



Great Artesian Basin Secretariat
Water Division
Department of Agriculture and Water Resources
by email: gabsecretariat@agriculture.gov.au
Submission: Draft Great Artesian Basin Strategic Management Plan

Lock the Gate Alliance (LTG) welcomes the opportunity to comment on the Great Artesian Basin Strategic Management Plan.

Lock the Gate Alliance is a national grassroots organisation made up of over 120,000 individual supporters and more than 250 local groups who are concerned about risky coal mining, coal seam gas and fracking for shale and tight gas. These groups are located in all parts of Australia and include farmers, traditional custodians, conservationists and urban residents.

Our vision is of healthy, empowered communities which have fair, democratic processes available to them to protect their land and water and deliver sustainable solutions to food and energy needs. LTG understands that the Great Artesian Basin (GAB) is one of the hydrogeological wonders of the world. Underlying 22% of Australia, mostly arid and semi-arid inland areas, the GAB is undoubtedly a water resource of national importance.

Whole-of-Basin management requires a collaborative effort and strong partnerships across all jurisdictions, GAB industries and GAB communities. The original GAB Strategic Management Plan (SMP) was underpinned by robust partnerships and strong collaboration between stakeholder groups. It is LTG's understanding that a great deal was achieved under the first SMP, including natural resource management outcomes well beyond the obvious work of capping uncontrolled bores and piping free-flowing drains under the GABSI programs.

Our initial observation is that the draft SMP is not a strategic plan at all. The document reads like a draft agreement written by and for governments, but not other relevant stakeholders. LTG believes that a strategic plan should set out clear roles, responsibilities and accountabilities for agreed actions to be undertaken by relevant stakeholders, and performance indicators to track the degree to which desired goals and outcomes are achieved. We are disappointed to find roles, responsibilities and accountabilities are almost entirely lacking from the exhibited draft plan.

Vision

In our view, the Vision is adequate but subject to interpretation. It alludes to collaboration and partnership approaches but we are disappointed that the rest of the document fails to provide much detail of how non-government stakeholders can be involved and engaged.

2015 Review

The 2015 Review of the previous Strategic Management Plan identified *'issues that need to be addressed to ensure the social, economic and environmental benefits and integrity of the Basin are maintained'*. This draft plan demonstrably fails to address those issues. Most notably, the 2015 review noted that *'It is crucial that water extractions for mining and unconventional gas related activities is transparent and accountable, does not compromise the long-term sustainability of the resource, does not erode the water rights of other users and minimises any potential third party impacts.'*

However, this draft SMP does nothing to:

1. Increase transparency and accountability of mining and gas take
2. Prevent long-term impacts on the GAB from mining and gas
3. Stop the erosion of water rights due to uncontrolled and unlimited extraction by the mining and gas industries
4. Stop the major impacts on third parties that are occurring as a result of mine water take

Impacts of Mining on the GAB

The SMP fails to provide any genuine assessment of the risks posed by mining to the GAB. Mining and gas are major new water users who pose a massive threat to existing water users and to the sustainability and health of the GAB, across four states – Queensland, NSW, South Australia and the Northern Territory.

In relation to the existing impacts of CSG, the Underground Water Impact Report for the Surat Cumulative Management Area indicates that 469 water bores will be drawn down as a result of current CSG projects and that 65,000 ML of water is already being extracted each year by the industry, mostly from GAB aquifers. CSG companies are not required to obtain water licences for that take – it is an unregulated, unlimited take that impinges severely on third parties.

Furthermore, the erosion of water rights of third parties to the mining industry is still continuing. In late 2016, the Queensland Government extended the statutory right to take associated water which the CSG industry already had across the mining industry. This means that any new coal mines that will affect GAB water will not require licences for associated take.

In NSW, the Narrabri CSG gas project threatens a vital southern recharge area of the GAB. The Environmental Impact Statement for the project was vastly inadequate, and experts have identified major weaknesses with water modelling, monitoring and assessment. In Queensland, shale gas development and fracking in the Channel Country also poses a risk to the Basin.

In South Australia, proposed shale gas fracking near Coober Pedy has raised major community concerns about impacts on the GAB. The Environmental Impact Report for the SAPEX Arckaringa project is weak and overlooks interconnectivity between various aquifers and underestimates risks.

The massive mines proposed for the Surat Basin, including the Wandoan mine, pose a major direct risk to the GAB. Furthermore, the true impacts of the proposed Galilee Basin mines on the GAB are poorly understood. Adani has not done the seismic surveys that would be required to fully assess the impacts on the Doongmabulla Springs, which are GAB discharge springs. The Bioregional Assessment has identified major uncertainty about the threat Adani poses to the

springs.

The Queensland Coordinator General identified that groundwater could drain from the GAB via geological fault structures from the Clematis Sandstone into the coal seams being targeted by Adani. The Independent Expert Scientific Committee also highlighted that subsidence from the Adani longwall mine could cause fracturing that could also create risks of connectivity to the GAB. However, the research required to thoroughly assess these risks has not been conducted.

In the south eastern corner of the Northern Territory, a coal gasification scoping study has been completed by Ebony Energy, right through the Great Artesian Basin water resource. Very little information is publicly available.

Coal-to-gas activities in QLD have already proven highly polluting, creating an environmental disaster zone that negatively impacted land, water and people's health at risk. Coal gasification is now banned in that state. Any further developments on coal gasification in SA or the NT must be carefully scrutinised for the potential impacts to the GAB. Based on the experience of QLD, the Alliance recommends the practice is banned outright across Australia.

Issues, Challenges and Opportunities

LTG is generally supportive of the issues listed in the draft SMP. However, we note that carbon sequestration is not mentioned. LTG understands that there have been incidents overseas of acidified groundwater as a result of the process of geosequestration. We are as alarmed as local landholders that there is a proposal to pump CO₂ into the Precipice Sandstones in the Wandoan area.

The risks to the GAB arising from mining and unconventional gas development in Queensland and NSW is obviously a major concern to LTG and our supporters. We are aware of Queensland LTG supporters in the Surat Basin who are already experiencing impacts on their groundwater supplies as a result of CSG extraction. LTG supporters in NSW and in other parts of Queensland are deeply concerned about the potential for this to occur in their own areas.

The Narrabri CSG gas project puts at risk an important southern recharge area of the GAB. Similarly, opening up of the Galilee Basin's coal reserves in and/or adjacent to a recharge area puts at risks water supply for some graziers as well as GAB-fed springs with significant cultural values. We note that there is no cumulative groundwater model for the Galilee Basin section of the GAB to underpin robust decisions in relation to Galilee coal basins.

Coordinated Governance

The draft SMP makes several references to "governments, communities and industries working together" suggesting stakeholder support and commitment is sought. However, LTG finds no evidence of a true partnership model nor collaborative approaches to GAB management involving GAB communities, industries and/or water users. It is also unclear how the implementation of the final SMP will be resourced.

LTG is concerned by the absence of detail on governance and implementation of the SMP, particularly mechanisms that assign roles, responsibilities and accountabilities for its implementation. One interpretation that could be drawn from this is that governments lack commitment to achieving the outcomes of the draft SMP. Another is that "the community" will be

afforded only a very limited role in SMP implementation.

The draft indicates that these governance and implementation details will be developed by governments, with other stakeholders to be advised later. An opaque approach such as this will totally undermine the stated desire for collaborative partnerships and will likely erode what little trust in government processes remains in the wider community. This is especially so for many of our supporters who are well informed about the challenges facing the GAB and who are deeply cynical of government decisions involving the combination of water resources and fossil fuel extraction.

A Healthy Resource

Beyond groundwater dependent ecosystems, the draft SMP does not appropriately recognise biodiversity and broader environmental values within the GAB area. References to “a healthy resource” are vague and general, with most confined to spring communities.

LTG strongly agrees that it is essential that pressure be maintained to ensure the long term health of GAB springs and we contend that measures such as set-back distances are likely to be insufficient to protect high conservation value springs. The draft SMP fails to address the potential risks that arise where GAB groundwater comes to the surface, whether from bores or springs; and we understand that much also remains to be done to protect landscapes from disturbance by people and animals. The draft mentions the issues of biodiversity in water remote areas and weeds but not the impacts of feral animals. There are no actions or strategies provided to address or mitigate the impacts of invasive species on biodiversity.

Similarly, there are potentially significant risks to the environment as a result of the disposal of associated / co-produced / formation water brought to the surface by the mining and petroleum and gas industries. Given the potential expansion of these industries in the GAB area we regard this as a very significant omission.

LTG understands that recent research by CSIRO (Smerdon et al 2012) determined that the GAB is a declining resource and not in a “steady state” as had apparently been previously assumed. LTG also understands that the GAB is rich in hydrocarbons, the extraction of which has implications for water and pressure and hence existing users of GAB water. We are well aware of (and gravely concerned about) the increasing demand for greater access to GAB water from the resources sector.

We note that the draft SMP identifies the potential growth in extraction of GAB water and new industries developing within the Basin. LTG is concerned that the draft fails to address real concerns regarding third party impacts from new water users beyond noting that third party impacts need to be addressed in state/territory water plans. The Queensland GABORA Water Plan provides a general reserve of only 840ML of unallocated GAB water, yet the unconventional gas industry has unfettered access to unlimited volumes of GAB water in Queensland. Accordingly, LTG has no confidence at all in the Queensland government's commitment to “a healthy resource.” We are surprised and disappointed to find little detail on this matter as, in our opinion, the expansion of the coal and unconventional gas industries within the GAB footprint presents clear risks to the integrity of the GAB in addition to impacts on third parties. A clear process or pathway is required to address third party impacts and to ensure “secure and managed access” for existing GAB water users.

Aboriginal and Torres Strait Islander values, cultural heritage and other community values

LTG welcomes the inclusion of this principle in the draft SMP. We particularly welcome the statement that, *“Springs and other cultural sites must be protected as an integral, intricate component of Aboriginal and Torres Strait Islander culture and society and as an essential part of Australia’s cultural heritage.”* (our emphasis)

Whilst LTG strongly supports this outcome we seriously doubt governments’ commitment to it given their enthusiastic support for and approval of Adani’s Carmichael mine. Doongmabulla Springs are GAB-fed and of enormous cultural significance to Wangan and Jagalingou people. LTG would be delighted to see real, lasting protection of this and other important cultural sites but fear that in this case, governments are merely paying lip service to an important principle. Similarly, ensuring First Nations peoples have an effective voice in GAB management will only occur if the draft coordinated governance measures are re-written to deliver true partnerships and collaborative approaches to GAB management.

Secure and Managed Access

LTG finds this principle to stand in stark contrast to the reality of GAB water allocations. We have long held concerns about the inequitable situation that allows the minerals and energy resources sectors virtually unlimited access to GAB water resources while other users have to purchase their entitlements – assuming unallocated water is available in their particular area. Furthermore, this sector is largely self-regulated so it is hard to understand how compliance will operate and how “secure and managed access” will actually be delivered.

We find it extraordinary that the draft SMP is silent on these important issues. Together with the lack of detail on coordinated governance, LTG believes that these omissions undermine the credibility of the entire SMP. In our opinion, there are real questions as to whether the draft SMP can

- protect existing access arrangements/entitlements and ensure equity between user groups
- offer existing users some protection against new and emerging users who have a higher risk impact on the GAB than current users
- afford current users opportunities to access funding to enhance their resource and explore new opportunities
- encourage new and more efficient, higher value industries that are complementary to existing users AND which -as far as possible - maintain what is now known to be a declining resource

Judicious Use

LTG supports the principle of “judicious use.” However, in the context of a sector that has been granted unlimited access to and use of GAB water, we find this principle to be one in name only.

LTG understands that capping and piping uncontrolled bores was a key element of the original SMP, that GABSI was a highly successful program and that artesian pressure losses were reversed in some parts of the GAB. We are also aware that since the proliferation of the unconventional gas industry in Queensland, pressures and water levels have begun to decline in those areas. We hold great concerns for the integrity of the GAB and those landholders reliant on its water as the gas

industry extends its operations and as the coal sector plans massive mines that will effectively facilitate its draining via a significant part of the GAB's recharge area. There is nothing “judicious” in the resources sector's use of the resource.

Significant risks remain from uncontrolled or poorly-maintained infrastructure. Some extinct springs – and even some uncapped bores – have begun to flow again or at high flow rates as pressure is recovered. We are therefore surprised that the SMP fails to stress the importance of completing capping and piping programs.

Furthermore, the issue of on-going long term maintenance of bores and associated infrastructure seems to be regarded as a thing of the past. In addition to those currently uncapped bores and those that are deteriorating, tens of thousands of new gas wells are planned for the GAB. Every single one of these will eventually fail so on-going maintenance is a significant - and increasing - risk. In our view, it is essential for the new SMP to deal with this legacy, including how this substantial body of work will be funded. We are disappointed to find the draft SMP does not address this significant and growing issue.

Information, knowledge and understanding for good management

This section of the draft SMP states “[...] *that the outcomes be achieved through an adaptive, evidence-based risk management approach. In order to succeed, such an approach must be driven by accurate and timely information. Readily accessible, relevant, high-quality information can ensure risks are identified and inform the development of effective policy.*”

LTG is deeply sceptical of adaptive management approaches. This has been the Queensland government’s approach to the unconventional gas industry and many of the existing GAB water users among our supporters would argue that in some areas, water use has been unsustainable. In our opinion, the draft SMP fails to give sufficient emphasis to information gathering, and data collection to improve our understanding of how the GAB functions. We agree that GAB management needs to be based on evidence and best available science so it is essential that this be improved. A realistic budget is required.

We are surprised and disappointed that the bore audit information in the fact sheet provided on the GABCC website (<http://www.gabcc.gov.au/publications/gab-bore-data-factsheet>) does not appear to have been used in preparing the draft SMP. The SMP needs to provide clear, explicit linkages to *risks based on evidence*, i.e. those identified in the bore data document. The nature and scale of risks, and potential measures to address these risks must be included.

Similarly, the SMP fails to identify regulatory measures that would be appropriate to minimise the risks to groundwater from bore failure. The development of comprehensive construction and decommissioning standards for all bores seems an obvious strategy.

Information management, communication and education

We note the recurring themes of building trust, understanding and confidence in this section and under the “Coordinated Governance” principle. However, we are concerned that these themes are not reflected in the outcomes or practicalities of the draft plan. Furthermore, the draft SMP fails to provide any indication of how the stated outcomes for this principle will be achieved.

Conclusion

We are disappointed by the lack of clear direction, leadership and specific outcomes for many of the Principles contained in the draft SMP. In our view, considerably more work needs to be done to make the draft SMP a useful and credible Plan to protect the integrity of the GAB and to manage it into the future. LTG recommends the Coordinated Governance section in particular be re-thought and re-written to reflect true partnerships and collaboration and to provide clear roles, responsibilities and accountabilities for all relevant stakeholders. In our view, in its current form it is not a realistic or credible SMP.

We also recommend that an additional principles section is added which relates specifically to the mining and gas industries. This should include a commitment for all governments to work towards:

- Full transparency and accountability of all mining and gas water take
- Ensuring that mining and gas activities are subject to the same water management rules, caps and licensing regimes as other industries
- Preventing impacts from mining and gas water take on existing businesses and industries
- Special measures to protect recharge areas from any proposed mining and gas impacts
- Full protection for GAB springs from any proposed mining and gas activities
- Setting strict standards for environmental assessments and an independent body to advise on any mining and gas projects which may threaten the GAB

Thank you for the opportunity to comment.