# ASX Release

21 August 2024

## Downstream equipment trials achieve lithium-ion battery anode grade across all targeted product specifications

### Purification equipment trials validate Renascor's eco-friendly, HF free purification process and provide design specifications for Australian Government co-funded PSG demonstration facility

- Equipment trials for Renascor's planned Purified Spherical Graphite (**PSG**) manufacturing facility further validates Renascor's eco-friendly, hydrofluoric (**HF**) free purification process[1].
- The recently completed trials build upon previously completed lab-scale and locked-cycle tests by incorporating commercially available equipment into the proposed purification circuit.
- The trials successfully produced lithium-ion battery grade graphite across all targeted product specifications, with results of up to 99.99% carbon (**C**) (versus anode industry standard of 99.95% C).
- Equipment specifications from the trials are being incorporated into the engineering design for Renascor's planned PSG demonstration facility, which is intended to validate the commercial viability of Renascor's PSG process.
- As announced on 11 July 2024, Renascor was recently awarded a $5 million grant under the Australian Government's International Partnerships in Critical Minerals Program for the PSG demonstration facility[2].
- Renascor has commenced engineering for the PSG demonstration facility and is on schedule to commence commissioning of the demonstration plant in Q2 2025.

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Renascor Resources Limited (ASX: RNU) (**Renascor**) is pleased to announce the successful completion of equipment trials for its planned Purified Spherical Graphite (**PSG**) manufacturing facility in South Australia.

The trials successfully produced lithium-ion battery grade graphite across all targeted product specifications, further validating Renascor's eco-friendly, hydrofluoric (**HF**) free purification process and providing detailed equipment specifications for the planned PSG demonstration facility.

Commenting on equipment trials, Renascor Managing Director David Christensen stated:

> *"Renascor's eco-friendly, HF-free purification technology has the potential to deliver a globally competitive PSG operation and advance Renascor towards its goal of becoming a long-term producer of high-quality graphite products to the lithium-ion battery sector.*
>
> *With these positive results from the recently completed equipment trials, we have achieved an important milestone in the delivery of our Australian Government co-funded PSG demonstration facility. "*

## Discussion

Renascor is developing a vertically integrated Battery Anode Material (**BAM**) operation in South Australia. The BAM project comprises: (i) an upstream graphite mining and processing operation, and (ii) and a downstream BAM facility in which graphite concentrates will be converted into PSG before being exported to lithium-ion battery anode manufacturers (see Figure 1).

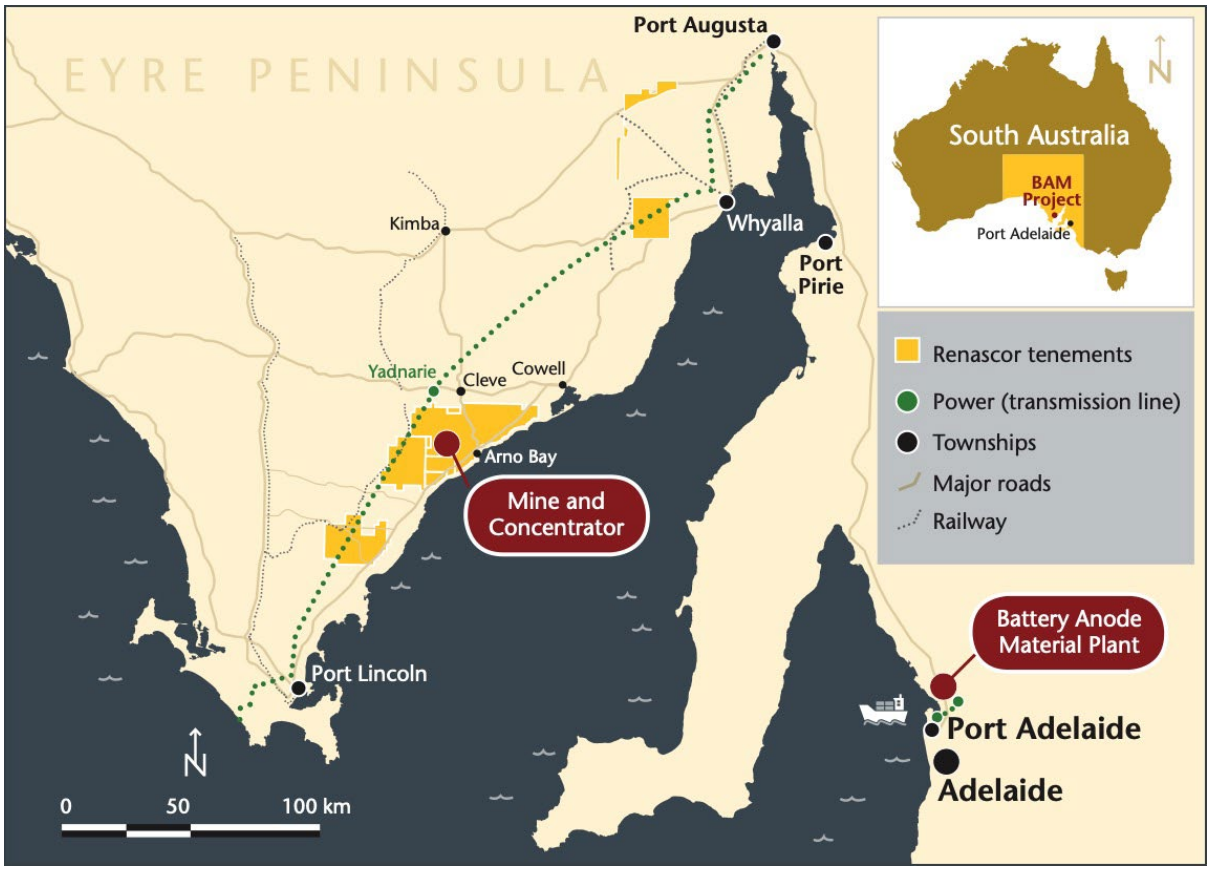


Figure 1. *Renascor's BAM project, showing the locations of the planned mine and concentrator and the BAM facility*

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The BAM project is in the advanced planning stages, with Renascor intending to accelerate the development of the upstream mining operation to reduce the time to first production of graphite to coincide with projected near-term supply shortfalls.

Renascor is currently undertaking an Early Contractor Involvement (**ECI**) process to mature engineering design of the upstream minerals processing plant and non-processing infrastructure[3]. The ECI process is intended to culminate with an executable EPC contract for the upstream operation, comprising a fully priced offer, agreed commercial terms, finalised project works scope, technical specifications and performance parameters[4].

Concurrent with the development of the upstream mining operation, Renascor is continuing to advance the downstream PSG facility.

As announced last month, Renascor was awarded a $5 million grant under the Australian Government's International Partnerships in Critical Minerals Program to construct a PSG demonstration facility[5]. The demonstration facility will convert graphite concentrates from Renascor's Siviour Graphite Deposit into PSG through a continuous production process, enabling Renascor to test, demonstrate and optimise its purification flowsheet prior to detailed design and construction of the full-scale commercial facility[6].

In preparation for construction of the PSG demonstration facility, Renascor recently undertook equipment trials designed to evaluate commercially available equipment.

The equipment trials built on previously completed batch-scale and lock-cycle tests by testing the Renascor purification flowsheet with commercially available equipment at comparable scale to the planned PSG demonstration facility.

The trials successfully produced lithium-ion battery grade graphite across all targeted product specifications, with results of up to 99.99% carbon (**C**) (versus anode industry standard of 99.95% C). The trials similarly met industry requirement for impurities, with all tests below industry impurity standards.

Renascor has commenced engineering for the PSG demonstration facility, incorporating equipment specifications from the recently completed trials. The PSG demonstration facility is on schedule to commence commissioning in Q2 2025.

This ASX announcement has been approved by Renascor's Board of Directors and authorised for release by Renascor's Managing Director David Christensen.

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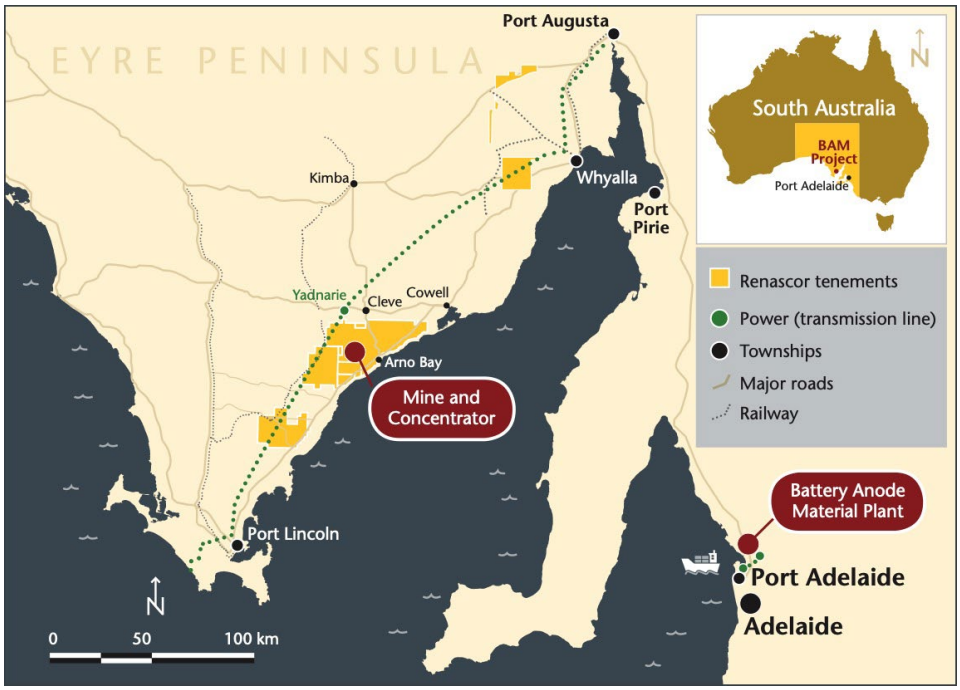
# Appendix 1
# About Renascor

Renascor is developing a vertically integrated Battery Anode Material Manufacturing Operation ("**the Project**") in South Australia. The Project comprises:

- **the Siviour Graphite Deposit** - the world's second largest Proven Reserve of Graphite and the largest Graphite Reserve outside of Africa[7];
- **the Graphite Mine and Concentrator** - a conventional open-pit mine and crush, grind, float processing circuit delivering world-class operating costs in large part due to the favourable geology and geometry of Renascor's Siviour Graphite Deposit; and
- **a Battery Anode Material Production Facility** - where Graphite concentrate will be converted to PSG using an eco-friendly processing method before being exported to lithium-ion battery anode manufacturers.



HF-free

**Figure 1. Renascor's Battery Anode Material Project location**

The 100% Renascor owned Siviour Graphite deposit is unique in both its near-surface, flat-lying orientation and its scale as one of the world's largest graphite Reserves. The favourable geology and size of the deposit will allow Renascor to produce Graphite Concentrate at a low-cost over a 40-year mine life.

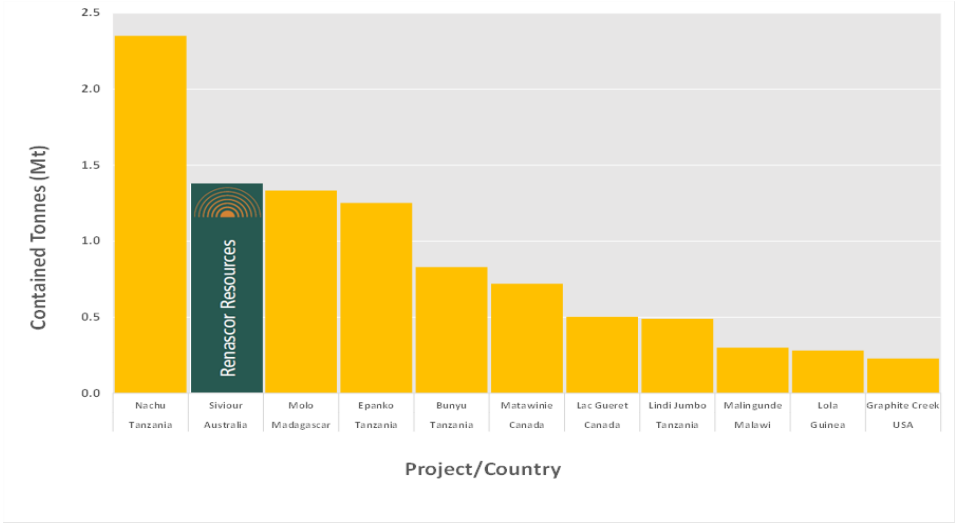



**Figure 2. Globally Reported Proven Ore Reserve estimates (September 2023)[8]**

Renascor intends to leverage this inherent advantage and develop a vertically integrated operation to manufacture high value PSG from a low-cost graphite concentrate feedstock and provide a secure cost-competitive supply of battery anode raw material into the rapidly growing lithium-ion battery market.

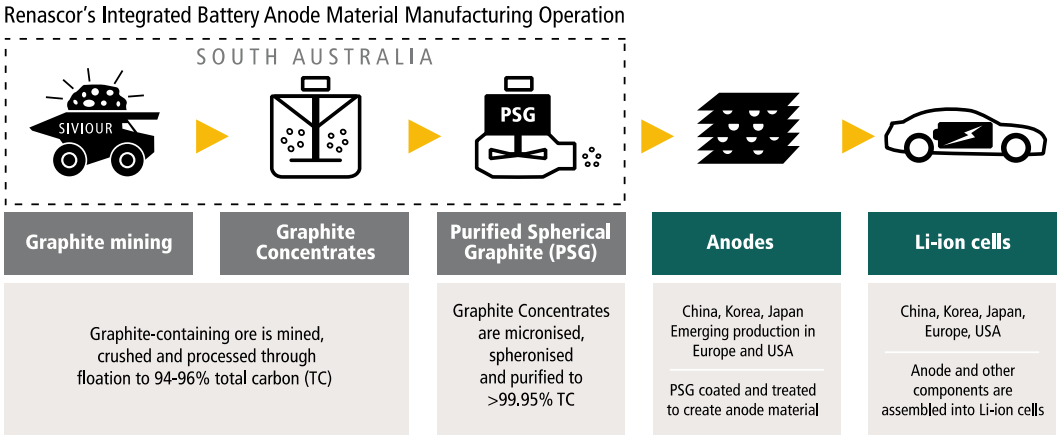



**Figure 3. Renascor's vertically integrated Mine and Concentrator and Downstream PSG production facility within the Electric Vehicle supply chain.**

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## Appendix 2

## Peer Comparison Data

| Project name | Code | Company | Country | Report name | Date | Link |
|---|---|---|---|---|---|---|
| Bunyu | VRC | Volt Resources Ltd | Tanzania | Pre-Feasibility Study Completed | 15 December 2016 | https://announcements.asx.com.au/asxpdf/20161215/pdf/43drlhpvdwbhxp.pdf |
| Epanko | EGR | Ecograf Ltd | Tanzania | Updated Epanko Ore Reserve | 25 July 2024 | https://announcements.asx.com.au/asxpdf/20240725/pdf/065xhvjr74hlh2.pdf |
| Graphite Creek | GPH | Graphite One Inc | USA | Preliminary Feasibility Study Technical Report Graphite One Project | 14 October 2022 | https://www.graphiteoneinc.com/wp-content/uploads/2022/10/JDS-Graphite-One-NI-43-101-PFS-20221013-compressed.pdf |
| Lac Guéret | LLG | Mason Graphite Inc | Canada | Feasibility Study Update of the Lac Guéret Graphite Project | 12 December 2018 | https://masongraphite.com/wp-content/uploads/2021/06/a53b7c_22115be39ccf4d85b9579f359680997c.pdf |
| Lindi Jumbo | WKT | Walkabout Resources Ltd | Tanzania | Updated Ore Reserve delivers 17.9% graphite grade | 28 February 2019 | https://announcements.asx.com.au/asxpdf/20190228/pdf/44321stl8dlk5f.pdf |
| Lola | SRG | SRG Mining Inc. | Guinea | Lola Graphite Project NI 43-101 Technical Report – Updated Feasibility Study | 12 April 2023 | https://srgmining.com/wp-content/uploads/2023/04/J6626-SRG_Lola_UFS_Rev_0_Fin_2023-0407.pdf |
| Malingunde | NGX | NGX Ltd | Malawi | Replacement Prospectus | 14 June 2023 | https://announcements.asx.com.au/asxpdf/20230614/pdf/05gn89bfqrhwx8.pdf |
| Matawinie | NOU | Nouveau Monde Graphite | Canada | NI 43-101 Technical Feasibility Study Report for The Matawinie Mine and the Becancour Battery Material Plant Integrated Graphite Projects | 10 August 2022 | https://nmg.com/wp-content/uploads/2022/08/Feasibility-Study-NMGs-Integrated-Phase-2-Projects.pdf |
| Molo | NEXT | NextSource Materials Inc | Madagascar | Molo Phase 2 Preliminary Economic Assessment NI 43-101 Technical Report | 12 December 2023 | P9239 Molo Graphite Phase 2 NI43-101 Technical Report (nextsourcematerials.com) |
| Nachu | MNS | Magnis Energy Technologies Ltd | Tanzania | Bankable Feasibility Study Update Confirms Strong Financial and Technical Viability for the Nachu Graphite Project | 27 September 2022 | https://announcements.asx.com.au/asxpdf/20220927/pdf/45fhzx2nsgrmjb.pdf |
| | | | | Supplementary Information Regarding Nachu BFS Update Released 27.9.2022 | 30 September 2022 | https://announcements.asx.com.au/asxpdf/20220930/pdf/45fqs3q6h3hpw4.pdf |

[1] See Renascor ASX announcement dated 10 August 2023.
[2] See Renascor ASX announcement dated 11 July 2024.
[3] See Renasocr ASX announcement dated 24 June 2024.
[4] See Renasocr ASX announcement dated 24 June 2024.
[5] See Renascor ASX announcement dated 11 July 2024.
[6] See Renascor ASX announcement dated 11 July 2024.
[7] See Renascor ASX release dated 21 July 2020.
[8] Source: public company reports. Does not include graphite deposits that do not publicly report data on main stock exchanges in Australia, Canada, the United Kingdom and the United States. See Appendix 2 for further details on sourcing.