

Public Consultation input to EPBC Act Referral 2023/09717
“Northern Water Desalination and Pipeline Infrastructure Project”

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Title:

The Northern Water Project must be subject to EPBC Act Impact Assessment and Approval given the potential significant ‘indirect impact’ / ‘indirect consequence’ and decision outcomes of the Project on a listed Endangered Ecological Community:

The unique and fragile Mound Springs of the Great Artesian Basin in SA.

Contents:

Introductory over-view	2
Concern that EPBC Act Referral 2023/09717 is not ‘fit for purpose’	3
NW has ‘indirect consequence’ in adverse impacts on listed Springs of the GAB	4
Protecting desert Springs is a Cultural Heritage priority for Indigenous People	5
Threats to the cultural & ecological values of the Kati Thanda springs remain real and significant	6
As to my relevant Background	7

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The unique and fragile Mound Springs of the Great Artesian Basin in SA.

The pending DCCEEW decision on EPBC Act Referral 2023/09717 must require EIS level EPBC Act Impact Assessment on listed Mound Springs, with a priority in EIS Guidelines to protect the Springs.

Community is rightly alarmed by the State of SA having excluded potential significant adverse indirect impacts on a Matter of National Environmental Significance (NES), [a listed Endangered Ecological Community](#), from its EPBC Act Referral [2023/09717](#) for the [Northern Water Project](#) (NW).

Community is concerned that DCCEEW has published State documentation for EPBC Act public consultation without addressing the cited omission over NW’s potential adverse impacts on viability of listed [Mound Springs](#) and on the integrity of [Great Artesian Basin](#) groundwater flows to Springs.

Correspondence was provided to the Department on 17th & 21st January pointing out that State Referral documentation on NW was considered unsuitable for public release on this basis.

NW has consequence for the viability and survival of unique and fragile Springs of the GAB in SA, a Federal / DCCEEW responsibility, of fundamental ongoing cultural importance to Indigenous People.

Current extraction of GAB waters, principally for BHP mining, are adversely impacting a Federal protected Matter of NES in EPBC listed Springs of the GAB. These impacts on Springs are recognised by NW to be unsustainable and to be the cause of ‘*ongoing environmental degradation*’. The NW “[Summary Business Case, Northern Water](#)” (Feb 2024) recognises the ongoing impacts to Springs:

2.2.1 ENVIRONMENTAL *Currently, mining and other industry in the region are reliant upon extracting water from the River Murray, Great Artesian Basin and other deep saline groundwater resources. Reliance on these unsustainable water sources will result in ongoing environmental degradation. ... The NW will provide a sustainable source of water and reduce the need for supplies to be taken from either the Great Artesian Basin or the River Murray. ...*

The **SA Minister for Climate, Environment and Water the Hon Susan Close MP** has stated on NW:

“I agree with you that the real opportunity to achieve significant beneficial environmental and cultural outcomes is to replace, or at least significantly reduce, Olympic Dam’s current extractions from the GAB with a new, sustainable water supply. ...

“Subject to the outcome of the required assessments, it is my view that this project represents the most effective approach to achieving the environmental outcomes that we both desire.” (Letter to David Noonan, 18 July 2022, provided to DCCEEW on 21st Jan 2024)

NW is the *only* foreseeable means to stop BHP’s ongoing adverse impacts on the Springs of the GAB.

Further, protection for the Springs relies on exercise of Federal EPBC Act powers and public interest responsibilities, given the State of SA’s ‘conflict of interest’ over mining and BHP’s undue influence.

Concern that EPBC Act Referral 2023/09717 is not ‘fit for purpose’:

DCCEEW has an obligation to test claims made by proponents re impacts on Matters of NES.

Referral documentation released for public comment by DCCEEW must be ‘fit for purpose’ to properly inform the public regarding all impacted Matters of NES. This Referral warrants review.

DCCEEW has a legal responsibility to scrutinize and address the State of SA’s failure to refer NW’s potential significant adverse impacts on a Matter of NES. In any case, I will seek ‘Reasons for Decision’ on EPBC 2023/09717 (as notified in correspondence to DCCEEW on 17th Jan).

Q: How can it be ‘fit for purpose’ for Referral documents to fail to even address or provide context regarding NW’s potential adverse impacts on Springs, matters raised with NW for two years.

There is an untenable paucity of coverage to impacted Springs in EPBC Act Referral [2023/09717](#) documentation. The main over-view doc [00-2023-09717 Referral.pdf \(2050 KB\)](#) provides only two minor mentions of Springs (at p.23 & p.25), with two minor mentions of the GAB (at p.1 & p.15).

The Referral *4.1.4 Threatened Species and Ecological Communities* and *Att 3 V2 Significant Impact Assessment* fails to consider and omits to mention the Springs Endangered Ecological Community.

The [Referral over-view doc](#) provides one mention of ‘mound springs’ (p.23) citing ‘*positive impacts*’ and provides only a second ref (at p.15) to “*reducing reliance on the Great Artesian Basin*”:

p.23: “*The Arabana, Dieri and Kuyani are likely to take an interest in the Project on the grounds of cultural heritage, in particular the potential for positive impacts on mound springs if groundwater take can be reduced through the provision of a new water source for mining activities.*”

The SA Gov refusal to refer impacts on Springs to the EPBC Act led to civil society raising concern on the NW “Stakeholder Reference Group” (I am a Member of the SRG representing Conservation SA).

In response, Infrastructure SA cited [EPBC Act](#) Sec.75(2)(b) to say the Federal Minister can’t take beneficial impacts of the NW Project on the Springs into account in an Approval decision on NW. This does not *preclude* DCCEEW from duly ordering an EPBC Act Impact Assessment on the Springs.

DCCEEW has an obligation to test the SA Gov claim that NW can only have ‘beneficial’ impacts on listed Springs. I reported potential significant indirect adverse impacts to DCCEEW on 17 & 21 Jan.

As a proponent, the SA Gov claims NW can-not have negative / adverse impacts on Springs of the GAB, with a written reason given to the SRG, that NW: ‘*does not directly draw water from the GAB*’.

As provided by the SA Government, this EPBC Referral ignores the consequential significant relationship between NW decision outcomes and whether BHP’s adverse impacts on listed Springs are to be ongoing or not. BHP could have written that script!

This is a legally relevant matter for DCCEEW: as NW decision outcomes can have ‘indirect impact’ / ‘indirect consequence’ and ‘facilitated third party actions’ with significant adverse impacts on EPBC listed Springs of the GAB in SA.

NW has 'indirect consequence' in adverse impacts on listed Springs of the GAB:

NW decisions and outcomes could protect GAB Mound Springs from BHP impacts OR condemn the Springs to 'ongoing degradation' as impacts and loss of GAB water pressure & flow accrue over time.

Referral 1.2 Proposed Action details (p.1) states: "The Action aims to provide a sustainable water supply to end-users who currently extract water from the Great Artesian Basin". However, it fails to consider the consequence in adverse impacts resulting from a low rate of reduction in extractions.

The NW Referral tends to only cite 'benefits' to Springs in reducing reliance on GAB water extraction but does cite that NW could 'minimise impacts' on Springs. The [Referral Attachment D](#) "Stakeholder and Community Engagement Plan", at 6.7. *Native Title and cultural heritage* (p.22), states:

"NWS has the potential to have significant cultural benefits to other Traditional Owners. If the project can decrease reliance on the Great Artesian Basin and minimise impacts on the desert mound springs (which are important to the Dieri and Arabana people), the environmental values of this culturally significant area will improve."

At 6.8. *Terrestrial environmental impacts* the Plan concedes: "Terrestrial environmental issues have been largely overshadowed by potential marine impacts in engagement to date". The Plan goes on to directly connect NW *Terrestrial environmental impacts* with a cited Mitigation measure (p.23) to:

- *reduce extraction from the Great Artesian Basin for the benefit of Desert Mound Springs.*

An EPBC Act Impact Assessment must address how NW can minimize impacts on desert Springs.

The Referral fails to recognize the corollary to NW's potential benefits to Springs: in NW decisions and outcomes that fail to significantly reduce extractions have indirect consequent adverse impacts. There is an inverse relationship between extent of reduction & degree of adverse impact.

For instance, there is a conservation priority for BHP's small scale Wellfield A operations (approx. 6 MI/day) to close ASAP. NW could grant that benefit, as a small reduction in GAB water extraction.

However, if that is the extent of NW's 'benefit' in reduction of BHP water extraction then real long term adverse (if indirect) impacts will ensue in effectively locking in BHP's larger scale Wellfield B operations, that are an untenable long-term insidious threat to the viability of Spring flows.

Half of NW's major marine de-sal water supply is to go to mining (up to 130 MI/day, of 260 MI/d): to BHP's '[Copper-Uranium Province](#)' in nth SA, for multiple mine expansions and a new [Oak Dam mine](#).

The challenge to DCCEEW is to require NW decisions and outcomes to *replace* BHP's unsustainable extraction (total 35 MI/d) of GAB water, with part of this new marine de-salination water supply. We understand NW has capacity to do so while also providing mining in north SA with BHP's increased demand for water. This critical conservation outcome should not be left up to political will in SA.

If left up to the SA Gov and BHP's influence a State EIS is likely to fail to even assess the benefits of a full phase out of BHP's extraction of GAB water that so adversely impact EPBC listed desert Springs.

Federal public interest responsibility in an EPBC Approval over NW is required to protect our Springs.

Protecting desert Springs is a Cultural Heritage priority for Indigenous People:

DCCEEW has a core responsibility to protect Indigenous cultural heritage on behalf of the Minister.

The Mound Springs are of fundamental ongoing cultural and spiritual value to Indigenous People.

Protecting the integrity of GAB waters and the cultural and ecological values of the Springs is a national issue, see: "[Olympic Dam busters: BHP fight over outback water rights](#)" The Weekend Australian (Business p.1) and "[Why BHP is facing a minefield](#)" The Advertiser (p.30) on 05 03 2022.

Both articles cite "Mr Noonan wants to hear a formal commitment about alternative water sources."

Further, see "[Mining giant sucking life out of SA's vanishing Springs](#)" The Advertiser (30 June 2021), and "[SA's disappearing mound springs raise questions for miner BHP](#)" The Age & SMH (23 Nov 2020).

The "[Summary Business Case, Northern Water](#)" (Feb 2024) does recognise Springs cultural values:

"2.2.2 CULTURAL The 2021 Juukan Gorge Inquiry made the following observations:

'These springs (Mound Springs) are of great significance to the Arabana people and they are an important part of their cultural heritage. There are fears that continued extraction from the Great Artesian Basin will result in a significant reduction to the 'vitality and the ecological viability of the springs', and that there is a high likelihood that more springs will go extinct.'

The NW will play a significant role in reducing reliance on the use of water supplies that hold significant cultural importance to Traditional Owners. Providing the opportunity for reduced water withdrawals from the Great Artesian Basin may play a role in preserving mound springs. As virtual oases in the desert, the springs were, and still are, of vital importance to Indigenous people."

Q: Why then does the SA Gov seek to deny an EPBC Impact Assessment of NW given the project's acknowledged: "*significant role in reducing reliance on the use of water supplies that hold significant cultural importance to Traditional Owners*" to "*play a role in preserving mound springs*".

NW may equally play a role to condemn Mound Springs to ongoing degradation through project outcomes that may likely only realise a partial reduction in GAB water extraction by BHP.

NW has initiated a [Goyder Institute](#) "[Northern Water: GAB Reduced Extraction Study](#)". However, NW has not agreed to require a full phase out of BHP water extraction from the GAB as one of six Study modelling scenarios. The only non-government 'Stakeholder' deemed to be on this Study is BHP!

There are real world potential significant adverse impacts (even if legally deemed to be 'indirect impacts') that can ensue to EPBC listed Springs through the decision outcomes of the NW Project.

DCCEEW also has a core responsibility to prevent species loss and must take the observations of the Federal *2021 Juukan Gorge Inquiry* seriously and thereby order an EPBC Act Impact Assessment.

Just as NW's 'social license' is dependent on public interest decisions to protect integrity of GAB waters and viability of unique and fragile Mound Springs, DCCEEW standing is also on the line here.

Threats to the cultural & ecological values of the Kati Thanda springs remain real and significant:

Threats to GAB Springs feature in a recent international peer reviewed science [book](#): ***“Threats to Springs in a Changing World. Science and Politics for Protection. Geophysical Monograph Series.”*** (Wiley/AGU, USA, 2023), Part 1 Threats to Springs and their Values, Chapter 6, Titled:

“Springs of the South-Western Great Artesian Basin, Australia: Balancing Sustainable Use and Cultural and Environmental Values” by Assoc Prof Gavin M. Mudd and Prof Matthew J. Currell, Environmental Engineering, RMIT University.

A [Preview](#) of the book provides a brief summary of the main contribution of Ch.6, in presenting:

“... an analysis of the effects of artesian groundwater extraction for Australia’s largest mining operation on the culturally and ecologically significant Mound Springs of the south-western GAB (Australia’s largest interconnected aquifer system). They combine spring-flow and artesian bore water level measurements to illustrate the effect of mine water extraction on different springs in the unique Kati-Thanda complex.”

Abstract: *The Great Artesian Basin (GAB) is one of the world’s largest groundwater systems and supports a wide variety of springs, associated ecosystems and cultural values. ...*

In particular, the Olympic Dam mining project in South Australia has been extracting groundwater since 1983 from a wellfield located on the south-western margins of the GAB – an area containing a vast array of culturally significant, ecologically unique and sensitive springs, including iconic mound springs. The extraction rate has increased over time, leading to concerns about impacts on the springs and their associated values. There are plans to expand the mine that would potentially increase the extraction rate further. This chapter reviews the hydrogeological setting of the springs of the south-western GAB, their cultural and environmental values and synthesizes and analyses the available groundwater monitoring data associated with the wellfield. The case highlights the critical importance of detailed spatial and temporal hydrogeological monitoring, including both spring flow rates and groundwater level/pressure data, and the need to link monitoring and management of such sites to key cultural and environmental values.”

Summary and Conclusions: *“This chapter has presented the case of Wellfield A, which supplies water to the Olympic Dam mining project in central South Australia, and the impacts and risks to Kati Thanda springs. The springs are unique and irreplaceable cultural and ecological heritage but those in the vicinity of Wellfield A have clearly experienced significant impacts and some have gone extinct (Priscilla, Venables). This has been demonstrated through a detailed synthesis and assessment of monitoring data for Wellfield A, especially the lack of full recovery in levels or flows in many bores or springs following the reduction in extraction in the mid-1990s after the development of Wellfield B. The monitoring frequency has been substantially reduced since February 1999 for bores and 2002 for springs, whilst from 2015 reporting has reduced individual spring and bore monitoring data, making it impossible to assess in detail the state of individual springs or bores. A key finding of this chapter is the unique relationships between nearby artesian pressure levels and spring flows, arguably the first time such an analysis has been synthesized for the Kati Thanda springs and confirming the intuitive expectation that small reductions in pressure can lead to significant reductions in spring flows. The special case study highlights the critical importance of aligning monitoring closely with the science and determining compliance criteria accordingly – something which clearly needs to be improved in this case. Given the ever-present potential for a third GAB wellfield for Olympic Dam, as well as an expansion of extraction from Wellfield B and even potentially Wellfield A, **it is clear that threats to the cultural and ecological values of the Kati Thanda springs remain real and significant.”***

As to my relevant Background:

I worked as a campaigner for Australian Conservation Foundation (ACF) from 1996-2011 based in Adelaide and retained an ACF advisory and consulting role on public interest issues regarding Olympic Dam mining and integrity of the Great Artesian Basin and viability of Mound Springs.

This has included as lead author and consultant to Joint National & State Environment Group's [Input](#) and [Recommendations](#), along with a set of Olympic Dam [Briefing Papers](#), provided to the Federal Environment Minister (Dec 2019) on BHP's then proposed expansion of Olympic Dam (EPBC Act Referral 2019/8570). For further information see: <https://nuclear.foe.org.au/olympic-dam/>

Please note a relevant Joint National & State Environment Group's [Brief](#) (ACF, FOEA and CCSA, 2019): *"Preconditions to Protect Mound Springs in Olympic Dam Expansion EIS Guidelines"*.

I made submissions, gave Hearing evidence, and am quoted in the Federal Juukan Gorge Inquiry into Aboriginal Heritage ("[A Way Forward](#)" Report, Oct 2021, p.124-125), see: **"Box 5.3 Case study: The sacred mound springs of the Arabana people"**.

I've had input to, gave Hearing evidence, and am quoted on GAB Springs issues in the "[Aboriginal Heritage Inquiry Report](#)" (June 2023) by the SA Aboriginal Lands Parliamentary Standing Committee.

Joint National & State Environment Group's have repeatedly declared: To protect GAB waters and the cultural and ecological values of Springs requires clear and urgent public interest commitments to:

- Close BHP Wellfield A water extraction operations - inappropriately located for max adverse impact within the geographic arc of GAB Mound Springs, as soon as possible.
- Phase out the larger scale BHP Wellfield B water extraction operations, as a priority.

BHP took over Olympic Dam in 2005. Successive SA State Governments and BHP have had decades to protect GAB waters and Springs but failed to do so. NW may be a final belated opportunity to do so.

I provided input to the DCCEEW **EPBC Act Referrals Gateway Team** on 17th and 21st Jan 2024, Titled:

"RE Civil society alarm over SA Gov failure to Refer a Listed MNES, the Mound Springs of the GAB, impacted by the proposed Northern Water Supply Project".

Raising concerns the SA Gov Referral documentation was not 'fit for purpose' re failure to refer impacts on listed Springs of GAB. This should also be taken into account in a Referral Decision.

As a Conservationist I've recently made a 'Call to Protect our Springs' on ABC TV 7 PM News (SA) coverage on the NW Project (22nd Feb) and morning ABC 891 Radio News on hour on 23rd:

'when the first (marine desal) water turns up at Roxby Downs town and at Olympic Dam mine, BHP should have to turn off the taps on GAB water extraction'

Please contact on any of these issues: Mobile 0414 519 419 E-Mail davidnoonanxs1@yahoo.com.au

Yours sincerely

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