

## ASX ANNOUNCEMENT

27 SEPTEMBER 2023

### WATER SUPPLY EXCLUSIVE NEGOTIATION RIGHTS SECURED

#### Highlights:

- Magnetite Mines recently made a proposal to the South Australian Government to access a discarded Murray Basin wastewater source for use in magnetite processing
- The wastewater source is one of two water supply options with potential to supply planned 5Mtpa operations at the Razorback Iron Ore Project
- Cabinet has approved a 6 month exclusive negotiation period for the proposal
- Decision represents material SA Government support for Razorback, aligned with the state's emerging Green Steel Strategy
- Proposal's unique and beneficial ESG aspects are fully aligned with Magnetite Mines' leading "*foresight*" sustainability platform

#### MGT CEO Tim Dobson commented:

*"For over 30 years, salinity levels in the Murray River have been government-managed by extracting salty groundwater using an array of bore pumps alongside the river and discarding it to evaporation ponds with no beneficial use. Using this wastewater for value-adding to South Australia's mineral resources makes logical sense and has potentially profound environmental benefits."*

*"We have been working closely with the SA Government this year, aligning our business plan to develop high-grade iron ore production in the Braemar with the Government's emerging strategy to create a green steel industry in the state on a foundation of renewable energy and green hydrogen production."*

*"This approval by the SA Government Cabinet to advance our proposal to access this wastewater source, with exclusive negotiating rights, is extremely encouraging and represents the first material support by the SA Government for Razorback ahead of the planned submission of our mining lease proposal in the new year."*





*"Being acutely aware of the arid environment in which we will operate, we take our water stewardship obligations seriously. Beneficially using wastewater from Murray Basin salt interception schemes would contribute to a circular economy and is fully aligned with the intent and spirit of our leading 'foresight' sustainability platform."*

**Magnetite Mines Limited (ASX:MGT)** is pleased to announce that it has received approval from the South Australian Cabinet to progress to Step 2 of the State's Unsolicited Proposal process for the Company's application to access wastewater from the Stockyard Plains Salinity Management Basin (SPSMB).

The Unsolicited Proposal relates to one of two preferred water supply options for the Razorback Iron Ore Project. Up to 10 gigalitres (GL) per year of water is required to process magnetite-bearing ores into 5Mtpa of value-added, premium-grade iron ore concentrates for use in low-carbon steelmaking.

This approval enshrines an exclusive negotiation period during which the Company will develop a business case in conjunction with the SA Government. Exclusivity provides MGT with a high level of assurance and confidence to proceed with technical design and environmental assessment programs. A dedicated Case Manager has also been appointed by the SA Government.

Through its Unsolicited Proposal application, MGT proposed actions across four key pillars – access to produced wastewater, access to land, regulatory assistance and funding opportunities – as part of Company initiatives to de-risk project infrastructure solutions and facilitate project partnering.

Scope of Magnetite Mine's Step 1 Unsolicited Proposal application			
 Access to produced wastewater	 Access to land	 Regulatory assistance	 Funding opportunity
<ul style="list-style-type: none"> <li>• Interim exclusive negotiation rights</li> <li>• Future water offtake rights</li> <li>• Allow development approvals processes</li> </ul>	<ul style="list-style-type: none"> <li>• Short-term – enable environmental investigations</li> <li>• Long-term – for construction and system operation</li> </ul>	<ul style="list-style-type: none"> <li>• Interface with Murray Darling Basin Authority</li> <li>• Engagement with relevant state and federal bodies</li> </ul>	<ul style="list-style-type: none"> <li>• Potential to partner for federal government grants</li> </ul>

The sustainability benefits of the proposal to use SPSMB wastewater have the potential to be significant and demonstrates the Company's clear focus under the “*foresight*” sustainability platform. Through the business case development and technical assessment programs, MGT will investigate system benefits that may arise from wastewater use, including the potential to extend the operational life of the SPSMB.

The Company has also identified a unique opportunity to provide limited quantities of water to regional pastoralists along the proposed pipeline corridor to Razorback as a drought-proofing measure, further enhancing the mutual sustainability outcomes that could be achieved from this project water supply solution. Further analysis of a shared supply concept will occur through the development of the Step 2 business case.

## BACKGROUND: STOCKYARD PLAINS SALINITY MANAGEMENT BASIN (SPSMB)

The SPSMB is a series of detention basins and salt pans (refer Figures 1 and 2) used to naturally evaporate groundwater produced by groundwater bores in the Woolpunda, Waikerie and Qualco/Sunlands salt interception schemes (SIS)<sup>1</sup>. The purpose of the SIS is to manage salinity levels in the Murray River to ensure system health and maintain water qualities suitable for human use and primary production.



Commissioned in 1990 and managed by the Murray Darling Basin Authority, the SPSMB is spread over ~10km<sup>2</sup> and receives wastewater at an average rate of ~10GL/year<sup>1</sup>; however, the system is capable of producing up to 12.5GL/a. The wastewater contains total dissolved solids (TDS) levels of approximately 19,000 mg/L, approximately half of that of seawater in the Upper Spencer Gulf<sup>2</sup>, and presents a compelling opportunity to use this water for direct use in magnetite processing or as desalination supply source compared to sea water.



Figure 1: Main pool, Stockyard Plains Salinity Management Basin

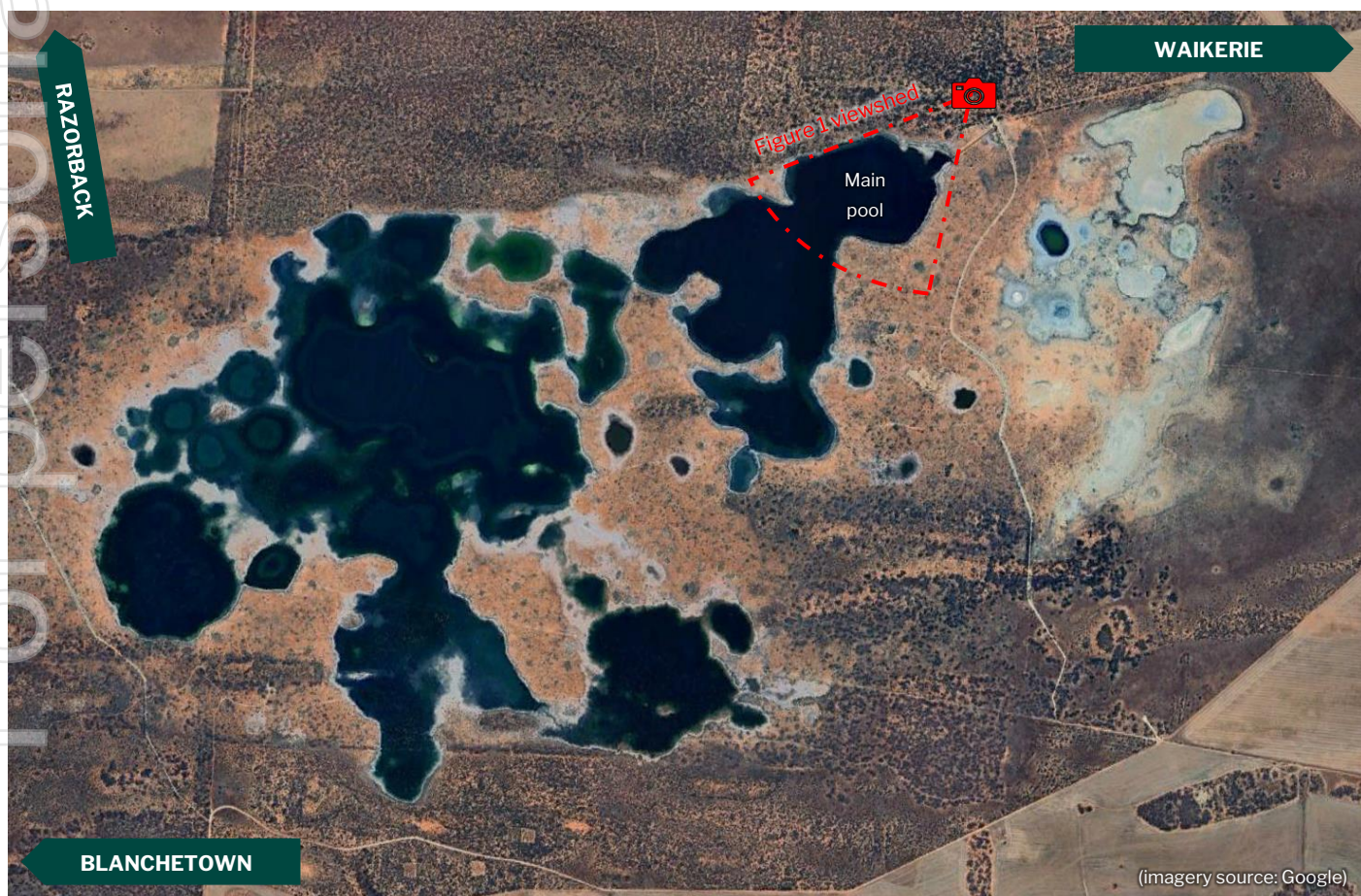


Figure 2: Stockyard Plains Salinity Management Basin



## WATER SUPPLY FROM THE STOCKYARD PLAINS SALINITY MANAGEMENT BASIN

As part of MGT's ongoing assessment of two preferred water supply options for the Razorback Project<sup>3</sup>, a pipeline infrastructure corridor has been identified between the mine site and the SPSMB (Figure 3). The infrastructure corridor has been proposed to follow existing property boundaries and public roads where feasible to reduce the potential impact to landowners and the environment. To further assess the suitability of the proposed corridor routing, an environmental, social and administrative constraints assessment has been commissioned with Eco Logical Australia.

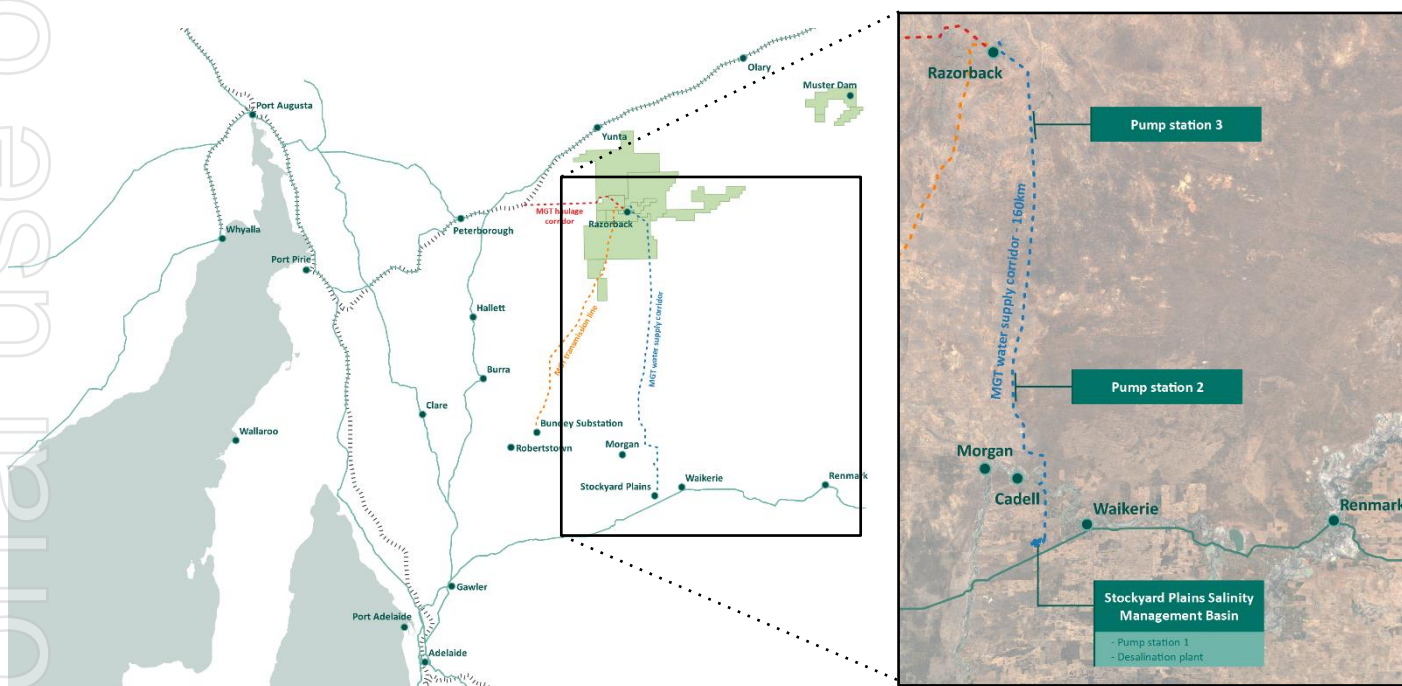


Figure 3: Conceptual pipeline route and infrastructure

## MAGNETITE PROCESSING USING SALINE WATER

Test work currently in progress is assessing the suitability of SPSMB water for magnetite processing purposes, which will assist in determining if this supply option requires at-source desalination. The SPSMB area has extensive existing power supply infrastructure and it is anticipated that pump stations along the pipeline infrastructure corridor can be serviced with off-grid hybrid generation solutions, reducing the need for power reticulation.

Consultation with a leading desalination provider has been ongoing for several months, should the use of desalinated water be deemed necessary for magnetite processing. Initial modelling indicates that a standard desalination configuration for the treatment of SPSMB water would suffice and that a higher recovery ratio (treated water : brine) compared to seawater could be expected.

## SA GOVERNMENT UNSOLICITED PROPOSAL PROCESS

The South Australian Unsolicited Proposal process is a formal 3 step process facilitated by the Department for Treasury and Finance to consider non-standard requests of the SA Government outside of formal procurement processes<sup>4</sup>. Unsolicited Proposals require Cabinet approval to proceed and are considered against a set of five key criteria:

1. Alignment to SA Government priorities and policies
2. The uniqueness of the proposal
3. No competing proposals
4. A value proposition for the State
5. Suitable capacity and capability of the proponent.

MGT submitted its proposal to the SA Government in April 2023 and, following Cabinet's approval to proceed to Step 2, will now focus on:

- the development of a business case and confirmation of approvals pathway
- engagement with SA and Federal regulatory agencies
- technical and engineering programs to accurately define the project
- assessing existing environmental datasets, including hydrogeological modelling
- planning environmental baseline works
- assessing grant funding opportunities.

### **RAZORBACK SUPPORT ALIGNED WITH SA GOVERNMENT GREEN STEEL STRATEGY**

State Cabinet's approval for MGT's Unsolicited Proposal to progress to Step 2 of the process is directly aligned with the South Australian Government's strategy to enable the establishment of a world-leading, integrated green iron and steel industry in the state.

The SA Government has identified South Australia's competitive advantage with respect to renewable energy and the emerging opportunity for the State to lead green hydrogen production at scale. Extending this advantage, the SA Government aims to pair the state's abundant magnetite resources with locally-produced green hydrogen to efficiently manufacture low-carbon iron and steel products. This strategy has the potential to attract significant international investment into the State as regional steelmakers seek to meet their decarbonisation mandates and avoid future carbon tax and border adjustment implications.

MGT acknowledges several recent major initiatives driven by the SA Government designed to reach the goals described above:

1. World-leading penetration of intermittent renewable energy generation within a gigawatt-scaled economy.
2. Hydrogen Jobs Plan<sup>5</sup> - a critical catalyst for Australia's nascent green hydrogen industry commencing with a world leading demonstration project to prove green hydrogen production at scale for power generation and manufacturing applications (including iron ore reduction).
3. Hydrogen and Renewable Energy Bill<sup>6</sup> - providing a streamlined and simplified one-stop legislative framework to support a \$20 billion pipeline of proposed commercial scale renewable energy and hydrogen production projects.

These initiatives provide the necessary foundation for the State's impending green steel strategy. Together with the development of the expansive Braemar magnetite resources, these initiatives position South Australia as a competitive destination for green iron & steel production for generations to come.

For further information contact:

Gemma Brosnan  
General Manager - External Affairs  
+61 8 8427 0516

## ABOUT MAGNETITE MINES

---

Magnetite Mines Ltd is an ASX-listed iron ore company focused on developing magnetite iron ore resources in the highly-prospective Braemar iron region of South Australia. The Company has a 100% owned Mineral Resource package of 6 billion tonnes of iron ore, including 2 billion tonne in Probable Ore Reserves. The Company is developing the Razorback Iron Ore Project, located 240km north of Adelaide, to meet accelerating market demand for premium iron ore products created by iron & steel sector decarbonisation, with the potential to produce high-value Direct Reduction (DR) grade concentrates. Razorback is set to become a very long-life iron ore project with expansion optionality in a tier 1 jurisdiction that will produce a superior iron ore product sought by steelmakers globally. For more information visit [magnetitemines.com](https://magnetitemines.com).

## REFERENCES

---

<sup>1</sup> Stockyard Plains Salinity Management Basin: 25 Year Review (SA Water, February 2019)

<sup>2</sup> Laboratory analysis (ALS) of TDS (calculated from Electrical Conductivity), sampled dates 31 May 2023 and 15 August 2023

<sup>3</sup> ASX Announcement – 01/09/23 – Razorback Iron Ore Project Update

<sup>4</sup> [SA Department for Treasury and Finance – Unsolicited Proposals](#)

<sup>5</sup> [Office of Hydrogen Power SA – About the Project](#)

<sup>6</sup> [Government of South Australia – Landmark laws to unlock hydrogen and renewable energy \(13 September 2023\)](#)