# *The Siviour Battery Anode Material Project:*
## *Australian Graphite for the EV Sector*

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NOOSA MINING
INVESTOR CONFERENCE
PEPPERS NOOSA RESORT | 17-19 JULY 2024

**Noosa Mining Investor Conference**
17 – 19 July 2024
*David Christensen*
*Managing Director*

RENASCOR RESOURCES
*Powering Clean Energy®*

# Executive Summary

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# The Siviour Battery Anode Material Project –
*100% Australian Made Graphite*

## Scale

- World's 2nd largest Proven Graphite Reserve
- Largest Graphite Reserve outside of Africa

## Tier 1 OPEX

- Favourable geology and in-country vertical integration drive globally competitive projected OPEX
- Vertically integrated operation drives competitive advantage vis-à-vis new ex-China supply sources

## Economics

- Post-tax $NPV_{10}$ of A$1.5b
- Post-tax unleveraged IRR of 26%
- Average annual EBITDA of A$363m

## Development Ready

- All major regulatory approvals in place for upstream phase 1
- A$185m conditional loan from Australian Government's Critical Minerals Facility
- Current cash balance of $114million

## Secure & Sustainable

- Tier 1 jurisdiction with low sovereign risk
- USA Free Trade Agreement (meets requirements under Inflation Reduction Act)
- Low ESG footprint with ~70% South Australia renewable electricity supply

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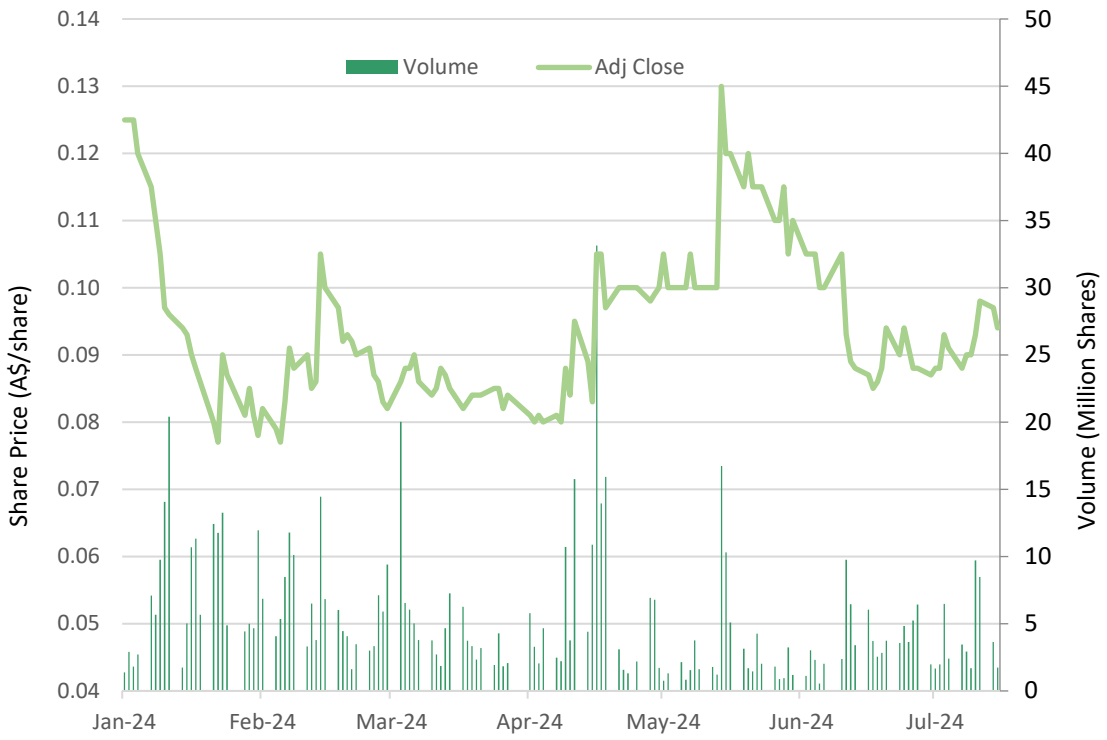
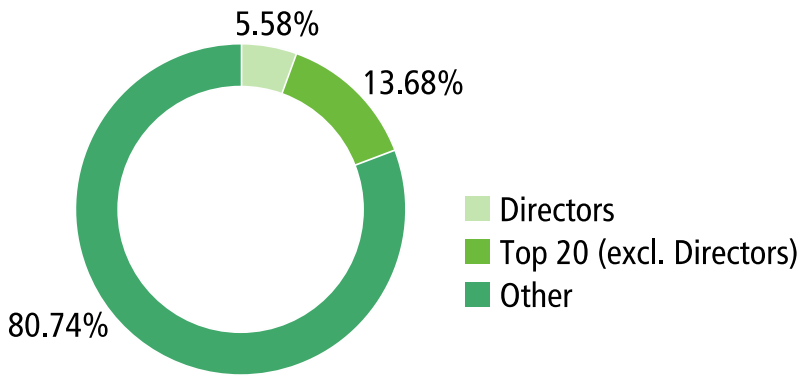
# Renascor Corporate Overview

## Share Price Chart (ASX code: RNU)




| | |
|---|---|
| **Shares on issue** | **2,541M** |
| Share price (17 July 2024) | A$0.094/sh |
| **Market Cap (at A$0.094/sh)** | **A$238.9M** |
| Cash (31 March 2024) | A$113.8M |
| Debt (31 March 2024) | Nil |
| **Enterprise Value** | **A$125.1M** |

## Shareholder breakdown (June 2024)



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# Renascor's Strategy

**We aim to become a global leader in the supply of sustainable, 100% Australian-made battery anode material**

## Stage 1

### Mining Operations

- Commence production of Graphite Concentrates
- Continue to build valuable offtake relationships with leading anode suppliers
- PSG Demonstration Plant & qualification
- Increase Resource / Reserve

## Stage 2

### PSG Operation

- Initiate production of Purified Spherical Graphite
- Staged approach to minimise upfront shareholder dilution
- Anode product development with current and next-generation anode suppliers
- Develop markets for other specialty graphite products

## Stage 3

### Full Renascor Potential

- Expand Graphite Concentrate and Purified Spherical Graphite production
- Establish further downstream processing expertise (and partnerships, as appropriate) to support development of fully integrated anode production
- Utilise expertise in graphite materials, engineering and applications to become industry leading manufacturer of high value graphite products and solutions

# Impact of Lithium-Ion Battery Growth on the Graphite Market

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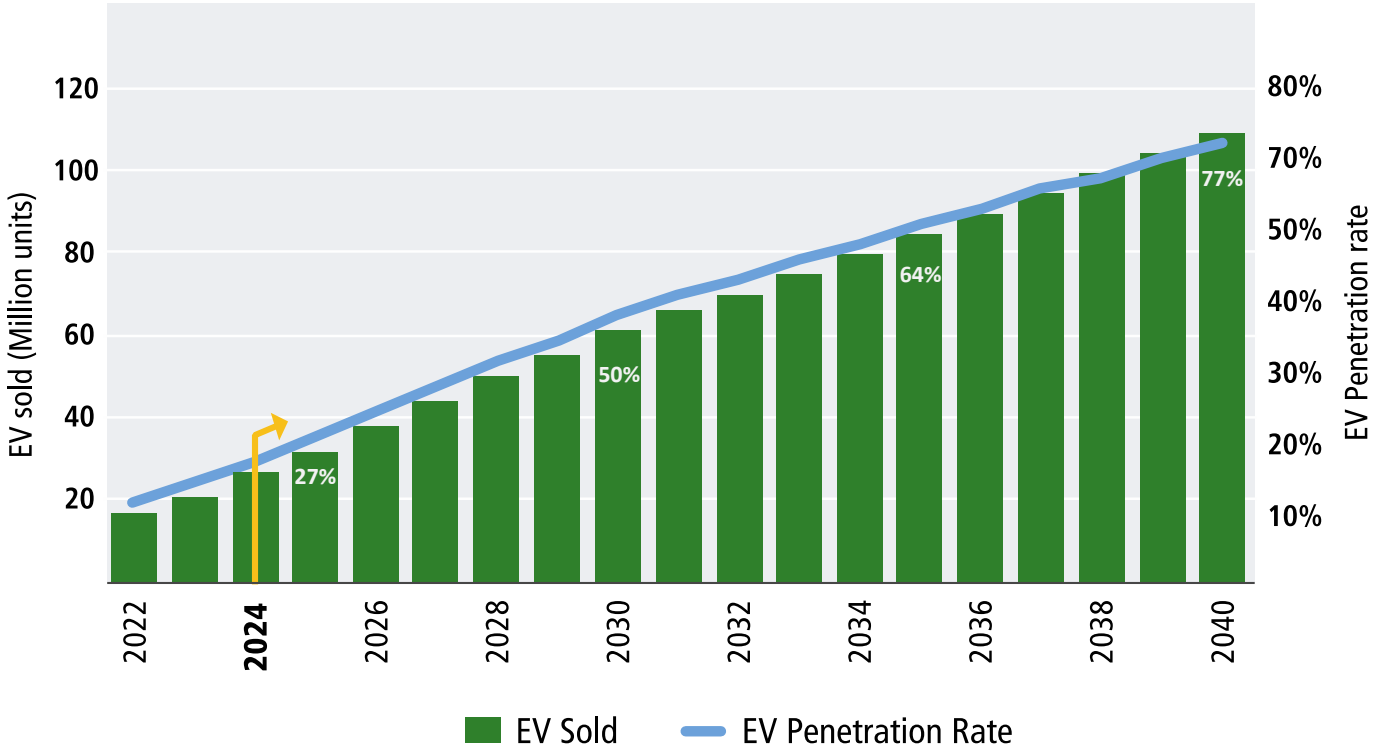
# EV Sales Continue to Increase

**EV sales and net zero climate policy objectives continue to drive demand for lithium-ion batteries and associated battery minerals**

- EV sales rose by 27% in 2023 when compared to 2022
- Forecast sales growth remains high at 24% for 2024
- EV penetration rate is forecast to rise from 20% in 2024 to 55% in 2034
- Strong 2023 growth despite easing of subsidies in China and Germany

** Source: Benchmark Mineral Intelligence*

## EV Sales and Market Penetration




*Source: Benchmark Mineral Intelligence*

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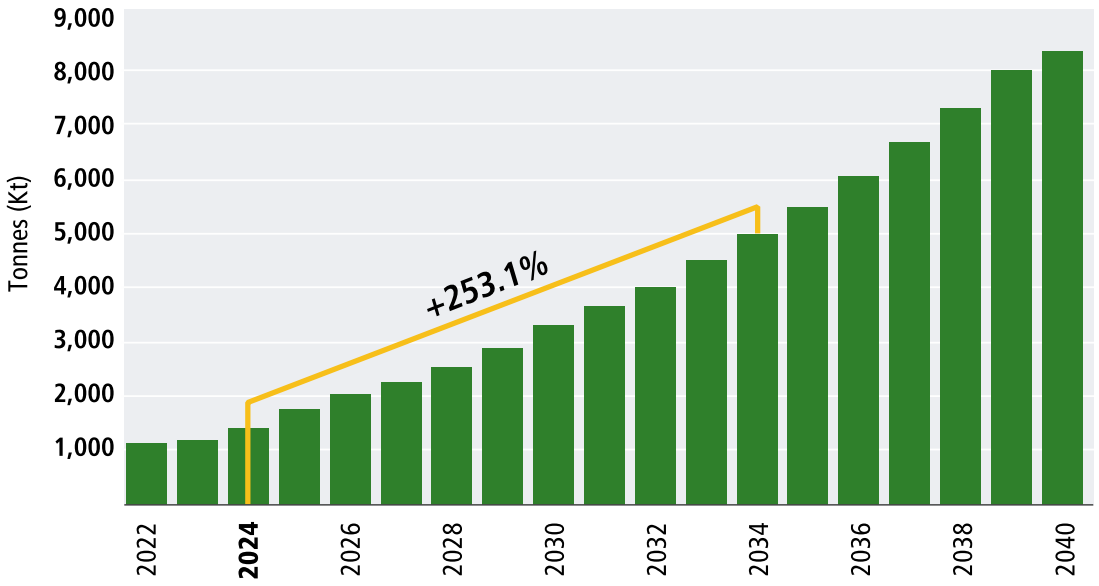
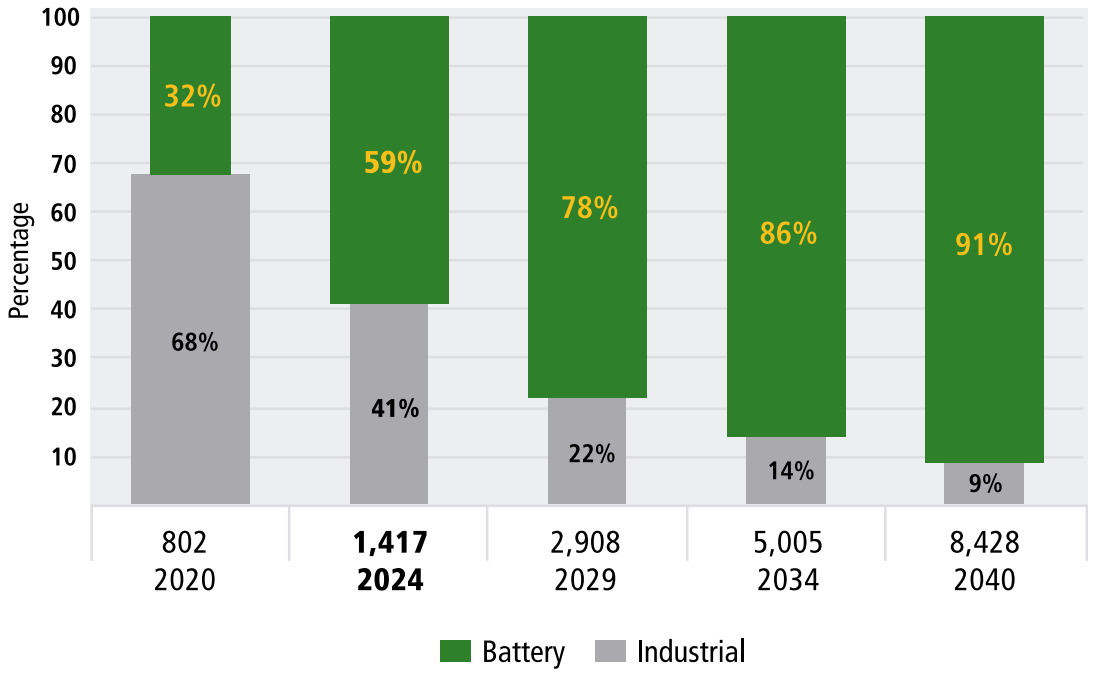
# Anode and Graphite Demand are Directly Linked to Battery Production Growth

**Graphite is the fundamental raw material in lithium-ion battery anodes, with 96%* of graphite demand expected to be driven by the battery sector**

## Flake Graphite Demand (kt)*




## Flake Graphite Demand by Application (kt)*




** Source: Benchmark Mineral Intelligence*

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# Natural Anode Market Will Continue to Grow

**The growth of the natural anode market will require significant new production of flake graphite concentrates and purified spherical graphite**

Natural and synthetic graphite are both currently used as precursor materials to produce anodes, with synthetic graphite anodes having a larger market share.

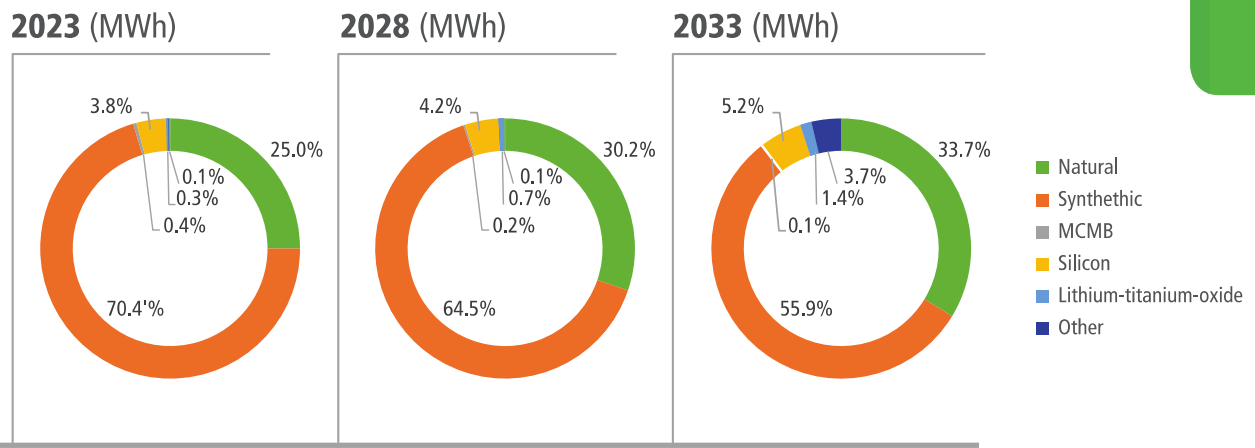
Due to its lower cost of production and more favourable ESG credentials, natural graphite anode demand growth is expected to outpace synthetic anodes, in particular, in ex-China markets.

**Natural anode 2023 – 2033**

| Supply growth | Demand growth |
|---|---|
| **133%** | **489%** |

*Source: Benchmark Mineral Intelligence*

## Anode Chemistry Evolution




| | 2023 | 2028 | 2033 |
|---|---|---|---|
| Natural Graphite Demand for LiB | **603,703** tonnes | **1,941,159** tonnes | **3,745,128** tonnes |

*Source: Benchmark Mineral Intelligence*

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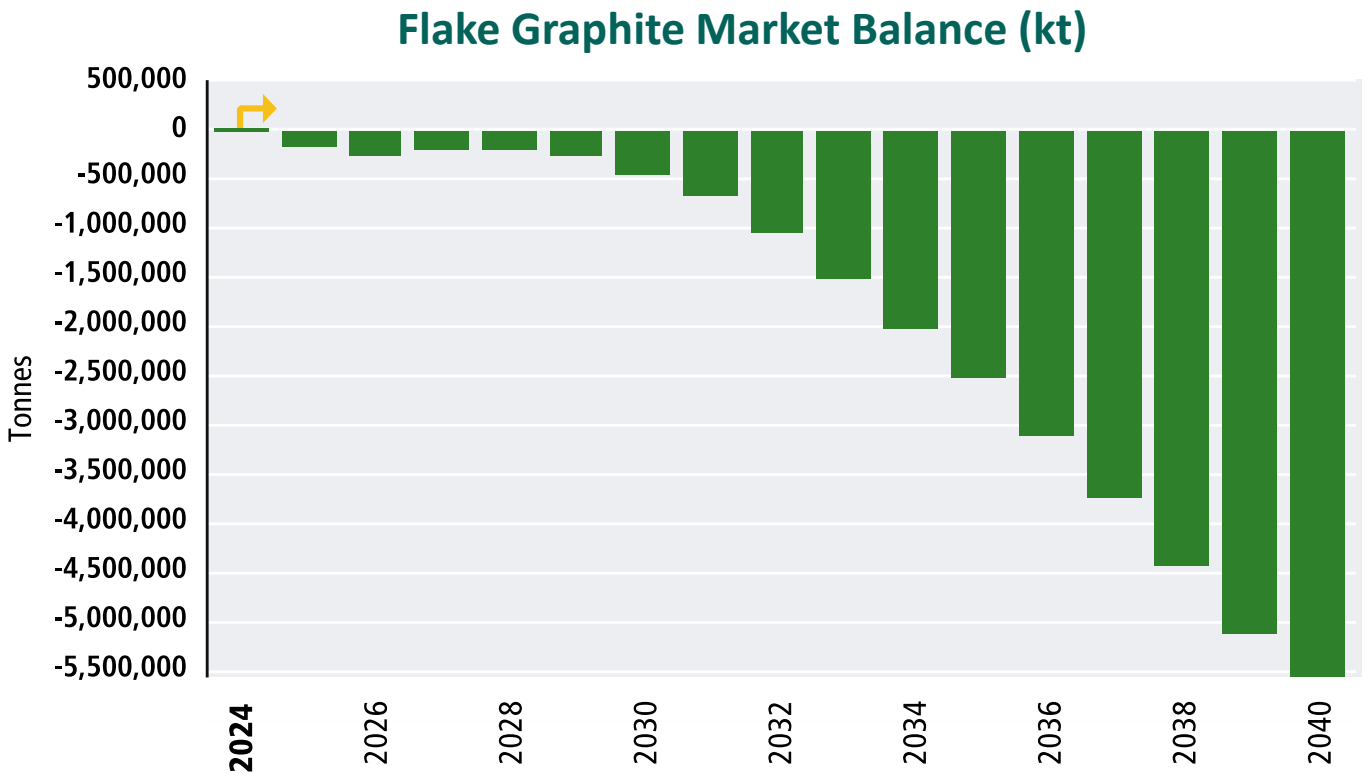
# Graphite Flake Market Balance Moving to Undersupply

**Significant new production is required to meet projected demand for graphite flake concentrates.**

- *EV demand is forecast to grow at a **CAGR of 17.5%*** from 2023 to 2033, driving demand for natural flake graphite*
- Natural flake graphite supply is expected to enter deficit from 2025
- New supply is unlikely to be able to keep pace with demand through to 2040




** Source: Benchmark Mineral Intelligence*

*Source: Benchmark Mineral Intelligence*

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# Policy Initiatives Favour New, Non-Chinese Graphite Supply

**Public policy is driving cell manufacturers and OEMs to procure graphite supply outside of China**

## United States

EV credit of up to US$7,500/vehicle:

- Transitional rules in place for graphite sourcing:
  - No graphite from FEOC (inc. China) from 2027
  - OEMs must demonstrate how they will source compliant graphite from 2027

25% tariff on Chinese Graphite from 2026

## EU Critical Raw Materials Act

Not more than 65% of EU critical mineral demand to be met by a single country by 2030

## Chinese graphite export restrictions

Restrictions on export of graphite products

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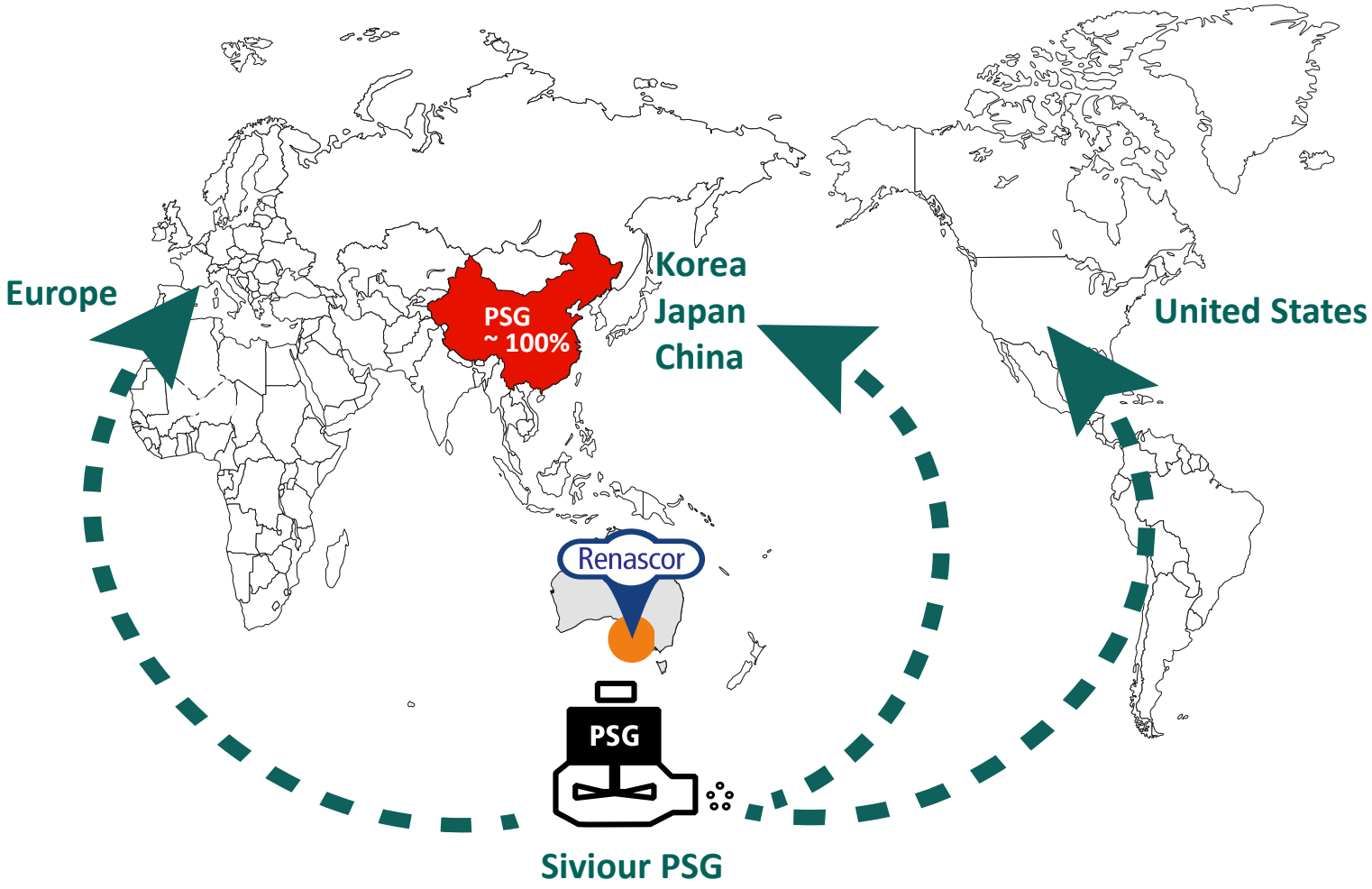
# Vertical Integration Drives Further Competitive Advantage

**All anode producers (including manufacturers in South Korea and Japan) are currently dependent on China for Purified Spherical Graphite.**



# The Siviour Battery Anode Material Project

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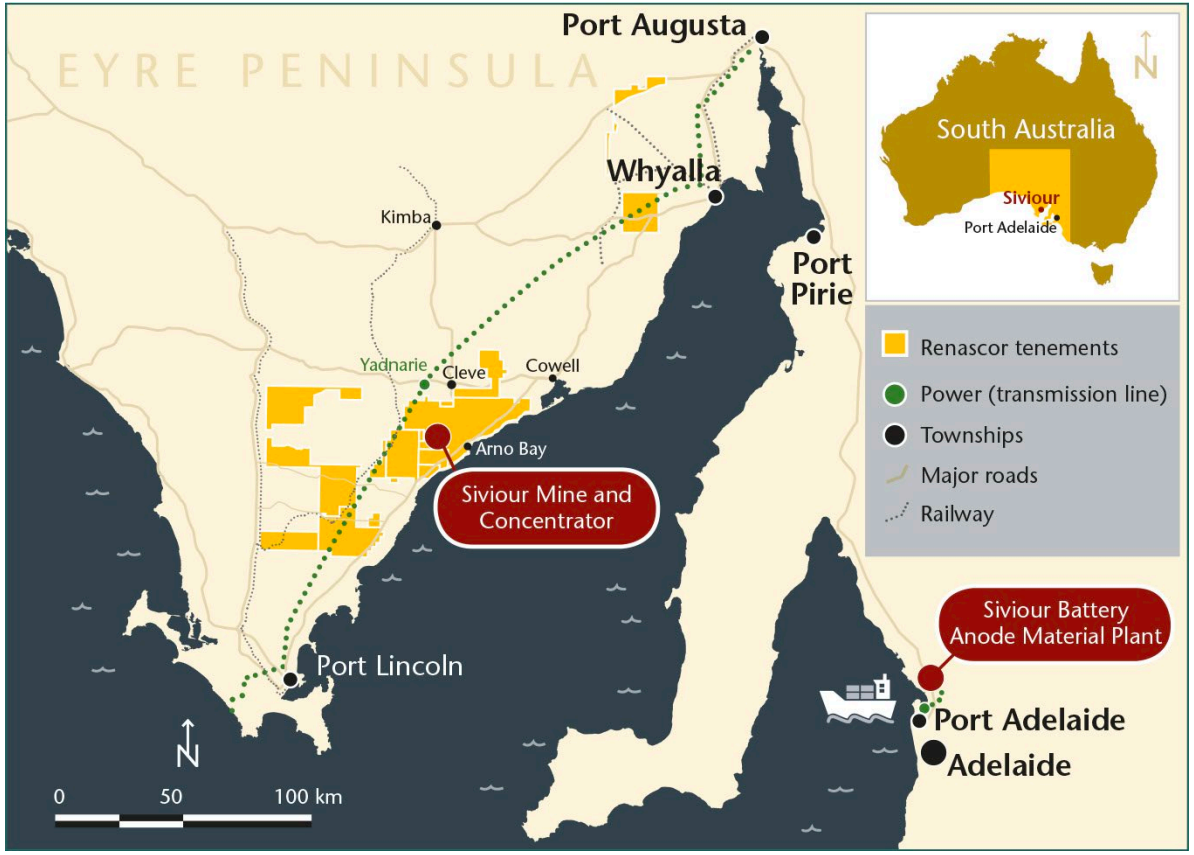
# Secure Graphite Supply From Australia

**Australian Location Offers Mine to Market Supply Chain Security and is fully compliant with *US Inflation Reduction Act* critical mineral sourcing requirements**



*Conceptual illustration of the planned Siviour BAM manufacturing facility at Bolivar, South Australia*

100% Australian-made

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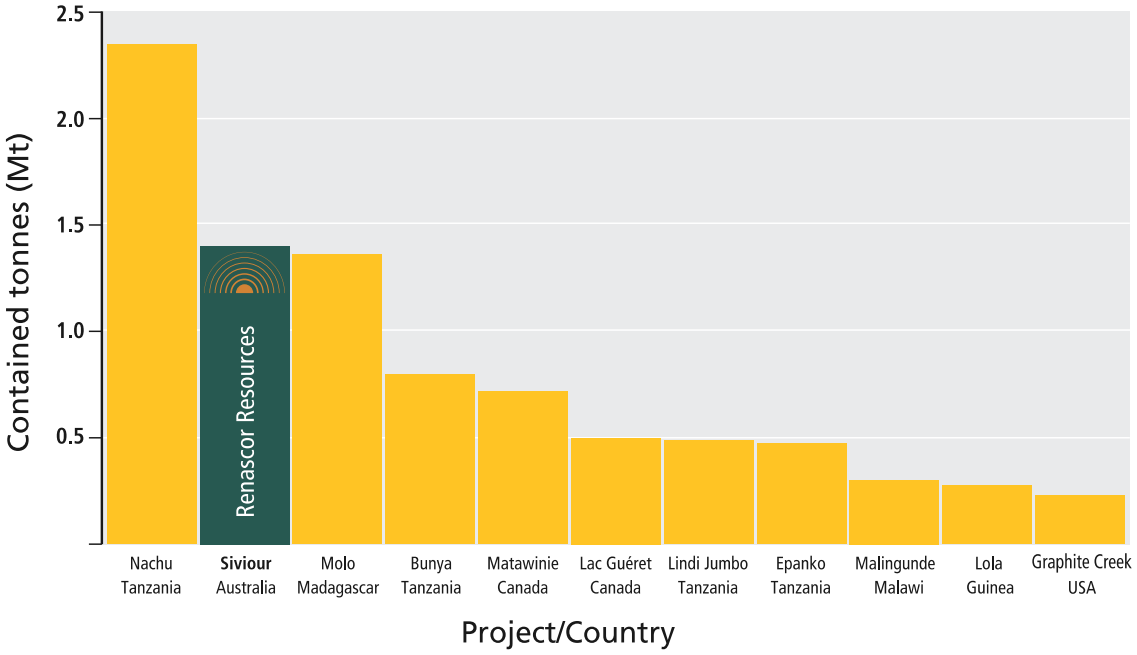
# The Siviour Graphite Deposit is Amongst the World's Largest

**Siviour is the <u>second largest Proven Reserve of graphite globally</u> and the <u>world's largest reported graphite Reserve outside of Africa</u>.**

## Global Graphite Proven Reserves[1]




1. 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 1 for further details on sourcing.

## Mineral Resource Estimate (September 2023)[2]

| Category | Tonnes (Mt) | Grade (% TGC) | Graphite (Mt) |
|---|---|---|---|
| Measured | 16.9 | 8.6% | 1.4 |
| Indicated | 56.2 | 6.7% | 3.8 |
| Inferred | 50.5 | 6.5% | 3.3 |
| **Total** | **123.6** | **6.9%** | **8.5** |

*2. ASX release 14 September 2023 "Siviour Mineral Resource Increases by 25%"*

## Ore Reserve Estimate (August 2023)[3]

| Category | Tonnes (Mt) | Grade (% TGC) | Graphite (Mt) |
|---|---|---|---|
| Proven | 16.8 | 8.2% | 1.4 |
| Probable | 45.0 | 6.6% | 3.0 |
| **Total** | **61.8** | **7.0%** | **4.3** |

*3. ASX release 24 August 2023 "Updated Mineral Ore Reserve Estimate for Siviour"*

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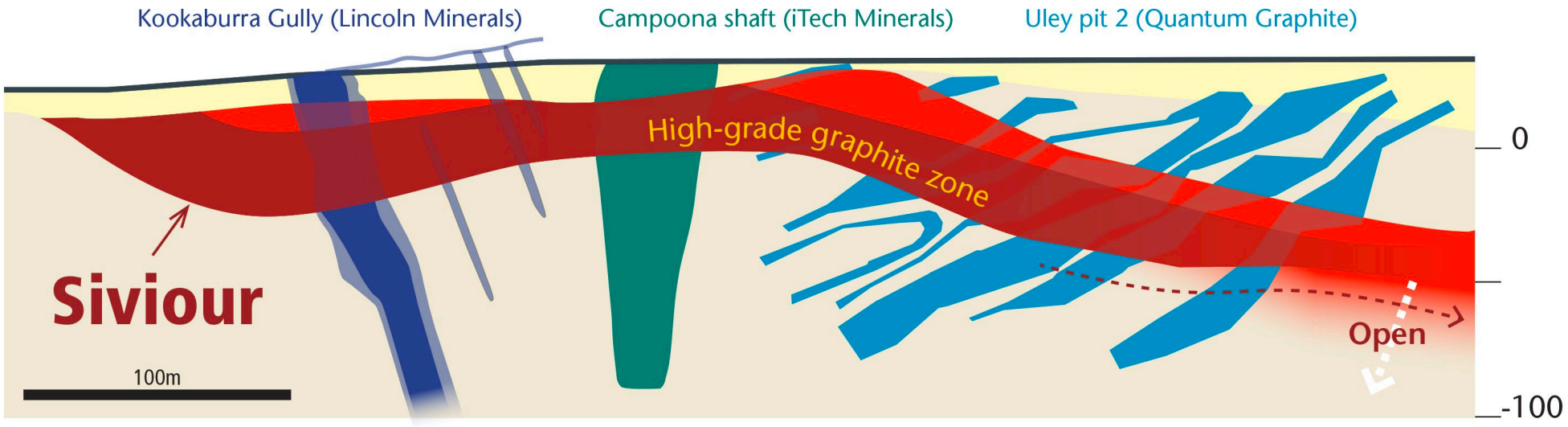
# Siviour has a Unique Near-Surface, Flat-lying Orientation

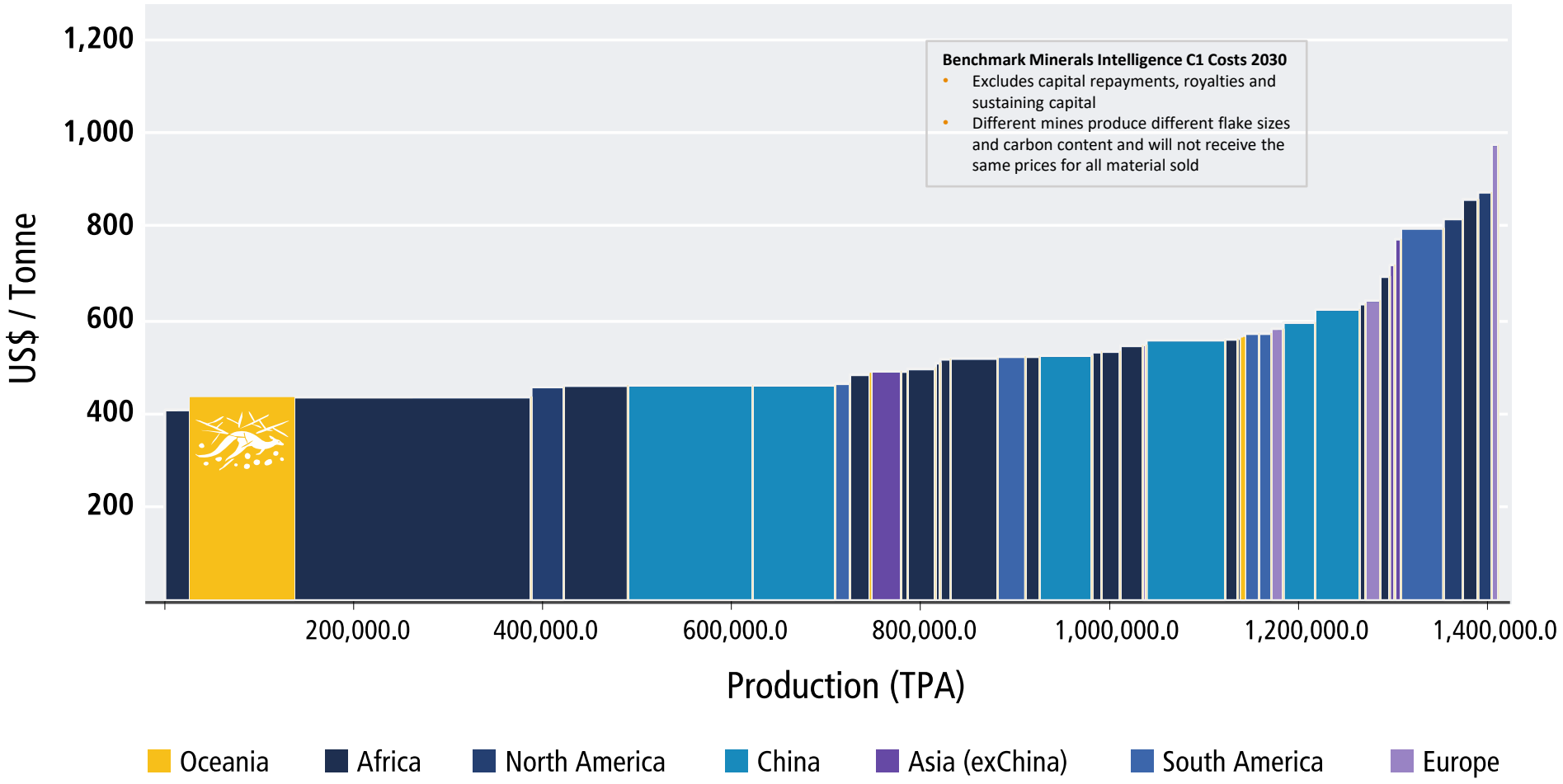
**The deposit is flat, shallow and large, resulting in low-cost mining and consequently low-cost production of Graphite Concentrate.**

## Cross-section of Siviour Deposit (shown in red) compared to other Australian graphite deposits




**Sources:**
Lincoln Minerals ASX release 16 April 2024
Quantum Graphite ASX release 15 July 2019
iTech Minerals ASX release 19 October 2021

# Siviour is Amongst the World's Lowest Cost of Production Sources




*Source: Benchmark Mineral Intelligence*

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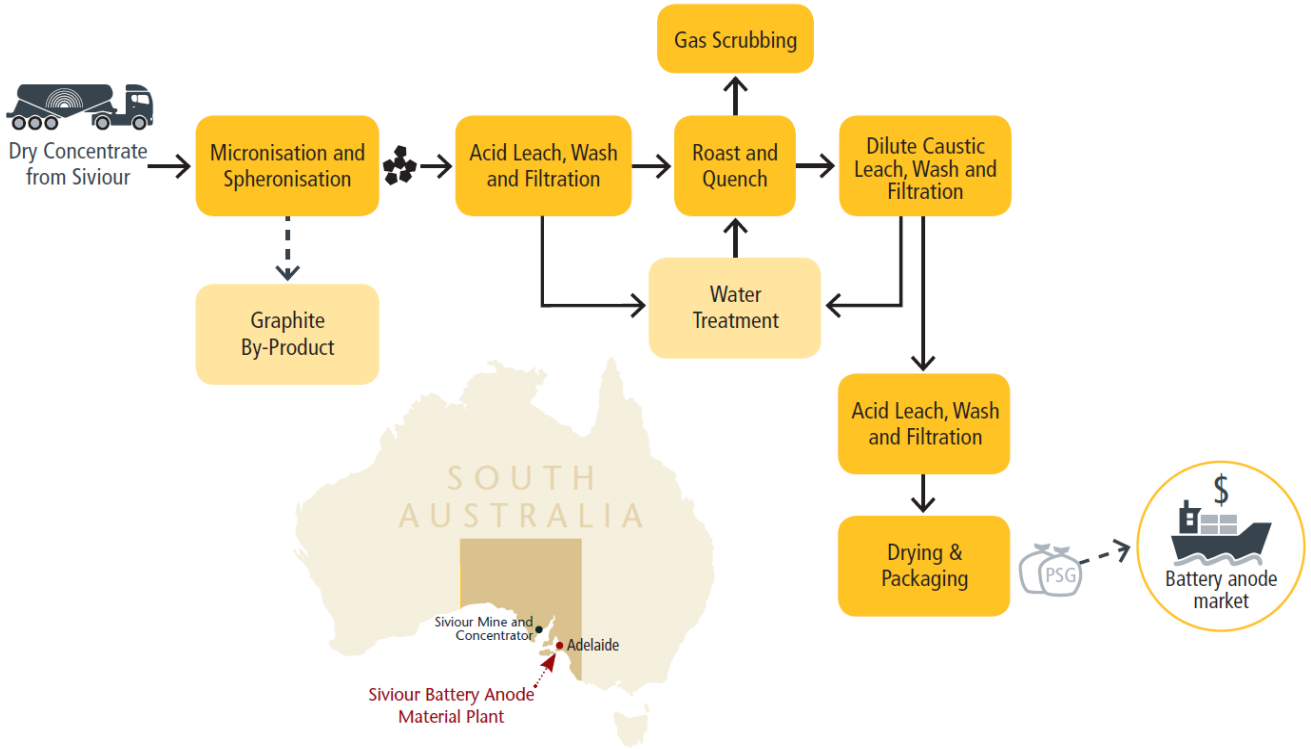
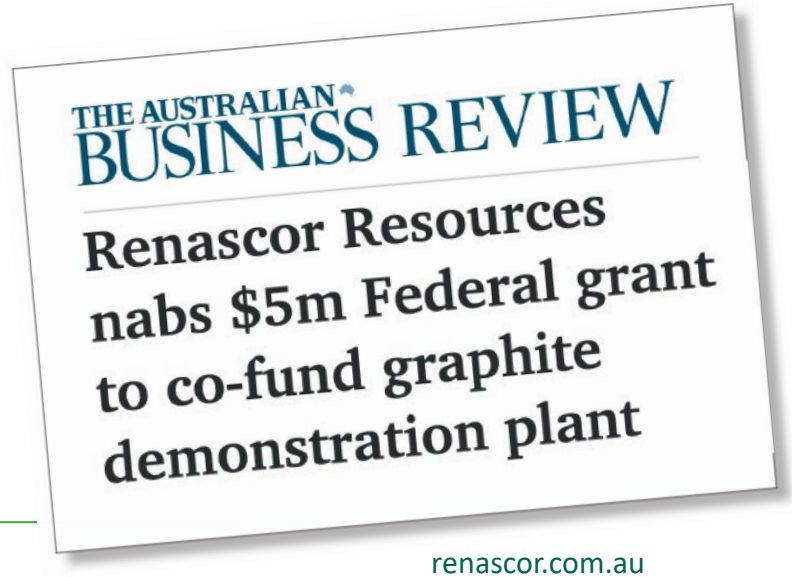
# Production of Purified Spherical Graphite

**Purified Spherical Graphite to be produced from Siviour Graphite Concentrates.**



*Conceptual illustration of the planned Siviour BAM manufacturing facility at Bolivar, South Australia*



THE AUSTRALIAN BUSINESS REVIEW

**Renascor Resources nabs $5m Federal grant to co-fund graphite demonstration plant**

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*The study results confirm Renascor's BAM Project as a low-cost, high value supplier of 100% Australian-made graphite for the growing lithium-ion battery anode sector*

100% Australian-made

# Battery Anode Material Study Results

**Low graphite concentrate feedstock costs drives Renascor's low PSG production costs, high margins and strong cash generation.**

## Snapshot of the Siviour BAM Project

| | | |
|---|---|---|
| **A$1.5B**<br>$NPV_{10}$ after tax | **26%**<br>IRR after tax | **A$363m**<br>Annual average EBITDA |
| **40 years**<br>Life of Mine | **US$405/t**<br>ave. graphite concentrates OPEX years 1-10 | **US$1782/t**<br>PSG OPEX years 1-10 |
| **A$215m**<br>Initial upstream investment | **75ktpa**<br>Initial graphite concentrates production | **4½ years**<br>(payback) |

*1. BAM Study results were released to the ASX on 8 August 2023*

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*Independent life cycle assessment confirms Siviour's potential as a cleaner source of Purified Spherical Graphite*

100% Australian-made

# Strong Environment, Social and Governance (ESG) credentials

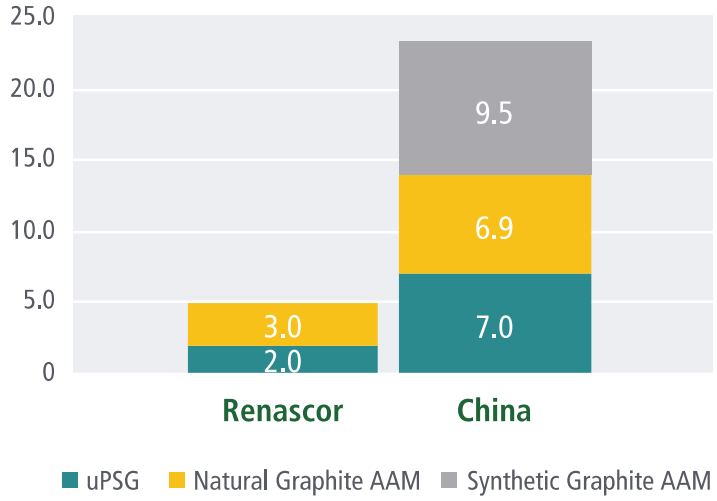
**Renascor's purification process is eco-friendly.**

- Renascor has developed a purification process that avoids the use of Hydrofluoric ("HF") acid, offering a cleaner HF-free alternative to prevailing process used in China.

**Locating the BAM facility in South Australia drives strong ESG credentials.**

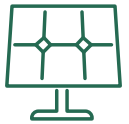
- By leveraging South Australia's largely renewable electricity grid, the BAM facility can achieve a $CO_2e$ footprint under 1/3rd that from existing sources in China (for natural flake graphite processed into uPSG).

## $Co_2e$ / Tonne* (Scope 1, 2 & 3)




** See ASX release dated 1 November 2023.*

HF-free



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# Offtake Strategy: Aligned with Global Leading Battery Anode Manufacturers

**Total non-binding commitments for up to full Stage 1 PSG capacity of 50ktpa**

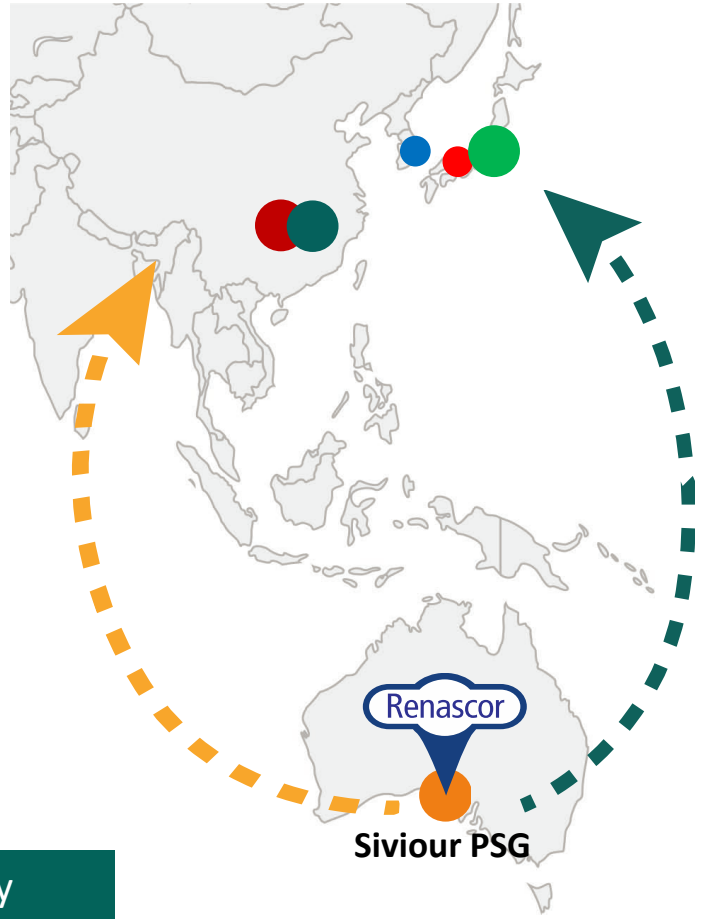
**POSCO (South Korea):** largest ex-China anode producer. Non-binding offtake MOU for up to 30ktpa for 10 years with scope for strategic cooperation, including the potential for equity investment.

**Mitsubishi Chemical (Japan):** largest Japanese chemical company. Non-binding offtake MOU, with a framework for strategic cooperation.

**Hanwa (Japan):** leading trading company in battery sector. Offtake MOU for up to 10ktpa for 10 years.

**Mingunag (China):** Anode manufacturer. Offtake MOU for up to 10ktpa for 10 years.

**Zeto (China):** Anode manufacturer. Offtake MOU for up to 10ktpa for 10 years.




Negotiation on binding offtake terms, including long-term pricing, currently underway

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# A$185 Million Conditional Loan Approval from Australian Government

**The Australian Government has conditionally approved a A$185 million loan facility to support the development of the Siviour Graphite Concentrate Operation in South Australia.[1]**

- This loan is approved under the Australian Government's **$4 billion Critical Minerals Facility**, which was established to assist the development of Australian critical minerals projects and to secure the vital supplies of resources needed to drive the new energy economy and support the resources jobs of the future.
- The Siviour BAM Project has been **granted Major Project Status by the Federal Government**, in recognition of its potential to contribute to Australia's Critical Mineral Strategy and Resource Technology, and Critical Mineral Processing National Manufacturing Priority Roadmap.
- Renascor aims to become **a world leader in the sustainable production of 100% an Australian-made advanced graphite product** for use in the Li-ion batteries.

export finance australia

Managing Director David Christensen representing Renascor at the *United States – Australia Critical Minerals Roundtable held on 24 October 2023*

AUS TRADE
AUSTRALIAN TRADE COMMISSION

*1. ASX 17 April 2024, "$185million Loan Facility from the Australian Government approved to fund development of the Siviour Graphite Concentrate Operation"*

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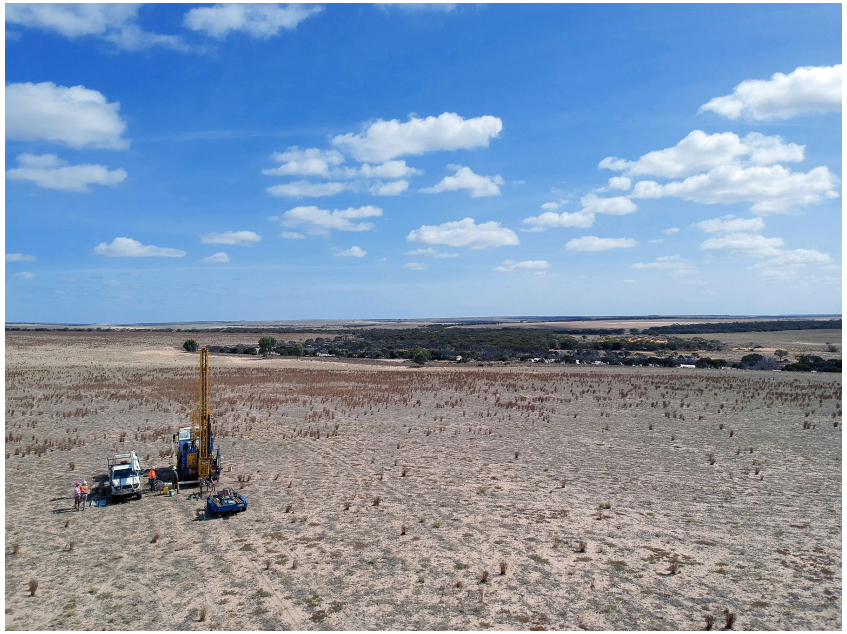
# Siviour is Development Ready

**All major developmental technical works are complete and regulatory approvals are in place to permit construction of our phase one graphite concentrate operation.**

- ✓ DFS assessment completed with Battery Anode Material Study.
- ✓ FEED / competitive ECI tender process, initial on-site works and long lead time procurement currently underway.
- ✓ Key regulatory approvals (PEPR[1], Mineral Lease[2]) from South Australian Department of Energy and Mining for graphite concentrate operation.

PEPR allows processing capacity of up to 1.65 million tonnes per annum, which would permit Renascor to produce up to 150,000 tonnes of Graphite Concentrates per year.



1. *ASX 28 November 2022, "PEPR Approval for Siviour Graphite Mine and Concentrator"*
2. *ASX 8 April 2019, "Mineral Lease Granted for Sivour"*

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# Renascor Resources: Multiple Near-Term Value Drivers

- Complete land acquisition
- Complete Upstream FEED (including EPC contract)
- Finalise Binding Offtake
- Secure Financing / strategic partnering arrangements
- Upstream Final Investment Decision

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*Our goal is to become one of,*
*if not the largest,*
*global suppliers of PSG to the*
*lithium-ion battery sector*

100% Australian-made

Powering Clean Energy®

RENASCOR RESOURCES

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# Forward Looking Statements

This Presentation may include statements that could be deemed "forward-looking" statements. Although Renascor Resources Limited (the "Company") believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and actual results or developments may differ materially from those expected in the forward-looking statements or may not take place at all. Any forward-looking statements included in this document involve subjective judgment and analysis and are subject to uncertainties, risks and contingencies, many of which are outside the control of, and may be unknown to, the Company. In particular, they speak only as of the date of this document, they assume the success of the Company's strategies and they are subject to significant regulatory, business, competitive and economic uncertainties and risks. Actual future events may vary materially from the forward looking statements and the assumptions on which the forward looking statements are based. Recipients of this document ("Recipients") are cautioned not to place undue reliance on such forward-looking statements.

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# Competent Persons Statement

The results reported herein, insofar as they relate to exploration activities and exploration results, are based on information provided to and reviewed by Mr G.W. McConachy (Fellow of the Australasian Institute of Mining and Metallurgy) who is a director of the Company. Mr McConachy has sufficient experience relevant to the style of mineralisation and type of deposits being considered to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition). Mr McConachy consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

# Bibliography

Renascor confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements noted below and referenced in this presentation and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Renascor confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

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# Appendix 1

## 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 60ktpa Bankable Feasibility Study | 21 June 2017 | https://announcements.asx.com.au/asxpdf/20170621/pdf/43k2d21wvk2sv1.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/05qn89bfqrhwx8.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 | 27 April 2022 | https://www.nextsourcematerials.com/wp-content/uploads/2023/01/2022_04_27_molo_phase_2_pea_technical_report_dated_april_27__2022__final.pdf |
| 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 |

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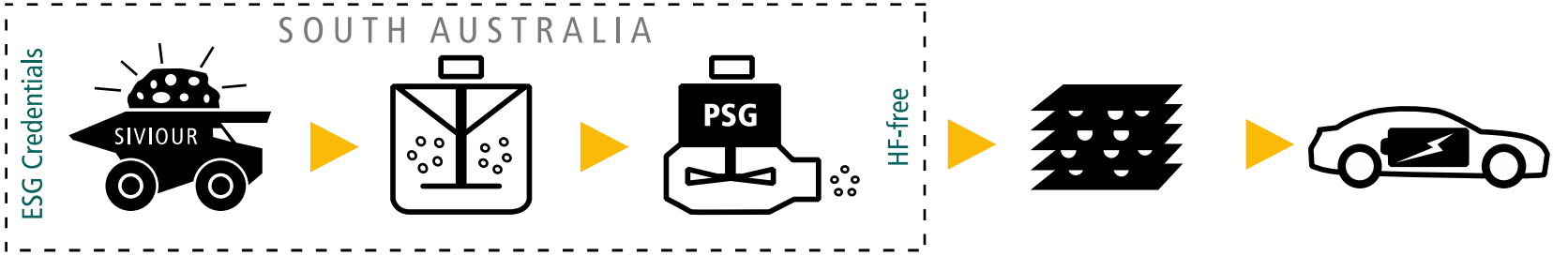
# Appendix 2: Renascor's Battery Anode Material Project in the Graphite Supply Chain

**Renascor is developing a vertically integrated operation within South Australia** consisting of a mine, concentrator and downstream manufacturing facility **to produce Purified Spherical Graphite (PSG)** via eco-friendly chemical purification for **sale to anode makers** and use in Li-ion batteries for **Electric Vehicles.**

Renascor's Integrated Battery Anode Material Manufacturing Operation




| Graphite mining | Flake Graphite Concentrates | Purified Spherical Graphite (PSG) | Anodes | Li-ion Battery |
|---|---|---|---|---|
| Graphite-containing ore is mined, crushed and processed through flotation to 94-96% total carbon (TC) | | Graphite Concentrates are micronised, spheronised and purified to >99.95% TC | China, Japan, South Korea Emerging production in Europe and USA<br>PSG coated and treated to create anode material | China, South Korea, Japan, Europe, USA<br>Anode and other components are assembled into Li-ion cells |

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