# Kookaburra Graphite Project Delivers 99.97% TGC purity – confirming suitability for battery anodes

### **Highlights:**

- Material from Kookaburra Graphite Project (KGP) attains battery-grade graphite purity levels (greater or equal to 99.95% TGC) across multiple test runs at two independent laboratories in Australia,
- Graphite purity levels confirm suitability for lithium-ion battery anode applications.
- **Purification achieved without the use of hydrofluoric acid (HF)** supporting a development path with significant safety and environmental benefits.
- Kookaburra Graphite demonstrates strong downstream potential for both micronised and spheronised products; key feedstocks for battery anode manufacturing.
- Test results confirm Lincoln's Battery Anode Material (BAM) Scoping Study directly supports the objectives of Australia's National Battery Strategy.
- **Ongoing test work now focused on value-added product pathways**, including the potential establishment of a Battery Anode Material (BAM) processing facility in South Australia.

**Lincoln Minerals Limited (LML** or **Company')** (ASX:LML) is pleased to report exceptional initial results from test work related to the Company's Battery Anode Material (BAM) Scoping Study, confirming that graphite purified from its Kookaburra Graphite Project (KGP) in South Australia meets the stringent specifications required for use in lithium-ion battery (LiB) anodes.

Multiple test runs at two independent laboratories in Australia achieved purity levels above 99.95% total graphitic carbon (TGC) – the industry benchmark for battery grade anode material. These outstanding results validate the quality of Kookaburra Graphite and provide a strong foundation for the ongoing BAM Scoping Study, which is focused on optimising the purification process, assessing key product characteristics, and exploring value-added opportunities to support a potential downstream processing facility in South Australia.

Lincoln Minerals CEO Jonathon Trewartha commented:

"We are extremely pleased with these outstanding initial results, particularly the achievement of batterygrade purity levels without the use of hydrofluoric acid. This not only reduces the cost and complexity

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typically associated with anode material production but also increases major safety and environmental benefits – aligning strongly with modern ESG and clean-technology standards.

These findings represent a major step forward in our Battery Anode Material Scoping Study and provide a strong technical foundation for the next phase of optimisation and product qualification. Importantly, they also build on the compelling economics outlined in our recently released Pre-Feasibility Study for the Kookaburra Graphite Project, which was based solely on direct concentrate sales. The ability to produce high-value anode material and other specialty graphite products has the potential to significantly enhance project returns and position Lincoln as a key player in the global graphite and battery materials supply chain."

#### **Overview of Purification Test Work**

Graphite concentrate samples with an average grade of 94.92% TGC were sent to Classifier Milling Systems (CMS) in Ontario, Canada for micronising and classification. Composite samples with a d80 of 35 microns were subsequently prepared and distributed to two independent laboratories for advanced analysis.

One set of the composite samples was sent to the Commonwealth Scientific and Industrial Research Organisation (CSIRO, Australia's National Science Agency) for detailed impurity analysis and purification test work. Thirteen test runs were completed using a variety of lixiviants (both acidic and alkaline) at varying concentrations of 1 to 10 molar, and thermal ranges up to 300 °C. Purities up to **99.97 % C** were achieved which exceed the minimum purity level of 99.95 % TGC required for use in LiB anodes. See Table 1 (Result A).

#### Hydrofluoric Acid-Free Processing: A Key Strategic Advantage

Crucially, all purification results were achieved **without the use of hydrofluoric acid (HF)** — a major differentiator that positions Kookaburra Graphite as a safer, cleaner, and more cost-effective option for downstream processing in Australia. This HF-free approach offers several significant advantages over conventional purification methods:

#### 1. Enhanced Safety Profile

HF is an extremely toxic and corrosive substance. Its exclusion from the purification process significantly reduces occupational health and safety risks, simplifying operational protocols and reducing the need for specialised handling procedures.

#### 2. Environmental Benefits

HF presents serious environmental risks if released into air, water, or soil. By eliminating its use, Lincoln's purification process lowers environmental liability and strengthens the Company's ESG credentials – a key focus for stakeholders and regulators alike.

#### 3. Lower Capital and Operating Costs

HF-based processes require expensive, corrosion-resistant infrastructure, including lined tanks and acidhandling systems. Avoiding HF eliminates the need for these, reducing both upfront capital expenditure and ongoing operating costs.

#### 4. Permitting and Regulatory Pathways

As a Schedule 7 dangerous poison in Australia, HF use triggers strict regulatory controls and community sensitivity. HF-free processing is more likely to gain quicker regulatory approvals and achieve greater social licence to operate.

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#### 5. Alignment with Sustainable Industry Trends

The global battery and critical minerals industries are increasingly focused on clean and responsible processing. Lincoln's HF-free approach aligns strongly with these evolving expectations and positions the Company as a forward-thinking supplier of low-impact anode material.

Impurities	Detection limit	Feedstock	LM 12
Cl <sup>-</sup> (%)	0.002	0.037	0.01
SiO <sub>2</sub> (%)	0.004	1.201	0.005
Al <sub>2</sub> O <sub>3</sub> (%)	0.004	0.814	< DL
Fe <sub>2</sub> O <sub>3</sub> (%)	0.001	0.572	0.004
TiO <sub>2</sub> (%)	0.003	0.019	< DL
SO3 (%)	0.002	0.029	< DL
K <sub>2</sub> O (%)	0.001	0.053	0.004
MgO (%)	0.003	0.357	< DL
Br <sup>-</sup> (%)	0.001	< DL	< DL
CaO (%)	0.007	0.991	< DL
CeO <sub>2</sub> (%)	0.006	0.072	< DL
CuO (%)	0.001	0.003	< DL
MnO <sub>2</sub> (%)	0.002	0.004	< DL
Na <sub>2</sub> O (%)	0.004	0.036	< DL
NiO (%)	0.001	< DL	0.005
P <sub>2</sub> O <sub>5</sub> (%)	0.002	0.005	< DL
SrO (%)	0.001	0.002	< DL
V <sub>2</sub> O <sub>5</sub> (%)	0.004	0.004	< DL
ZnO (%)	0.001	0.001	< DL
Nom. Purity (%)		95.8	99.97

#### Table 1: CSIRO XRF Analysis of Feedstock and Run 12 Variant

#### Strong Results Achieved for Purified Spheronised Graphite (PSG)

A second set of composite samples was sent to Battery Limits in Western Australia for spheronisation, following initial micronisation. The resulting micronised and spheronised samples were then sent to Independent Metallurgical Operations (IMO) in Western Australia for further impurity analysis and purification testing.

IMO conducted seven test runs using a combination of **low-risk hydrochloric acid (HCI) pre-leaching** followed by **roasting at temperatures up to 500°C**. Once again, the process delivered purity levels exceeding the LiB

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anode specifications of 99.95% TGC, with peak results reaching 99.96% TGC – all without the use of hydrofluoric acid (HF) (see Table 2 for full analytical results).

**Purified Spheronised Graphite (PSG)** is the critical feedstock for LiB anode production and attracts **premium pricing** in global markets due to its highly specific physical and chemical characteristics. The ability to produce PSG from Kookaburra Graphite further enhances the project's commercial appeal and downstream potential (see *Figure 1 for Scanning Electron Microscope (SEM) imagery of product upgrade stages*).

		DETECTION	Test 6 Final
ANALYTE	UNITS	LIMIT	Product-
		LIIVIII	Average
0*	ppm	_	53.9
Na	ppm	0.01	61.38
Si		0.01	22.7
K	ppm	0.01	2.9
Са	ppm	0.01	1.43
P	ppm ppb	100	970
 Li		0.1	858.2
	ppb	1	
S	ppb	100	535
Al	ppb	100	400
B	ppb	0.1	356.8
W	ppb	0.1	175.2
Мо	ppb	0.1	132.2
Au	ppb	0.1	100.8
Fe	ppb	10	70
Cr	ppb	0.1	58.3
Cu	ppb	0.1	51.3
Zn	ppb	0.1	49.4
Mg	ppb	10	25
Sr	ppb	0.1	15.3
Pb	ppb	0.1	12.7
Rb	ppb	0.1	12.7
Ва	ppb	0.1	10.6
I	ppb	0.1	9.9
Ni	ppb	0.1	7
Mn	ppb	1	4
Ce	ppb	0.1	3.3
Pd	ppb	0.1	3.3
Zr	ppb	0.1	2.9
As	ppb	0.1	1.8
La	ppb	0.1	1.4
Nb	ppb	0.1	1
Cd	ppb	0.1	0.7
Nd	ppb	0.1	0.6
Pt	ppb	0.1	0.3

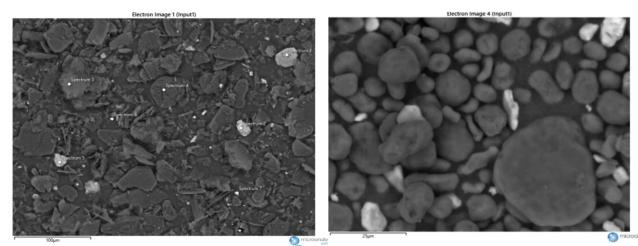
ANALYTE	UNITS	DETECTION LIMIT	Test 6 Final Product- Average
Sn	ppb	0.1	0.3
Be	ppb	0.1	0.3
Co	ppb	0.1	0.3
Y	ppb	0.1	0.3
Ag	ppb	0.1	0.2
Ga	ppb	0.1	0.2
Pr	ppb	0.1	0.2
Cs	ppb	0.1	0.1
Hg	ppb	0.1	0.1
Sm	ppb	0.1	0.1
Bi	ppb	0.1	<0.1
Dy	ppb	0.1	<0.1
Er	ppb	0.1	<0.1
Eu	ppb	0.1	<0.1
Gd	ppb	0.1	<0.1
Ge	ppb	0.1	<0.1
Hf	ppb	0.1	<0.1
Но	ppb	0.1	<0.1
In	ppb	0.1	<0.1
Lu	ppb	0.1	<0.1
Re	ppb	0.1	<0.1
Sb	ppb	0.1	<0.1
Sc	ppb	0.1	<0.1
Se	ppb	0.1	<0.1
Та	ppb	0.1	<0.1
Tb	ppb	0.1	<0.1
Те	ppb	0.1	<0.1
Th	ppb	0.1	<0.1
Ti	ppb	10	<10
Tİ	ppb	0.1	<0.1
Tm	ppb	0.1	<0.1
U	ppb	0.1	<0.1
V	ppb	0.1	<0.1
Yb	ppb	0.1	<0.1
TGC	%	0.01	99.96

#### Table 2: LabWest ICP Analysis for IMO Run 6

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**Micronised material from KGP** 

Micronised and spheronised material from KGP



#### Next Steps

Lincoln Minerals, together with its technical partners, will continue to advance its Battery Anode Material (BAM) Scoping Study with a strong focus on refining a purification process that entirely **eliminates the use of hydrofluoric acid (HF)**. This HF-free approach is expected to deliver a **safer, cleaner, and lower-cost alternative** to conventional graphite purification processes.

The next phase of test work will involve fresh concentrate trench samples obtained from the Kookaburra Graphite Project (KGP). These will be used to **further optimise the key process steps** - purification, micronisation, and spheronisation - required to produce high-quality, anode-grade Purified Spheronised Graphite (PSG) that meets the **stringent specifications of global lithium-ion battery manufacturers**.

Upcoming testing will also evaluate critical performance metrics such as **Loss on Ignition (LOI)**, **TGC%**, **tap density**, **BET surface area**, **particle size distribution**, **and yield**. Future phases will include **incorporation into pouch or coin cells** for long-term **cycle testing**, an essential step toward full downstream qualification.

Beyond PSG, the BAM Scoping Study will also explore pathways to produce **value-added specialty graphite products**, including conductivity and dry lubricants, carbon brushes, polymer additives, powder metallurgy inputs, drilling fluids, alkali battery materials, and foundry applications - unlocking multiple potential revenue streams from the Kookaburra resource.

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### Strong Alignment with Australian Government Initiatives

Eincoln's battery-grade purification results and ongoing downstream development work are strongly aligned with both **national and state-level strategic priorities** for critical minerals and energy transition.

At the Federal Government level, the Company's Battery Anode Material (BAM) Scoping Study directly supports the objectives of **Australia's National Battery Strategy**, which aims to establish a sovereign battery industry through the development of **value-added processing capabilities**, **low-emission supply chains**, and **secure access to ethically sourced critical minerals**. Lincoln's ability to deliver ultra-high purity graphite without the use of hydrofluoric acid (HF) reinforces this vision by offering a **cleaner and safer alternative** to conventional methods - a key differentiator in meeting global ESG standards and facilitating downstream industrial participation.

In South Australia, Lincoln's strategy complements the State Government's focus on **green energy, clean-tech innovation, and critical minerals development**, as outlined in initiatives such as the **South Australian Battery Strategy** and the **Green Iron and Steel Action Plan**. With the Kookaburra Graphite Project (KGP) located on the Eyre Peninsula - one of Australia's premier graphite provinces - Lincoln is well-positioned to contribute to regional economic development, jobs growth, and the emergence of a vertically integrated battery materials supply chain.

The Company intends to continue engaging with government stakeholders to explore opportunities for **collaboration**, **strategic investment**, **and project support** as its downstream vision progresses. These efforts will not only strengthen Lincoln's commercial positioning but also support Australia's ambition to become a **global leader in sustainable battery materials production**.

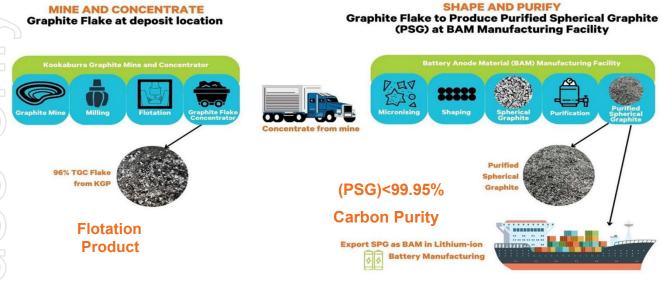
#### Background to Lincoln's BAM Strategy

The KGP is strategically located on South Australia's Eyre Peninsula – widely recognised as Australia's premier graphite province. The project benefits from **near-surface mineralisation and a high-grade concentrate**, making it ideally suited for scalable, low-cost development. When combined with its demonstrated ability to achieve ultra-high purification levels, KGP presents a compelling opportunity to provide **reliable**, **high-quality feedstock** for multiple stages of an integrated battery anode material supply chain (see Figure 2 for a schematic overview.)

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#### Figure 2: Schematic overview of mine-to-battery BAM production

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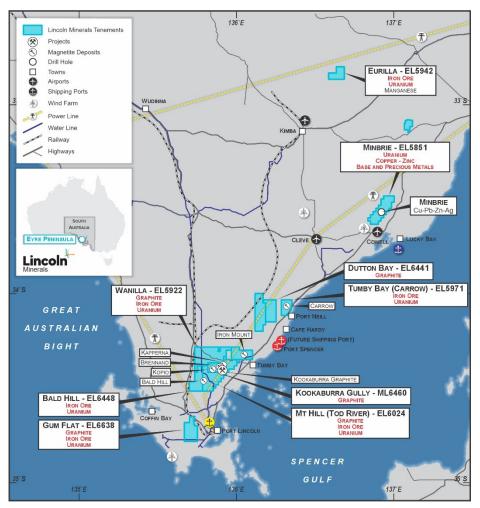
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#### **About Lincoln Minerals**

Lincoln Minerals (ASX: LML) is an Australian exploration and development company focused on advancing critical minerals projects in South Australia's world-class Gawler Craton region. Lincoln's portfolio includes high-value copper, uranium, graphite, and magnetite assets, all strategically positioned to support the global shift towards electrification, decarbonisation, and supply chain security.

The company's key projects include the Minbrie Copper & Base Metals Project, where recent exploration has confirmed a large-scale mineralised system over a 7km strike. Lincoln is also advancing the Kookaburra Graphite Project, a high-grade, at-surface deposit on an existing mining lease, and the Green Iron Magnetite Project, a large-scale magnetite resource positioned to supply SA's emerging green steel industry. The company also holds multiple highly prospective uranium targets across its existing tenement portfolio, located in a highly prospective uranium region.

Lincoln is actively progressing exploration and development across its portfolio while seeking strategic partnerships and alternative funding pathways to accelerate project advancement.



Location of Lincoln Mineral's projects in South Australia

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