ASX Announcement
**By eLodgement**
**29 January 2024**

# Springdale–Collie Integrated Mine to Market Scoping Study

International Graphite Limited has today released key findings from its new **Springdale–Collie Integrated Mine to Market Scoping Study.**

The study positions the Company's planned Springdale mine and Collie downstream processing facilities as a world leading development-stage graphite asset. The mine to market operation would supply graphite products for the lithium-ion battery industry from Western Australia – the world's premier jurisdiction for raw materials.

The study shows a:

- globally competitive cost structure
- multi-decade operating life – ~15% of the existing Springdale Mineral Resource has been scheduled
- robust project economics with significant potential for expansion at both Springdale and Collie.

The Company expects to complete a Definitive Feasibility Study by the end of calendar year 2024.

The **Springdale–Collie Integrated Mine to Market Scoping Study** incorporates a preliminary technical and economic investigation to assess the viability of developing a graphite mining and concentrate production operation at the Springdale Graphite Project on the south coast of Western Australia (**Springdale Scoping Study**).

It is intended that Springdale would supply graphite concentrates to the Company's planned downstream processing facility at Collie, 200km south of Perth, in Western Australia. The Collie operation, known as the **Collie BAM Facility**, would produce battery anode materials (**BAM**) for the lithium-ion battery industry.

An initial scoping study for the Collie BAM Facility was released to the ASX on 23 April 2023 and has now been updated, based on using concentrates produced at Springdale instead of imported graphite feedstock. The results form the basis of the **Springdale–Collie Integrated Mine to Market Scoping Study**.

Key metrics in the study's base case, for the first 15 years of operations, are:

- Springdale concentrator throughput 500,000tpa
- Feed grade average 9.5% Total Graphitic Content (**TGC**)
- Springdale average concentrate production 45,000tpa
- Waste to ore ratio 4.3 to 1
- Springdale capital cost of mine and concentrator A$76M
- Springdale all in sustaining cash operating cost estimate US$485 per tonne of concentrate
- Average Uncoated Spherical Purified Graphite (USPG) production 20.0ktpa
- Average Coated Spherical Purified Graphite production (CSPG) 18.6ktpa
- Capital cost of Collie USPG plant A$124M
- Capital cost of Collie CSPG plant an additional A$217M
- USPG average all in sustaining cash operating cost estimate US$1603 per tonne of product
- CSPG average all in sustaining cash operating cost estimate US$2,699 per tonne of product
- Financials Integrated USPG Project $NPV_{10}$ A$375M; IRR 35.8%
- Financials Integrated CSPG Project $NPV_{10}$ A$603M; IRR 30.5%
- Extensive resource potential for significant project scale up from the base case

IG6 Managing Director and CEO Mr Andrew Worland said the company was confident that Springdale would be a project of global significance for Australia in the critical battery minerals supply chain.

"We now have a clear economic and financial view of the breadth of the Springdale–Collie mine to market strategy. Springdale compares exceptionally well with its industry peers across a range of measures, particularly the forecast mine capital and operating costs."

The latest Springdale Mineral Resource estimate, released in September 2023, provides a compelling argument for expanding future operations beyond the Springdale Scoping Study base case.

"Less than 15% of the current Springdale Mineral Resource estimate has been scheduled and modelled so far and the production plan has yet to be optimised at this early stage of investigation.

"Our immediate focus is to move rapidly through the definitive feasibility phase for Springdale and to accelerate further infill resource and exploration drilling at Mason Bay, one of the newest graphite finds at Springdale, so we can continue expanding and upgrading the current Mineral Resource estimate."

The Company's planned activities have received strong support from state and federal government and the local communities of Hopetoun, Ravensthorpe and Collie.

"Graphite for batteries is fast becoming the centre of geo-political tensions and highly sought after, particularly after the Chinese government's recent decision to restrict the export of its graphite products. China currently supplies more than 80% of the world market.

"This leaves the global battery supply chain highly exposed. Firms across Europe, North America, Korea and Japan have made enormous commitments to build out battery gigafactory capacity and they all rely on a stable, reliable and consistent supply of raw materials, including graphite.

"Operating entirely in Western Australia strengthens the Company's position as a supplier of first choice for global markets."

**This announcement has been authorised for release by the Board of Directors of International Graphite Limited.**

Andrew Worland
Managing Director & CEO

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## Competent Persons Statement / JORC Compliance Statement

This announcement contains references to Mineral Resources Estimates and Exploration Results which have been extracted from previous ASX announcements as referenced. Particular attention is drawn to the ASX release dated 12 September 2023 titled 'Huge Mineral Resource increase at Springdale'. The Company confirms that it is not aware of any new information or data that materially affects the information included in the said announcements, and in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

## General Disclosure and Cautionary Statements

International Graphite Limited releases the key findings of its scoping study that has been undertaken for the purpose of developing a preliminary technical and economic assessment of the potential viability of the development of a graphite mining and concentrate production operation at the Springdale Graphite Project (**Springdale**) located on the south coast of Western Australia (**Springdale Scoping Study**).

Springdale would supply graphite concentrates to a downstream processing facility located in Collie, 200km south of Perth in Western Australia that would produce battery anode materials for the lithium-ion battery industry (**Collie BAM Facility**).

In April 2023 International Graphite released a scoping study that considered the preliminary technical and economic assessment of the potential viability of the construction and operation of the Collie BAM Facility that treated third party concentrates (**Collie BAM Facility Scoping Study**).

The completion of the Springdale Scoping Study allows production from Springdale to replace the third party concentrates used in the Collie BAM Facility Scoping Study with concentrates sourced from Springdale.

The Collie BAM Facilities has been designed around processing a 95% graphite concentrate. The ore source does not materially change the flowsheet assumptions at this level of graphite concentrate. There are no adverse impurities in the Springdale concentrate relative to imported concentrate that would require tailoring of the facilities accordingly. As the scope of the facilities (i.e. processing capacity) have not changed and the quantities of finished products being sold have not changed, there are accordingly no changes to labour, power consumption, maintenance, consumables, and general overheads and haulage. The Company has also reviewed general construction market conditions and conditions on hand in the Collie region since Q1 2023 and determined there are no indicators suggesting project implementation costs have materially changed in this period.

With the exception of foreign currency exchange rate, pricing from the Collie BAM Facility Scoping Study remains valid at the date of this report and there have been no changes to plant design or flowsheet assumptions. This ASX release should be read in conjunction with the ASX release dated 26 April 2023 for further particulars regarding the processing flowsheet for the Collie BAM Facility.

The substitution of graphite concentrate supply source lowers the forecast operating costs for the Collie BAM Facility. Capital cost inputs to the Collie BAM Facility Scoping Study remain unchanged.

The combination of the Springdale Scoping Study and the Collie BAM Facility Scoping Study is referred to herein as the Springdale–Collie Integrated Mine to Market Scoping Study.

The outcomes, production target and forecast financial information referred to in this release are based on low level technical and economic assessments that are insufficient to support estimation of Ore Reserves.

The Springdale–Collie Integrated Mine to Market Scoping Study is presented in Australian dollars to an accuracy level of +/- 35% with a 90% level of confidence.

While each of the JORC modifying factors was considered and applied, there is no certainty of eventual conversion to Ore Reserves or that the production target itself will be realised. Further exploration and evaluation work and appropriate studies are required before International Graphite will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

The production targets stated in this announcement are based on International Graphite's current expectations of future results or events and should not be relied upon by investors when making investment decisions. Further evaluation work and studies are required to establish sufficient confidence that production targets will be met. Accordingly, given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Integrated Mine to Market Scoping Study. Given that the results are subject to the qualifications above (including assumptions as to accuracy and confidence tolerances) any results reported in this release should be considered as approximates and subject to variances having regard for the assumptions referred to in this release.

In the first ten years of the Springdale Scoping Study production plan approximately 86% of the Mineral Resources schedule for extraction are currently classified as Indicated and 14% as Inferred. A valuation table is provided showing the financial viability of the project over this operating period. Of the Mineral Resources scheduled for extraction over 15 years in the Springdale Scoping Study production plan approximately 72% are currently classified as Indicated, including 81% in the first 13 years of the period modelled.

International Graphite confirms that the financial viability of Springdale and Collie BAM Facility is not dependent on the inclusion of Inferred Resources in the production schedule.

The Company has concluded that it has reasonable grounds for disclosing production targets which include a proportion of Inferred material. However, there is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that production targets themselves will be realised.

The Mineral Resources underpinning the production targets in the Springdale Scoping Study have been prepared by a Competent Person in accordance with the requirements of the JORC Code (2012). For full details of the Mineral Resources estimate, please refer to International Graphite's ASX release dated 12th September 2023, released to ASX under the title "Huge Mineral Resource increase at Springdale".

The Mineral Resource estimate was prepared by independent consultancies OMNI GeoX Pty Ltd and Trepanier Pty Ltd and Mr. Peter Langworthy of OMNI GeoX Pty Ltd and Mr Lauritz Barnes of Trepanier are named as Competent Persons. International Graphite confirms that it is not aware of any new information or data that materially affects the information included in that release and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not been changed.

To achieve the potential mine development outcomes indicated in the Springdale – Collie Integrated Mine to Market Scoping Study, funding in the order of A$76 million will likely be required to develop Springdale and between A$124 million and $341 million (depending upon the finished product to be produced) will be required to develop the Collie BAM Facility.

Investors should note that there is no certainty that the Company will be able to raise funding when needed, however the Company has concluded it has a reasonable basis for providing the forward-looking statements included in this announcement and believes that it has a "reasonable basis" to expect it will be able to fund the development of Springdale and the Collie BAM Facility.

It is also possible that such funding may only be available on terms which are dilutive to, or otherwise affect the value of, International Graphite's existing shares. It is also possible that International Graphite could pursue other 'value realization' strategies such as sale, partial sale or joint venture of the project. If it does, this could materially reduce International Graphite's proportionate ownership of the assets. International Graphite has concluded that it has a reasonable basis for providing these forward-looking statements and the forecast financial information included in this release. This includes a reasonable basis to expect that it will be able to fund the development of Springdale and the Collie BAM Facility upon successful delivery of key development milestones as and when required.

The detailed reasons for these conclusions are outlined throughout this ASX release. While International Graphite considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Integrated Mine to Market Scoping Study will be achieved.

## Forward Looking Statements

Some of the statements contained in this document are forward looking statements. Forward looking statements include but are not limited to, statements concerning estimates of tonnages, expected costs, statements relating to the continued advancement of International Graphite's projects and other statements which are not historical facts. When used in this document, and on other published information of International Graphite, the words such as "aim", "could", "estimate", "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. Although International Graphite believes that its expectations reflected in the forward-looking statements are reasonable, such statements involve risk and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements. Various factors could cause actual results to differ from these forward-looking statements include the potential that International Graphite's projects may experience technical, geological, metallurgical and mechanical problems, changes in product prices and other risks not anticipated by International Graphite. International Graphite believes that it has a reasonable basis for making the forward-looking statements in this announcement, including with respect to any mining of mineralised material, modifying factors, production targets and operating cost estimates. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of International Graphite. Actual values, results or events may be materially different to those expressed or implied. Given these uncertainties, investors are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this document speak only at the date of issue. Subject to any continuing obligations under applicable law, International Graphite does not undertake any obligation to update or revise any information or any of the forward-looking statements in this Study or any changes in events, conditions, or circumstances on which any such forward looking statement is based. For further information refer to Appendix A.

Pursuant to 'ASX interim guidance: Reporting scoping studies', International Graphite provides the following commentary:

| Guidance | Response |
|---|---|
| 1. Include all information required by the Listing Rules. | The Board of Directors has completed the Annexure: ASX Scoping Study Disclosure Checklist.<br>The Company believes the disclosures contained in this release include all information required including by Listing Rule 5.16 and 5.17 |
| 2. Reasonable Grounds for Forward Looking Statements | Refer Appendix A. |
| 3. Disclose all material assumptions | The Company believes the disclosures contained in this release include all material assumptions |
| 4. Include the required cautionary statements | A detailed statement is set out above |
| 5. Ensure the report is a fair and balance summary | This release outlines the results, material assumptions, risks and sensitivities identified in the Springdale – Collie Integrated Mine to Market Scoping Study. |
| 6. Do not report the results of a scoping study in a headline | Headlines have not reported results. |
| 7. Reporting the results as a realistic range | All results in this release are based on inputs and assumptions. They are to be regarded as approximate results and any change to an input or assumption will likely impact the result. |
| 8. Do not report results as a value 'per share' | No such information has been used. |
| 9. Do not use non-JORC terminology | No such terminology has been used. |

# Springdale-Collie Integrated Mine to Market Scoping Study
# Project Evaluation Summary

**Table 1 – Summary of processing plant attributes**

| | Unit of measure | Result |
|---|---|---|
| Springdale mining and ore processing capacity | Ktpa | 500 |
| Springdale capital cost estimate | A$M | 75.7 |
| Collie BAM Facility capital cost estimate | | |
| USPG | A$M | 124.0 |
| CSPG | A$M | 341.5 |
| Notional average annual primary production | | |
| USPG | Ktpa | 20.0 |
| CSPG | Ktpa | 18.6 |
| Annualised micronised by-product production | Ktpa | 17.0 |

**Table 2 – Key findings for Uncoated Spheroidised Purified Graphite and Coated Spheroidised Purified Graphite**

| | | Uncoated Spheroidised Purified Graphite | | Coated Spheroidised Purified Graphite | |
|---|---|---|---|---|---|
| | Unit of measure | First 10 years of operations | 15 years of operations | First 10 years of operations | 15 years of operations |
| Total production | Kt | 187.7 | **284.3** | 165.2 | **255.1** |
| Pre-tax / pre finance $NPV_{10}$ approximately | A$'M | 270.0 | **375.3** | 399.2 | **602.8** |
| IRR approximately | % | 34.4 | **35.8** | 28.4 | **30.5** |
| Average annual revenues approximately | A$M | 150.9 | **149.2** | 235.2 | **238.1** |
| Average annual EBITDA approximately | A$M | 79.6 | **78.0** | 140.0 | **141.7** |
| Springdale–Collie average all in sustaining cash operating cost – gross | US$/tonne product | 2,468 | **2,443** | 3,744 | **3,687** |
| Springdale–Collie average all in sustaining cash operating cost net of by-product credits | US$/tonne product | 1,497 | **1,603** | 2,563 | **2,699** |

**Table 3 – Summary of key findings from the Springdale Scoping Study**

| | Unit of measure | First 10 Years of Operations | 15 years of Operations |
|---|---|---|---|
| Indicated Mineral Resource mined and processed as a % of total Mineral Resource processed | % | 86 | 72 |
| Total tonnes mined | Mt | 35.4 | 53.2 |
| Ore mined (inc. low grade stockpiled) | Mt | 6.5 | 10.1 |
| Waste mined | Mt | 28.9 | 43.1 |
| Strip ratio | Waste: Ore | 4.4 | 4.3 |
| Total ore tonnes milled | Mt | 5.0 | 7.5 |
| Ore stockpiles available for processing | Mt | 1.5 | 2.6 |
| Average head grade processed | TGC % | 10.0 | 9.5 |
| Average annual concentrate production | Ktpa | 47.4 | 45.1 |
| All in sustaining cash operating cost estimate – delivered to Collie[1] | US$/tonne concentrate/ A$/tonne concentrate | 460.8 / 709.0 | 484.6 / 745.6 |

[1] All in sustaining cash operating cost estimate includes the cost of stockpiled ore which remains available for processing and generating sales revenue at the end of the modelled period.

# Springdale-Collie Integrated Mine to Market Scoping Study
# Detailed Summary and Material Assumptions

## Overview

The **Springdale Scoping Study** is a preliminary technical and economic assessment of the potential viability of developing a graphite mining and concentrate production operation at the Company's Springdale Graphite Project (**Springdale**), on the south coast of Western Australia.

It is intended that Springdale would supply graphite concentrates to the Company's proposed downstream processing facility at Collie, 200km south of Perth in Western Australia. The Collie operation, known as the **Collie BAM Facility**, would produce battery anode materials (**BAM**) for the lithium-ion battery industry.

In April 2023, the Company released the **Collie BAM Facility Scoping Study** that considered the potential viability of constructing and operating the Collie BAM Facility to treat graphite concentrates sourced from third parties.

The completion of the Springdale Scoping Study now allows the original Collie BAM Facility Scoping Study to be updated by replacing the third party concentrates with concentrates produced at Springdale.

The Collie BAM Facility has been designed around processing a 95% graphite concentrate. At this level of graphite concentrate, the ore source does not materially change the flowsheet assumptions. There are no adverse impurities in the Springdale concentrate relative to imported concentrate that would require tailoring of the facilities. As the scope of the facilities (i.e. processing capacity) has not changed, and the quantities of finished products being sold have not changed, there are no changes required to labour, power consumption, maintenance, consumables, general overheads and haulage costs. The Company has also reviewed general construction market conditions, including conditions in the Collie region since Q1 2023 and determined there are no indicators to suggest project implementation costs have materially changed in this period.

The substitution of graphite concentrate supply source lowers the forecast operating costs for the Collie BAM Facility. Capital cost inputs to the Collie BAM Facility Scoping Study remain unchanged. With the exception of foreign currency exchange rate, pricing from the Collie BAM Facility Scoping Study remains valid at the date of this report and there have been no changes to plant design or flowsheet assumptions.

This announcement should be read in conjunction with the ASX announcement dated 26 April 2023 which contains further details regarding the processing flowsheet for the Collie BAM Facility.

The combination of the Springdale Scoping Study and Collie BAM Facility Scoping Study is referred to as the **Springdale–Collie Integrated Mine to Market Scoping Study**.

## Springdale Graphite Project Scoping Study

The Springdale Scoping Study was completed to an Association for the Advancement of Engineering (AACE) Class 5 standard with a nominal level of accuracy of ±35%. The following information highlights material assumptions used in the Springdale Scoping Study. The Springdale Scoping Study was prepared with the assistance of a highly experienced and reputable group of independent consultants, mostly based in Australia, comprising:

**Table 4 – Independent consultants**

| Party | Expertise |
|---|---|
| Battery Limits Pty Ltd | Study management, mining, process design, engineering and cost estimation |
| ALS Laboratories | Metallurgy |
| OmniGeox Pty Ltd | Exploration and geology |
| Trepanier Pty Ltd | Mineral Resource estimation |
| On the Crest Mine Planning | Mining studies |
| Preston Consulting | Permitting |
| Lone Star Tech Minerals | Marketing |

The aim of the Springdale Scoping Study was to define an initial operation that could be modelled for at least 15 years; process mostly Indicated Mineral Resources in this period of operations at an average ore mining and processing rate of 500Ktpa and an average head grade of ~10% TGC; to achieve average annual production of ~40Ktpa of graphite concentrate grading 95%.

Of the Mineral Resources scheduled for extraction over 15 years in the Springdale Scoping Study production plan approximately 72% are currently classified as Indicated and 28% as Inferred over the period modelled.

**Approximately 7.5M tonnes of ore, grading on average 9.5% TGC, will be mined and processed and a further 2.6Mt of ore, grading on average 4.1% TGC, will be stockpiled and available for processing.**

In the first ten years of the Springdale Scoping Study production plan approximately 86% of the Mineral Resources schedule for extraction are currently classified as Indicated and 14% as Inferred. A valuation table is provided (Table 2 above) showing the financial viability of the project over this operating period.

**Approximately 5.0M tonnes of ore, grading on average 10.0% TGC, will be mined and processed and a further 1.5Mt of ore, grading on average 4.1% TGC, will be stockpiled and available for processing.**

## Project Location

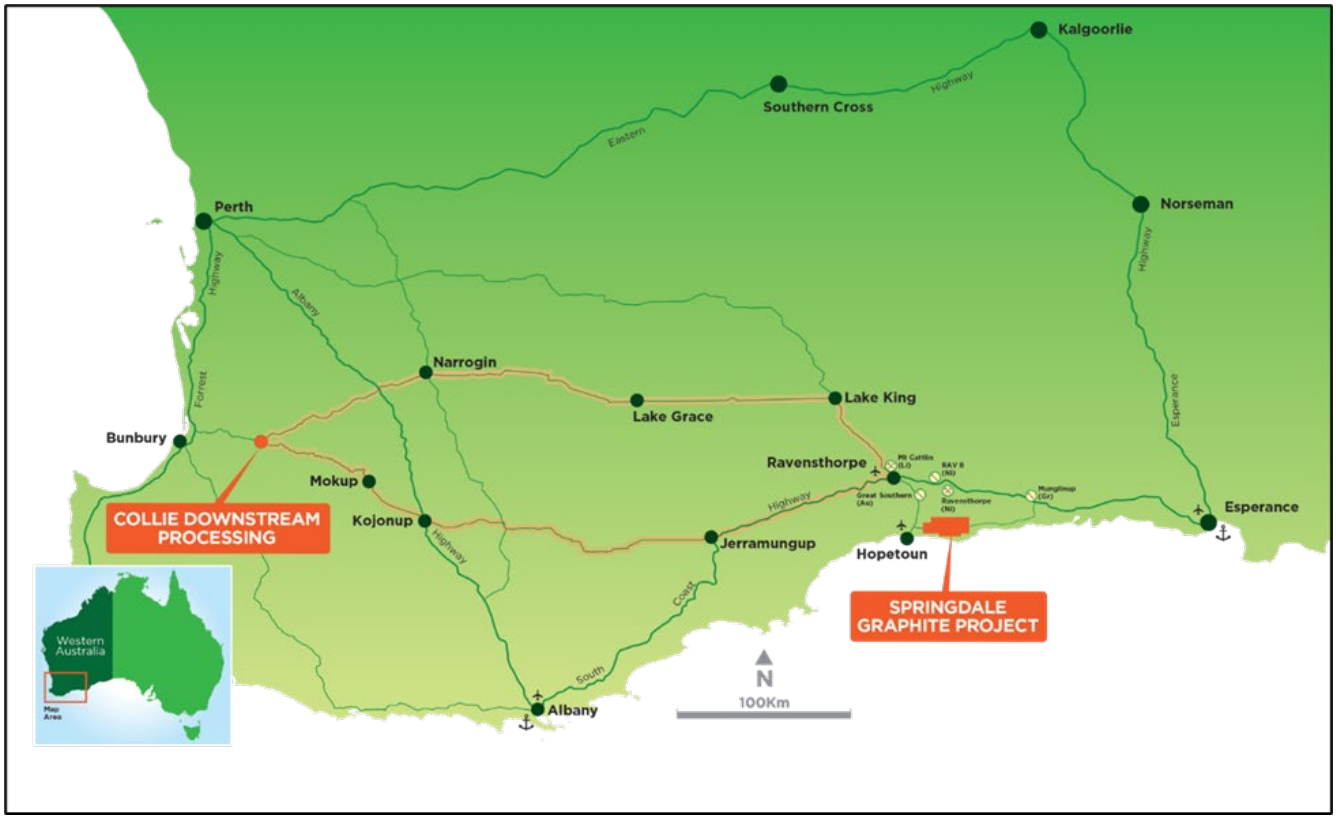



**Figure 1 – International Graphite Projects**

Springdale is located in the Shire of Ravensthorpe, approximately 25km from the town of Hopetoun, on the south coast of Western Australia.

The region is noted for the co-existence of mining and agriculture. The Ravensthorpe Nickel Mine is located 24km north of Springdale and the Mt Caitlin Lithium Mine neighbours the town of Ravensthorpe.

Access to Springdale is via sealed roads to within 10km of the project site and then via all-weather accessible gravel roads, including Springdale Road. The Ravensthorpe Airport, located 15km from site, is a 1,600 metre airfield servicing the region with direct commercial flights to and from Perth.

## Tenements

The Springdale Graphite Project consists of two granted exploration licenses, a prospecting license and an exploration license under application. All tenements are in good standing. The tenements are located on farming land much of which has been cleared. Mining agreements will be required with local landowners to enable establishment of mining and processing operations.

## Geology and Mineral Resources

On 12 September 2023, International Graphite published a JORC 2012 compliant Mineral Resource estimate for the Springdale Graphite Project, prepared by independent consultancies OMNIGeoX Pty Ltd and Trepanier Pty Ltd.

This Mineral Resource estimate was compiled from 44 diamond drill holes, 229 RC / AC holes for 30,107 metres at an average depth of 69 metres per hole.

The estimate of Indicated and Inferred Mineral Resources is shown in Tables 5 and 6 below. Table 7 details the new September 2023 Mineral Resource by oxidation profile. All figures presented in Tables 6-9 are rounded to one decimal place.

There has been no change to any of the information pertinent to the Mineral Resource estimate and JORC Tables 1, 2 and 3, in the ASX release dated 12 September 2023, remain valid.

The Mineral Resource estimate has been applied to the Springdale Scoping Study.

**Table 5 – Springdale JORC 2012 Mineral Resource estimate (using 2% TGC cut-off)**

| Classification | Springdale Graphite Project – September 2023 | | |
|---|---|---|---|
| | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) |
| Indicated | 11.5 | 7.5 | 0.9 |
| Inferred | 37.8 | 6.1 | 2.3 |
| **Total** | **49.3** | **6.5** | **3.2** |

**Table 6 – Springdale JORC 2012 Mineral Resource estimate (using 5% TGC cut-off)**

| Classification | Springdale Graphite Project – September 2023 | | |
|---|---|---|---|
| | Tonnes (Mt) | Graphite (TGC%) | Tonnes (Mt) |
| Indicated | 7.9 | 9.3 | 0.7 |
| Inferred | 20.1 | 8.5 | 1.7 |
| **Total** | **28.0** | **8.7** | **2.4** |

**Table 7 – Springdale JORC 2012 Mineral Resource by oxidation (using 2% TGC cut-off)**

| Oxidation Profile | Classification | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) |
|---|---|---|---|---|
| **Oxide** | Indicated | 3.6 | 6.9 | 0.3 |
| | Inferred | 5.4 | 6.1 | 0.3 |
| | **Total** | **9.0** | **6.4** | **0.6** |
| **Transition** | Indicated | 2.4 | 8.0 | 0.2 |
| | Inferred | 7.0 | 6.9 | 0.5 |
| | **Total** | **9.4** | **7.2** | **0.7** |
| **Fresh** | Indicated | 5.5 | 7.7 | 0.4 |
| | Inferred | 25.3 | 5.9 | 1.5 |
| | **Total** | **30.8** | **6.2** | **1.9** |
| **Combined** | **Indicated** | **11.5** | **7.5** | **0.9** |
| | **Inferred** | **37.7** | **6.1** | **2.3** |
| | **Total** | **49.3** | **6.5** | **3.2** |

**Table 8 – Springdale JORC 2012 Mineral Resource (using 2% TGC cut-off)**

| | Springdale Main | | | Mason Bay | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) |
| Indicated | 8.8 | 7.6 | 0.7 | 2.7 | 7.1 | 0.2 | 11.5 | 7.5 | 0.9 |
| Inferred | 36.2 | 6.1 | 2.2 | 1.5 | 6.0 | 0.1 | 37.7 | 6.1 | 2.3 |
| **Total** | **45.0** | **6.4** | **2.9** | **4.3** | **6.7** | **0.3** | **49.3** | **6.5** | **3.2** |

**Table 9 – Springdale JORC 2012 Mineral Resource (using 5% TGC cut-off)**

| | Springdale Main | | | Mason Bay | | | Total | | |
|---|---|---|---|---|---|---|---|---|---|
| | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) | Tonnes (Mt) | Graphite (TGC%) | Contained Graphite (Mt) |
| Indicated | 5.9 | 9.6 | 0.6 | 2.0 | 8.3 | 0.2 | 7.9 | 9.3 | 0.7 |
| Inferred | 19.0 | 8.6 | 1.6 | 1.1 | 6.9 | 0.1 | 20.1 | 8.5 | 1.7 |
| **Total** | **24.9** | **8.8** | **2.2** | **3.1** | **7.8** | **0.3** | **28.0** | **8.7** | **2.4** |

## Mining

Mining will be undertaken by conventional open cut processes using mining contractors supervised by Company management. Much of the Mineral Resource being mined is in the oxide (weathered) and transitional sections meaning the material should be amenable to free dig with limited drill and blast.

Mining would take place on day shift only, seven days per week, to generate 500,000tpa of ore for processing. Conventional excavators, haul trucks and ancillary equipment would be used, none of which require long lead times.

A preliminary optimisation was undertaken on Indicated and Inferred Mineral Resources, with Whittle and Datamine software, using the Mineral Resource models, economic inputs and associated parameters for a 0.5Mtpa targeting a nominal 40Ktpa of graphite concentrate production.

The mining studies produced optimisation inputs and results, life of mine schedule (**LOMS**) and production targets.

**Figure** 2 below shows the proportion of Indicated and Inferred Mineral Resource ore in the plant feed and Figure 3 shows LOMS head grade and graphite concentrate production.

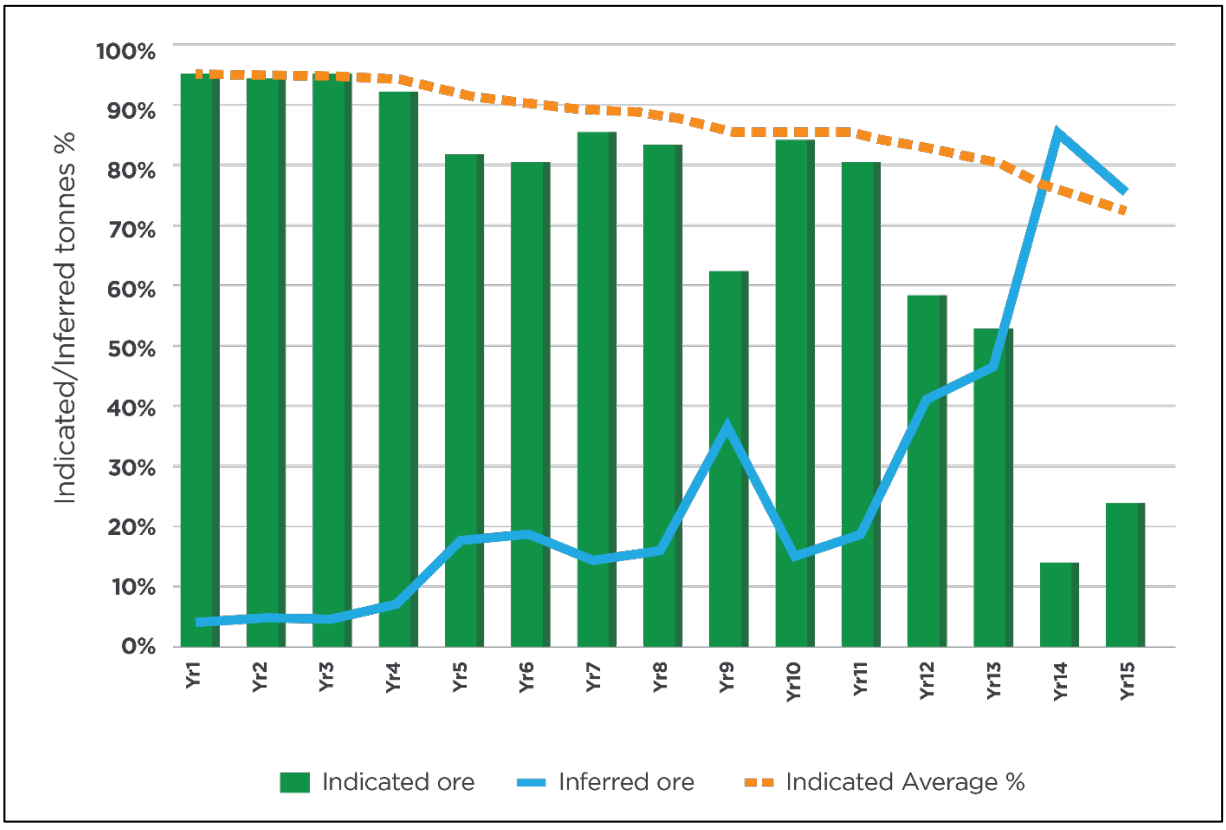



**Figure 2 – Proportion of Indicated and inferred ore in plant feed**

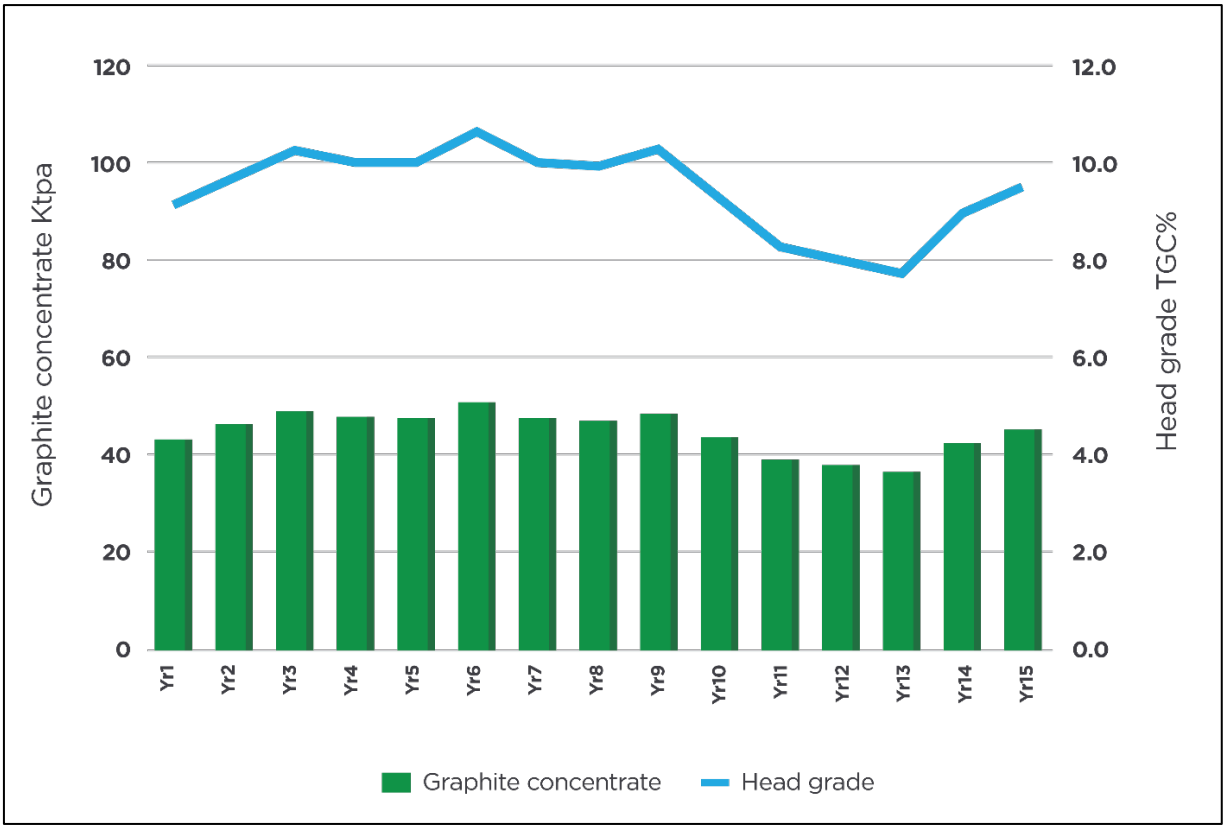



**Figure 3 – LOM schedule head grade and concentrate production**

## Metallurgy

The Springdale process flowsheet is based on a conventional graphite flotation flowsheet based on metallurgical testwork previously undertaken by Comet Resources Limited[2] and recent results announced by International Graphite[3].

In addition, a bulk flotation program, using RC chips from the 2022-23 Springdale drilling campaign, have formed the basis for bulk pilot scale metallurgical testwork that has been completed by ALS Metallurgy in Perth. Approximately 1.5 tonnes of bulk samples, from both the existing Springdale Mineral Resource and new discoveries at Springdale Central and Mason Bay, were collated and processed through ALS's pilot concentrate production facilities. Approximately 120kg of graphite concentrate was generated and will be used to progress the feasibility study for Springdale and downstream processing trials at Collie.

Further variability and bulk flotation programs are in progress to validate process flowsheet and to generate concentrate samples for additional downstream testwork.

[2] ASX 14th April 2021, 21st August 2020, 15th July 2020
[3] ASX 21st February 2023

## Plant Design and Infrastructure

The proposed Springdale process flowsheet is shown in Figure 4 and comprises:

- Primary crushing
- Primary milling
- Rougher flotation
- Flotation tailings thickening and pumped to a tailings storage facility (TSF)
- Multiple stages of cleaner flotation with inter-stage grinding
- Concentrate filtration drying and despatch

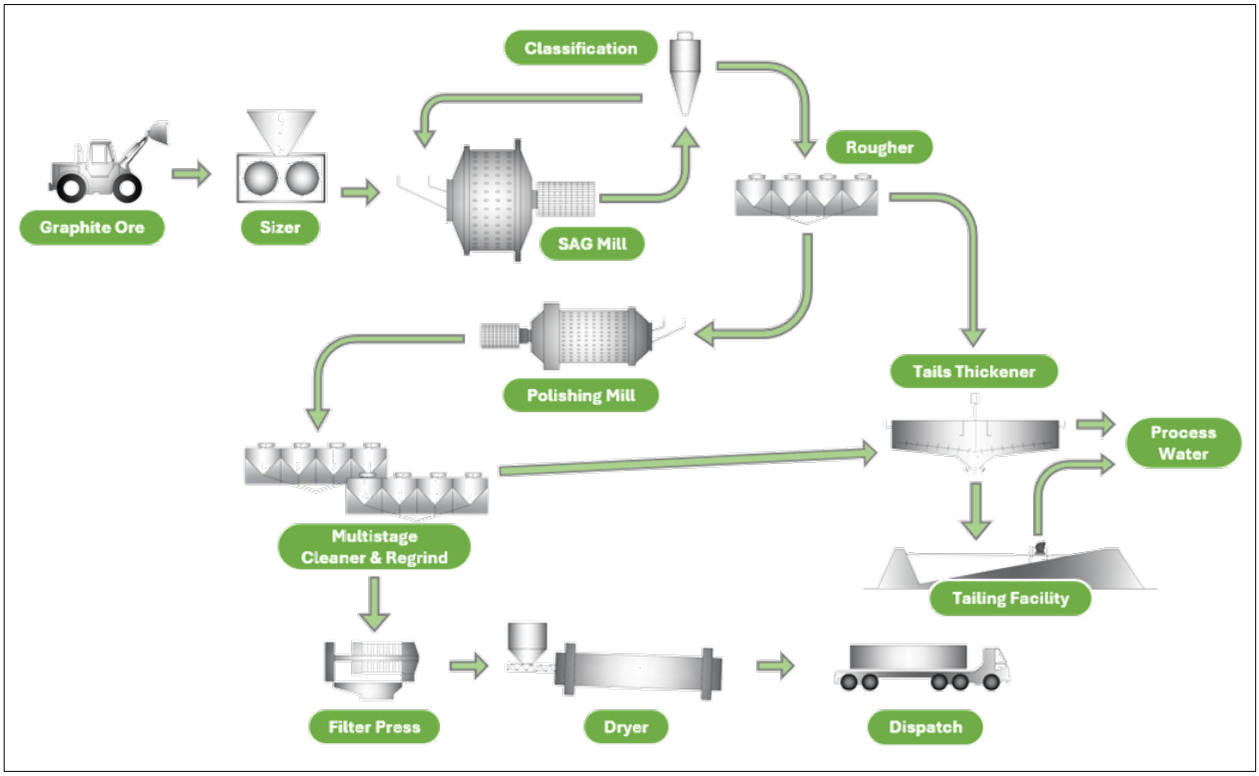



**Figure 4 – Springdale General Process Flowsheet**

The plant and infrastructure associated with the Springdale Scoping Study comprise the following:

- Process plant and ancillary equipment such as power station, office, laboratory and workshop
- TSF
- Mine, stockpiles and waste dumps
- Water supply bore field and pipe routes
- Access roads to and within the plant and mine site

The power station proposed in the study is based on diesel generator sets (gensets/solar hybrid) built and operated by an independent power provider.

Water requirements for the process plant are estimated at 0.8m3 per tonne of mill feed resulting in a total make-up water required for the operation of 0.4-0.5GL per year. It has been assumed that adequate groundwater will be available within a 2km radius of the process plant to operate an effective borefield. Exploration drilling campaigns having encountered significant water at relatively shallow depths.

Buildings within the plant, administration and infrastructure areas will be demountable/portable office type. Large plant buildings will be provided as dome structures and shipping containers including:

- Processing maintenance workshop
- Maintenance and consumables warehouse.

Up to three road trains per day will transport graphite concentrates approximately 450km by road to Collie for downstream processing. The south coast of Western Australia and the road links to Collie, Fremantle and Perth, service the movement of millions of tonnes of agricultural and mining products each year. The movement of goods, services and labour to support the Springdale operations will not have any material negative impact on communities.

There is no requirement for an airstrip as the Ravensthorpe airstrip provides commercial flights. Accommodation for mine employees and service providers is assumed to be available in Hopetoun and Ravensthorpe.

### Permitting and Approvals

The Company is working with a leading environmental consultancy to prepare an environmental approvals program for Springdale. Work has commenced to assess noise and dust emissions, clearing, groundwater and surface water conditions, solids and waste characterisation and heritage and cultural values. Baseline data will continue to be collected through the first half of 2024 to support applications to Government for environmental and mining approvals. The Company believes it will be able to implement mining operations at Springdale that minimise environmental impacts. In addition to environmental approvals, the Company is working towards a mining and works approval, and the granting of mining leases, with the relevant state government authorities, land and traditional owners.

### Operating Cost Estimation

Operating costs have been estimated using current mining, reagent, consumables and labour costs, equipment list power estimates and benchmark data, and reflect the cost of transporting graphite concentrates to Collie for downstream processing. The operating cost estimate has a base date of Q4 2023.

**Table 10 – Operating Cost Breakdown**

| Item | A$ per tonne of concentrate | A$ per tonne of ore processed | Proportion of total cost % | A$ per tonne of concentrate | A$ per tonne of ore processed | Proportion of total cost % |
|---|---|---|---|---|---|---|
| | First 10 years of operations | | | 15 years of operations | | |
| Mining | 370 | 35 | 52 | 395 | 36 | 53 |
| Processing | 248 | 23 | 35 | 258 | 23 | 35 |
| G&A | 38 | 4 | 5 | 40 | 4 | 5 |
| Haulage | 53 | 5 | 7 | 53 | 5 | 7 |
| Total | 709 | 67 | 100 | 746 | 68 | 100 |

### Capital Cost Estimation

Capital operating costs have been estimated by engineering and metallurgical consultants BatteryLimits to an AACE Class 5 standard with an accuracy of ±35%. The capital cost estimate is based on a high-level conceptual process flowsheet, process design criteria and mechanical equipment list. It includes vendor equipment pricing, industry estimating factors, inhouse databases information and additional project benchmark data. The capital cost estimate has a base date of Q4 2023 and includes an average contingency of 30%.

**Table 11 – Capital Cost Breakdown**

| Capital Cost Breakdown | A$M |
|---|---|
| Process plant and infrastructure | 26.3 |
| TSF | 3.0 |
| Site services, establishment and roads | 2.4 |
| **Total Direct Costs** | **31.7** |
| Engineering, procurement and construction management (EPCM) | 7.9 |
| Construction overhead | 4.7 |
| Spares | 3.2 |
| Owners' costs | 3.5 |
| Mine pre-strip | 9.8 |
| **Total Indirect Costs** | **29.0** |
| Contingency | 15.1 |
| **Total** | **75.7** |

## Collie BAM Facility Scoping Study

In its ASX announcement dated 26 April 2023, the Company released the results of the Collie BAM Facility Scoping Study. The planned flowsheet involves graphite micronising, spheroidising and non-HF chemical purification, to produce USPG, then carbon coating to produce CSPG.

The plant is designed in modules and as two parallel lines enabling the project to be implemented in stages. The processing attributes of the Collie BAM Facilities are shown in Table 1 above. USPG product could be initially produced, with coating facilities added to produce CSPG. Concentrates from Springdale would be processed at the Collie BAM Facility.

## Springdale–Collie Integrated Mine to Market Scoping Study
## Financial Model and Markets

The financial model applied to the Springdale–Collie Integrated Mine to Market Scoping Study matches the LOMS developed for Springdale over the first 15 years of operation. It includes sustaining capital allowance with customary maintenance for facilities of this kind. The financial forecasts are measured from the commencement of construction and assume all facilities are brought online in parallel.

Net present values and internal rates of return quoted are based on pre-tax, pre-finance forecast cashflows and a pre-tax discount rate of 10% has been applied.

The Company has applied a fixed price of US$4,500 per tonne for USPG and US$8,500 per tonne of CSPG based on management research, industry publications and forecasts from market participants.

Recent price decks published by global bank show yearly forecasts through 2030 with a long term forecast for CSPG and USPG that supports the Company's application of fixed pricing for the level of study.

**Table 12 – Product Price Outlook**

| Product | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | Long Term |
|---|---|---|---|---|---|---|---|---|---|
| USPG US$ per tonne | $3,720 | $4,229 | $4,750 | $5,250 | $5,000 | $5,274 | $5,413 | $5,555 | **$4,500** |
| CSPG US$ per tonne | $7,720 | $8,229 | $8,750 | $9,250 | $9,000 | $9,274 | $9,413 | $9,555 | **$8,500** |

Graphite is a critical mineral for global decarbonisation, electric vehicles and energy storage. A typical electric vehicle requires six times more mineral inputs than a conventional vehicle. Lithium, nickel, cobalt, manganese and graphite are crucial to battery performance, longevity and energy density.

The anode of a lithium-ion battery consists of 95% graphite. In one electric vehicle using a 75kwh nickel manganese cobalt (NMC) lithium-ion battery, graphite is the single largest raw material input at 66kg or 32% of the battery weight.

**Graphite supply would need to increase 18 times and 25 times on 2020 levels, by 2030 and 2040 respectively, to meet the 'sustainable development scenario' that achieves Paris Agreement goals[4].**

Leading graphite market research analysts are forecasting significant graphite supply shortfalls with a sizeable number of new mines and expansion of existing mines required to meet this forecast demand. Benchmark Minerals Intelligence forecasts 97 new natural flake graphite mines will be required by 2035 to meet lithium-ion battery demand and foresee battery anode production capacity reaching approximately 11Mtpa by 2030 (up from approximately 1.3Mtpa in 2022).

[4] Source: The Role of Critical Minerals in Clean Energy Transitions, May 2021 – International Energy Association

In addition, independent market reports commissioned by International Graphite have highlighted the growing forecast demand for micronised graphite products from traditional graphite markets, such as lubricants, refractories, friction products and other applications.

The Company believes this outlook supports the sales pricing adopted in the Springdale–Collie Integrated Mine to Market Scoping Study for finished products from the BAM production process and micronised by-products.

To the extent that annual production at Springdale exceeds the processing capacity at the Collie BAM Facility, concentrates from Springdale have been assumed to be sold at arm's length market prices.

A flat AUD:USD exchange rate of A$1.00 = US$0.65 has been applied.

## Sensitivities

The following graphs highlight the sensitivity of the Collie – Springdale Integrated Mine to Market Scoping Study NPV to changes in major inputs and assumptions.

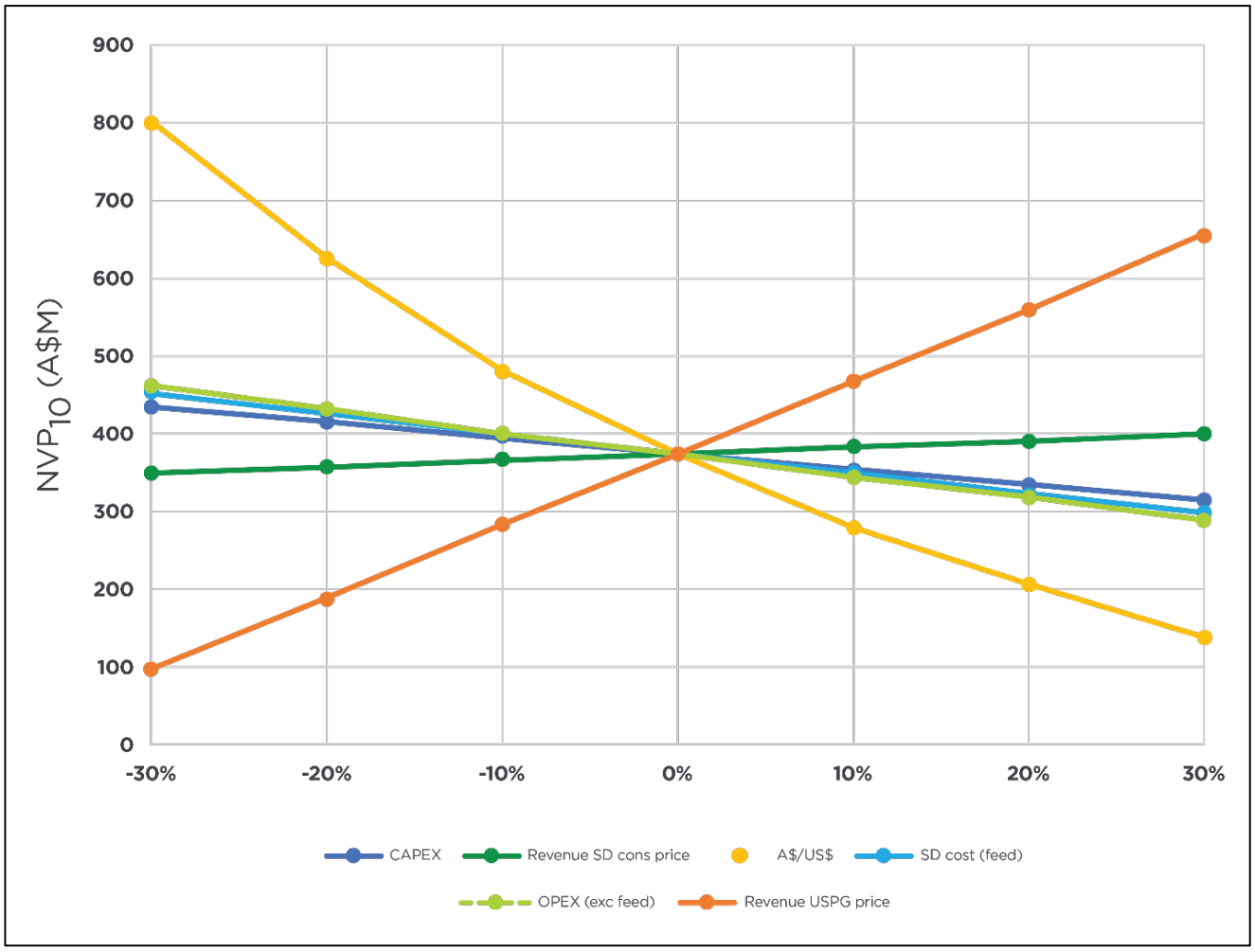



**Figure 5 – Impact of changes to assumptions to UPSG NPV**

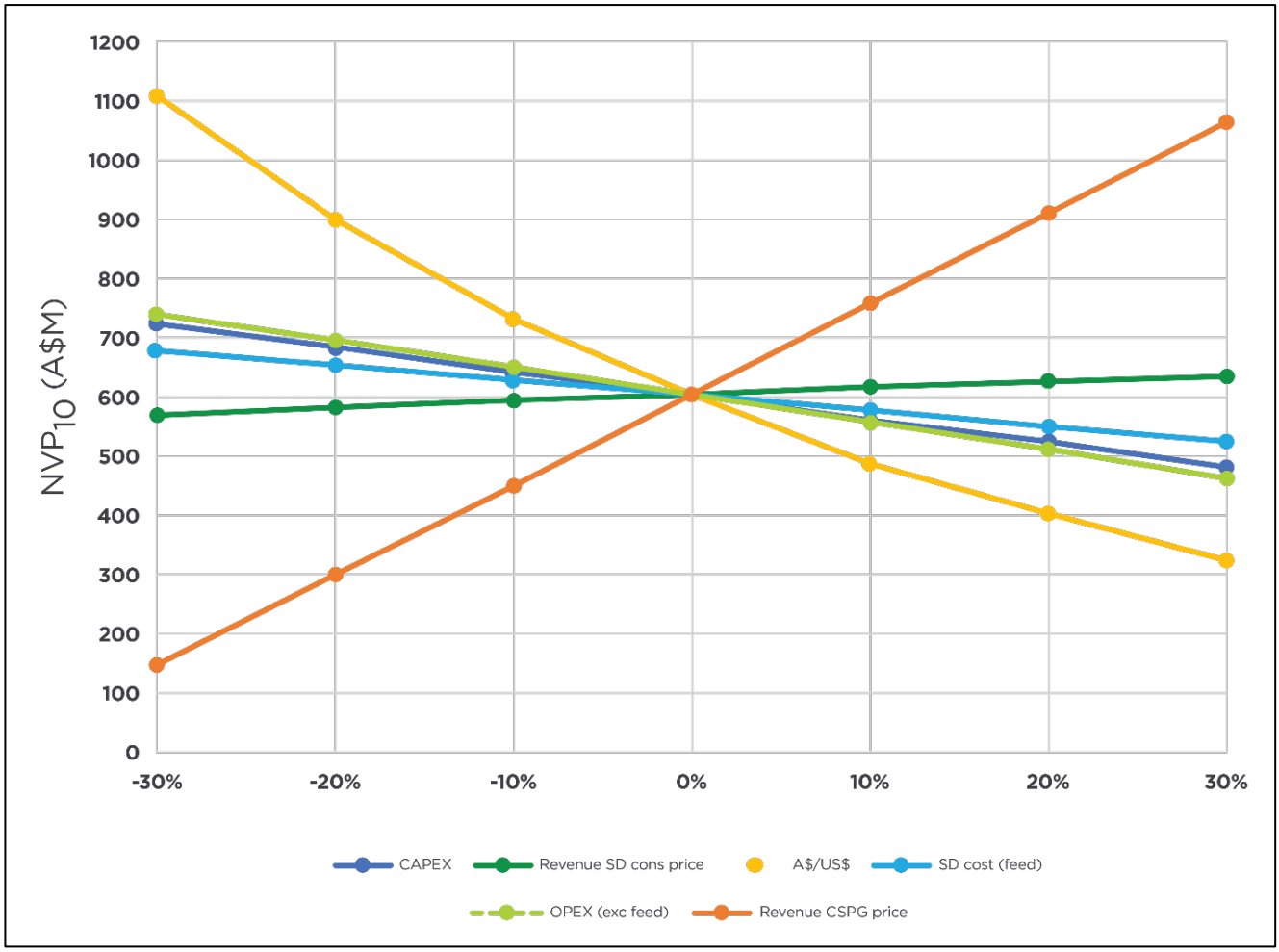



**Figure 6 - Impact of changes to assumptions to CPSG NPV**

## Timetable and Ramp Up

The Company will now move to conclude a definitive feasibility study for Springdale and the Collie BAM Facility with a target completion date of 2024. A final investment decision will be made at the point at which the Company considers it is suitably funded. A 12-month construction period has been assumed for Springdale and the Collie BAM Facility with both operating at nameplate capacity within 12-18 months of commissioning.

## Funding

Reference is made to the Cautionary Statement within this document. The Springdale–Collie Integrated Mine to Market Scoping Study outlines a capital cost of approximately A$76M to build the Springdale mine, with a further A$124M to produce USPG and approximately A$341M to produce CSPG.

During the upcoming feasibility study process, the Company will assess the optimal development and funding path, which may include seeking finance to build and operate the mine and mid-stream processing facilities before adding purification and coating capability, or a combination of these steps.

Based on the strength of the financials outlined in the Integrated Mine to Market Scoping Study, and the forecast demand for graphite, the Company expects to be presented with many funding opportunities from traditional equity and debt markets, industry groups, potential offtakes and government programs that are supporting world decarbonisation initiatives.

The Company has formed the view that there is a reasonable basis to believe that requisite funding for development of Springdale and the Collie Graphite BAM Facility will be available when required, having considered many factors including the following:

- The Company's Board and management team has extensive experience in the development and financing of major projects including processing facilities
- There are no impediments to contracting critical inputs to the facilities as the technical studies evolve and a final investment decision draws closer
- The basis of the Scoping Study will be updated and reclassified as more detailed feasibility studies are undertaken to further de-risk the project and improve its definition
- Sound market fundamentals and forecast pricing
- Strong financial forecasts and a long project life will support debt financing
- Government support for critical minerals, manufacturing initiatives and regional development

## Risk Assessment

The Springdale–Collie Integrated Mine to Market Scoping Study has identified the following risks, which are not exhaustive but are believed to be the more substantive risks at this stage of the project's development, along with mitigation strategies to minimise these risks.

| Risk | Description of risk | Mitigation actions |
|---|---|---|
| Mineral Resources | Risk that the Mineral Resource Estimate is overstated. | Mineral Resource estimate completed by independent consultants in accord with the JORC code, additional infill drilling planned to convert inferred resources to Indicated. |
| Ore Reserves | The risk that Ore Reserves cannot be estimated | The next phase of technical studies for Springdale will include more detailed resource development and mining assessment to determine Ore Reserves. |
| Springdale operational performance | The risk is the Springdale operation does not achieve target production | Mining is expected to be undertaken by an experience mining contractor adopting convention free dig, drill and blast and load and haul. Mining will be undertaken from multiple ore sources which will facilitate blending as required.<br>The process flowsheet is conventional with a predominated' fine' graphite concentrate which will facilitate a simplified flow sheet with a single product.<br>Additional testwork is planned to investigated ore variability and validate performance. |
| Approvals | The risk that the Company is unable to obtain relevant approvals for Springdale . | The Company is working with a leading environmental consultancy to prepare an environmental approvals program for Springdale. Work has commenced to assess noise and dust emissions, clearing, groundwater and surface water conditions, solids and waste characterisation and heritage and cultural values. Baseline data will continue to be collected through the first half of 2024 which will support applications to Government for environmental and mining approvals. The Company believes it will be able to implement mining operations at Springdale that minimises environmental impacts.<br>Upon receipt of environmental approvals the Company would work toward a mining and works approval with the relevant state government authorities and apply for mining leases. |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Risk | Description of risk | Mitigation actions |
|---|---|---|
| | | The site selected for the Collie BAM Facility is cleared land within an industrial zone. Approvals and licensing will focus on plant emissions and operating conditions. The approval process is well understood and relevant experts will be hired to manage the approvals process. |
| Collie plant performance | The risk that the Collie BAM Facility will produce finished products that do not meet market specifications | The process flowsheet has been developed based on testwork and flowsheets selected from similar projects, literature review, information from the Company's technical consortium from operations in China, known concentrate specifications available in the marketplace and knowledge gained from the Company's successful installation and operation of pilot scale micronising and spheroidising facilities at the Collie R&D Facility which treated imported graphite concentrate.<br>The Company has tested micronising and spheroidising equipment and its technology and has consulted with operators of this equipment and has selected this technology for the Scoping Study. The purification flowsheet comprising chemical purification involving chemical leach of impurity elements from the inert graphite matrix was selected based on testwork and review of flowsheets from similar projects.<br>A conventional petroleum pitch-based coating flowsheet has been adopted for the Scoping Study<br>Ongoing development of the process flowsheet for USPG and CSPG will be assisted by undertaking product testing and accreditation processes that are an industry critical precursor to securing offtake commitments. The extent and cost of these processes will be determined as the Company proceeds through feasibility.<br>During the feasibility process the Company will undertake selective competitive bidding processes to ensure it contracts with reputable, experienced, capable equipment providers and technology partners. |
| Sales pricing and foreign currency | Sales prices of finished products do not achieve forecast levels.<br>The majority of the project operating costs will be incurred in AUD whilst revenues will be received in USD. | Sales pricing is the most important driver of financial success of the project. Significant market assessment and negotiation will be undertaken with a range of buyers in order to achieve a diversity of customers, markets and sales terms to achieve the best market prices.<br>The Company will implement a foreign currency hedging program to mitigate risks to future debt servicing and operating costs denominated in AUD. |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Risk | Description of risk | Mitigation actions |
|---|---|---|
| Access to site and services | The risk that the Company will be unable to access land, power, water and labour. | There is abundant water available at Springdale which will require a comprehensive site water management system. Power to site will be provided by generating capacity on site supported by solar. Springdale operations will require less than 40 people to operate. Labour will be sourced from local mining communities supported by administration.<br>The Company has secured land suitable to construct and operate the Collie BAM Facility within an existing industrial zone in Collie with direct access to the electricity grid and water for processing (allowing for both inputs to be contracted) and allow for waste treatment. Employment for the facility in Collie will be drawn from the local trades community. |
| Operating costs | The risk that operating costs are impacted by adverse supply terms or lack of availability to inputs or cost escalation | The key operating costs for the project can be summarised as concentrate feed, labour, power, reagents and consumables. Graphite concentrate feedstock is discussed above. The Company will implement a local content and personnel policy to capture the services of local skilled and unskilled workers. The Collie region is a strong industrial region and is well supported by service providers from a residential base.<br>The Company expects to be able to offer attractive terms and conditions to attract and retain personnel and services. There are no reagents or consumables required by the operation that are scarce. Collie has ready access to those required. Power and water are expected to be contracted to site ad discussed under site location above.<br>Operating costs have been estimated based on process design criteria. Pricing for consumables, reagent and labour costs reflect current market prices and conditions and benchmark data. Power estimates have been generated from the equipment list power loads and forecast power pricing available based on the likely site selection. The operating cost estimate for the Collie BAM Facility has a base date of Q1 2023 with no allowance for escalation. The operating cost estimate for the Springdale Graphite Project has a base date of Q4 2023 with no allowance for escalation. Inflation remains a risk to the project and the industry. |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Risk | Description of risk | Mitigation actions |
|---|---|---|
| Capital costs | The risk that capital costs are impacted by adverse supply terms or lack of availability to inputs or cost escalation | Capital costs for have been estimated by BatteryLimits to an AACE Class 5 level with an accuracy of ± 35%. The capital cost estimate has been based on the high-level conceptual process flowsheet, process design criteria, mechanical equipment list and includes, vendor equipment pricing, industry estimating factors, inhouse databases information and additional project benchmark data. The capital cost estimate for the Collie BAM Facility has a base date of Q1 2023 and includes an average contingency of 30%. Inflation remains a risk to the project and the industry. The capital cost estimate for the Springdale Graphite Project has a base date of Q4 2023 and includes an average contingency of 30%. Inflation remains a risk to the project and the industry.<br>The construction contracts will be tendered to a highly experienced local engineering firm under a typical engineering, procurement, construction and management contract. Major long lead equipment items will be identified during the feasibility stage and contractual arrangements entered into with vendors as appropriate. |
| Timetable | The risk that the Collie Graphite BAM Facility will not be implemented within the forecast construction period. | A 12 month construction and commissioning period has been assumed for Springdale. A 24 month construction and commissioning period has been assumed for the USPG and CSPG facilities.<br>The construction contracts will be tendered to a highly experienced local engineering firm under a typical engineering, procurement, construction and management contract. Major long lead equipment items will be identified during the feasibility stage and contractual arrangements entered into with vendors as appropriate. |
| Funding | The risk that the Company will not be able to finance the capital costs and associated working capital requirements to complete the Collie Graphite BAM Facility. | The Board and management of International Graphite are focused on developing the most economic downstream processing facility possible which will be the focus of the upcoming feasibility studies. There is forecast to be unprecedented demand for battery anode materials. The Company believes the estimates presented in the Scoping Study compare well to the Company's peers and for the reasons outlined under section titled 'Funding' believes the project can be financed and draws the reader's attention to the Cautionary Statement. |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

## Next Steps

The next stage of technical development for Springdale and the Collie BAM Facility includes:

- Completing integrated feasibility studies for the development and operation of the Springdale Graphite Project and Collie BAM Facility
- Ongoing testwork to further develop and optimise the BAM flowsheet
- Reviewing staged BAM development options
- Progressing BAM sales and marketing agreements with customers
- BAM product qualification processes

## Appendix A: Reasonable Basis for Forward Looking Statements

International Graphite has not declared an Ore Reserve for the Springdale Graphite Project. This ASX release has been prepared in compliance with the current JORC Code (2012) and the ASX Listing Rules. All material assumptions on which the Integrated Mine to Market Scoping Study production target and projected financial information are based have been included in this release and disclosed in the table below.

Consideration of Modifying Factors (in the form of Section 4 of the JORC Code (2012))

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| Mineral Resource estimate for conversion to Ore Reserve | • Description of the Mineral Resource estimate used as basis for the conversion to an Ore Reserve.<br>• Clear statement as to whether the Mineral Resources reported additional to, or inclusive of, the Ore Reserve | The Mineral Resource estimate has been summarised in th ASX release and references the announcement dated 12 September 2023 under the title “Huge Mineral Resource increase at Springdale”.<br><br>No Ore Reserve has been declared. |
| Site visits | • Comment on any site visits undertaken by the Compe Person and the outcome of those visits.<br>• If no site visits have been undertaken indicate why thi the case. | Competent Persons have visited site on a regular basis sin April 2022. |
| Study status | • The type and level of study undertaken to enable Min Resources to be converted to Ore Reserves.<br>• The Code requires that a study to at least Pre-Feasib Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have b carried out and will have determined a mine plan that technically achievable and economically viable, and tl material Modifying Factors have been considered. | No Ore Reserve has been declared.<br><br>Studies are at a scoping study level. |
| Cut-off parameters | • The basis of the cut-off grades(s) or quality paramete applied. | Mineral Resources have been estimated using a 2% and 5% TGC cut-off both of which are common amongst peers and represent estimates of potential economic viability of Miner Resources. |
| Mining factors or assumptions | • The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either | No Ore Reserve has been declared. |

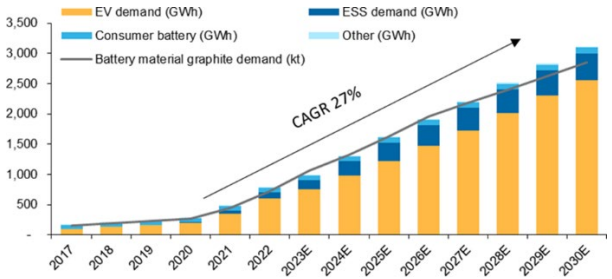

AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | by application of appropriate factors by optimization or by preliminary or detailed design).<br>• The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.<br>• The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.<br>• The major assumptions made and Mineral Resource model used for pit and stope optimization (if appropriate).<br>• The mining dilution factors used.<br>• The mining recovery factors used.<br>• Any minimum mining widths used.<br>• The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.<br>• The infrastructure requirements of the selected mining methods. | The Springdale Scoping Study is based on processing of graphite ore at Springdale. The operation would comprise mining based on a opencut operation utilizing free dig and conventional drill and blast, load and haul and crusher feed. It is envisaged that mining to be under to be taken by an experienced mining contractor. Graphite concentrates produced to be hauled to Collie for further downstream processing. |
| Metallurgical factors or assumptions | • The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.<br>• Whether the metallurgical process is well- tested technology or novel in nature.<br>• The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.<br>• Any assumptions or allowances made for deleterious elements.<br>• The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. | For the production of graphite concentrates the Springdale Scoping Study adopts a process flowsheet based on conventional graphite industrial practice and further informed by testwork program, Competed by Comet Resources[2] and IG[3]. Further a representative bulk sample composited from RC drill chips from recent campaign (2022-23) has been subject to a bulk pilot flotation campaign undertaken at ALS metallurgy Perth to produce concentrates for further downstream development .<br><br>No Ore Reserve has been declared |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications? | |
| Environmental | • The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterization and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported | Field studies are in progress |
| Costs | • The derivation of, or assumptions made, regarding projected capital costs in the study.<br>• The methodology used to estimate operating costs.<br>• Allowances made for the content of deleterious elements.<br>• The source of exchange rates used in the study.<br>• Derivation of transportation charges.<br>• The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.<br>• The allowances made for royalties payable, both Government and private. | Springdale Scoping Study capital costs have been estimated by engineering and metallurgical consultants BatteryLimits to an AACE Class 5 level with an accuracy of ± 35%. The capital cost estimate has been based on a high-level conceptual process flowsheet, process design criteria, mechanical equipment list and includes, vendor equipment pricing, industry estimating factors, inhouse databases information and additional project benchmark data. The capital cost estimate has a base date of Q4 2023 and includes an average contingency of 25%<br><br>Springdale Scoping Study operating costs have been estimated by Battery Limits and the Company using current mining, reagent, consumables and labour costs, equipment list power estimates and benchmark data, and reflect the cost of transport of graphite concentrates to Collie for downstream processing. The operating cost estimate has a base date of Q4 2023 |
| Revenue factors | • The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. | Product price assumptions are based on market reports, market expert opinion, other studies and publicly available data. |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | • The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals, and co- products | |
| Market assessment | • The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.<br>• A customer and competitor analysis along with the identification of likely market windows for the product.<br>• Price and volume forecasts and the basis for these forecasts.<br>• For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract. | Graphite's usage is rapidly increasing as an active anode material for lithium-ion batteries used in electric vehicles, grid-scale, behind-the-meter energy storage systems, and consumer electronics. Fine graphite is the preferred raw feedstock for natural graphite active anode material.<br><br>A significant increase in natural graphite demand is expected resulting in a near-term supply deficit. The graphite market's 27% CAGR forecast is primarily fuelled by the growing demand for electric vehicles, estimated to rise from 8.8 million in 2020 to 60.5 million cars in 2030 as shown in the figure below.<br><br>*Source: Macquarie Graphite Market Outlook Report, 24 March 2023* |
| Economic | • The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. •<br>• NPV ranges and sensitivity to variations in the significant assumptions and inputs. | The key assumptions for the financial model are detailed in this release. |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| Other (incl legal and governmental) | • To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:<br>• Any identified material naturally occurring risks.<br>• The status of material legal agreements and marketing arrangements.<br>• The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent. | No Ore Reserve has been declared.<br><br>Government environmental, mining and works approvals and landowner approvals will be required to build the Springdale mine and concentrator. The Company has no reason to believe that such approvals will not be forthcoming during the next technical phases of Springdale development. |
| Classification | • The basis for the classification of the Ore Reserves into varying confidence categories.<br>• Whether the result appropriately reflects the Competent Person's view of the deposit.<br>• The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any) | No Ore Reserve has been declared. |
| Audits or reviews | • The results of any audits or reviews of Ore Reserve estimates. | No Ore Reserve has been declared. |
| Discussion of relative accuracy / confidence | • Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and | No Ore Reserve has been declared.<br><br>Springdale Scoping Study completed to AACE class 5 estimate |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET

| Criteria | JORC Code explanation | Commentary |
| --- | --- | --- |
| | confidence of the estimate.<br>• The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.<br>• Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.<br>• It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available | |


AUSTRALIAN BATTERY GRAPHITE FROM MINE TO MARKET