assessed by the SA government in 1997. That assessment is now long out dated.

In 2011 the federal government accepted its responsibilities to protect Mound Spring as a Matter of NES and applied a number of relevant Approval Conditions to do so.

This occurred even though the 2011 Olympic Dam Expansion Project targeted a range of other water resources and did not directly seek at that time to increase GAB water extraction levels.

The following [2011 federal conditions](#) should be applied as pre-conditions on 2019-2020 EIS Assessment Guidelines:

“Conditions attached to the approval. Schedule 1: Mining and processing. Scope

1. The conditions of this schedule apply to all activities undertaken by the approval holder on the Special Mining Lease and to water extraction by the Approval Holder from Wellfields A and B in the Great Artesian Basin.

Groundwater 22. The Approval holder must ensure that the activities undertaken by the Approval Holder on a Special Mining Lease do not result in any:

a. significant adverse impact on groundwater dependent Listed Species or Ecological Communities

b. significant adverse impacts on the Environmental Values (as described in the EIS or as revised under condition 23b) of the Yarra Wurta springs.

24. the program required under condition 4 must include Compliance Criteria to determine whether the requirements of condition 22 are being achieved. Compliance criteria must be adequate to confirm that:

a. in relation to 22(a), that groundwater drawdown from mining operations will have no significant adverse impact on groundwater pressure in the Great Artesian Basin

b. in relation to 22(b), that groundwater drawdown from mining operations will not have a significant adverse impact on groundwater flow and pressure of the Yarra Wurta springs.

Extraction of water from the Great Artesian Basin

27. The approval holder must ensure that the extraction of water from Wellfield A and B in the Great Artesian Basin, as assessed under the Environment Protection (Impact of Proposals) Act 1974, does not have a significant adverse impact on groundwater dependent listed threatened species or Ecological communities.

28. The program required in Condition 4 must include:

a. compliance criteria for condition 27

b. a requirement for collection of spring flow data and bore pressure data, and details of how these will be used to refine aquifer parameters and re-estimate draw down effects at spring groups at regular time intervals

c. contingency measures and a response plan to address any significant adverse variation in monitored and/or predicted draw or flow rates at mound springs occurring as a result of water extraction by the approval holder

d. collection of a long term data set to achieve a better understanding of fluctuations in these systems.

Other outcomes 29. In understanding activities covered by this schedule, the Approval holder must ensure that:

a. there is no significant adverse impact on the abundance and diversity of Listed species outside of the Special Mining Lease as demonstrated by baseline and ongoing flora and fauna surveys

b. there is no increase in abundance or area of infestation of declared weeds, plant pathogens and pest animal populations (as declared under the NRM Act 2004 SA) as demonstrated by baseline and ongoing flora and fauna surveys.

Schedule 7: Whole of project conditions. Scope

81. The conditions in this schedule apply to the entire action as referred under the Act and any activities relating to the Olympic Dam mine that were assessed under the Environment protection (Impact of Proposals) Act 1994 that will continue after the date of this approval."

Note: 81 applied to various Plans, Auditing, reporting Compliance and remediating non-Compliance.

Recommendations:

Pre-Conditions to protect Mound Springs and to explore alternatives to Great Artesian Basin water extraction must be required by the EIS Assessment Guidelines

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 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 impacts 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.

The 'Bubbler' Mound Spring:

