

12 May 2022

**GreenRoc Mining plc**  
("GreenRoc" or the "Company")

**Amitsoq Graphite Project Update**  
**Significant Tonnage Upgrade to Amitsoq Island Exploration Target**

GreenRoc Mining plc (AIM: GROC), a company focused on the development of critical mineral projects in Greenland, is delighted to announce a significant increase to the Exploration Target for the Amitsoq Island graphite deposit (the "Amitsoq Island Deposit" or the "Deposit") at the Amitsoq Graphite Project in southern Greenland ("Amitsoq" or the "Project"), one of the highest-grade graphite deposits in the world.

**Highlights**

- Following the Maiden Resource estimate announced on 8 March 2022, the Exploration Target for the Amitsoq Island Deposit has now been updated.
- The Exploration Target<sup>1</sup> has increased from a tonnage range of 1.7 Mt–4.5 Mt at a grade range of 24-36% Graphitic Carbon ('Cg') (as announced by Alba Mineral Resources plc on 7 May 2021) to a tonnage range of 5-15 Mt at a grade range of 18-22% Cg.
- The Maiden Resource for the Amitsoq Island Deposit (announced by GreenRoc on 8 March 2022) defined a combined Indicated and Inferred JORC Resource of 8.28 million tonnes (Mt) at an average grade of 19.75% Cg, giving a total graphite content of 1.63 Mt.
- The Deposit is open along strike (predominantly to the north) and down dip to the west, and this will be tested in the Phase 2 drilling programme this year.
- There is additional considerable upside potential to come from the, as yet undrilled deposit, (the "Kalaq Deposit") to the south of Amitsoq Island; a revised Exploration Target calculation is being undertaken for this deposit.
- Graphite is a core component of an Electric Vehicle ("EV") battery and this is driving graphite demand and prices, with UBS estimating a natural graphite deficit of 3.7Mt by 2030, representing circa 37% of the global market.
- GreenRoc's technical work to date has confirmed that Amitsoq graphite can be upgraded to a more than 99.95% pure graphite product, which is the specification requirement for EV batteries, making GreenRoc well positioned to capitalise on the transition to Net Zero.

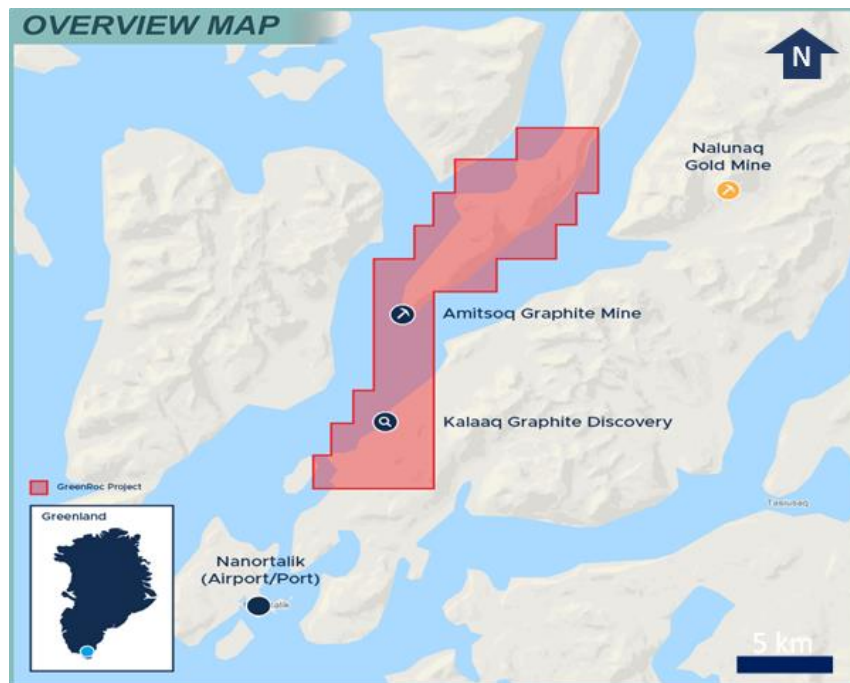
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<sup>1</sup> In accordance with the JORC Code (2012), the potential quantity and grade of the above Exploration Target for the Amitsoq Island Deposit is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource in respect of the area covered by the Exploration Target and it is uncertain if further exploration will result in the estimation of a Mineral Resource in respect of that area.

**GreenRoc's Interim CEO, Lars Br nner, commented:**

*"Amitsoq is one of the highest-grade graphite deposits globally, and our graphite has been shown to be amenable to the production of the high purity graphite, which is the requirement for EV batteries. Our focus now is on building our Resource tonnage to a level that will support a detailed feasibility study. The current Maiden Resource of 8.28Mt at an average grade of 19.75% Cg, giving a total graphite content of 1.63 Mt, is a fantastic result but we are confident we can improve this further and in so doing strengthen the commercial value of the Project.*

*"More than half of the Exploration Target area for Amitsoq Island remains undrilled and the upcoming drill programme will focus on unlocking this Resource potential. We look forward to sharing further details in due course."*



**Figure 1. Amitsoq Graphite Project in southern Greenland, showing Amitsoq Island Deposit to the north (site of the former graphite mine) and Kalaq Deposit to the south**

**Details**

The Company commissioned Dr John Arthur (CGeol FGS) to prepare a revised Exploration Target for the Amitsoq Island Deposit in southern Greenland. Dr Arthur is a Chartered Geologist and qualifies as a Competent Person/Qualified Person (as defined by CRIRSCO and the majority of National Reporting Organisations).

Following a detailed assessment of all pertinent data sets for the Amitsoq Project, Dr Arthur has concluded that the volume and grade ranges for the Amitsoq Island Exploration Target

are between 5 and 15 million tonnes (assuming a density of 2.63t/m<sup>3</sup>) with a grade range of between 18-22% Cg, for between 900,000 and 3.3 million tonnes of contained graphite.

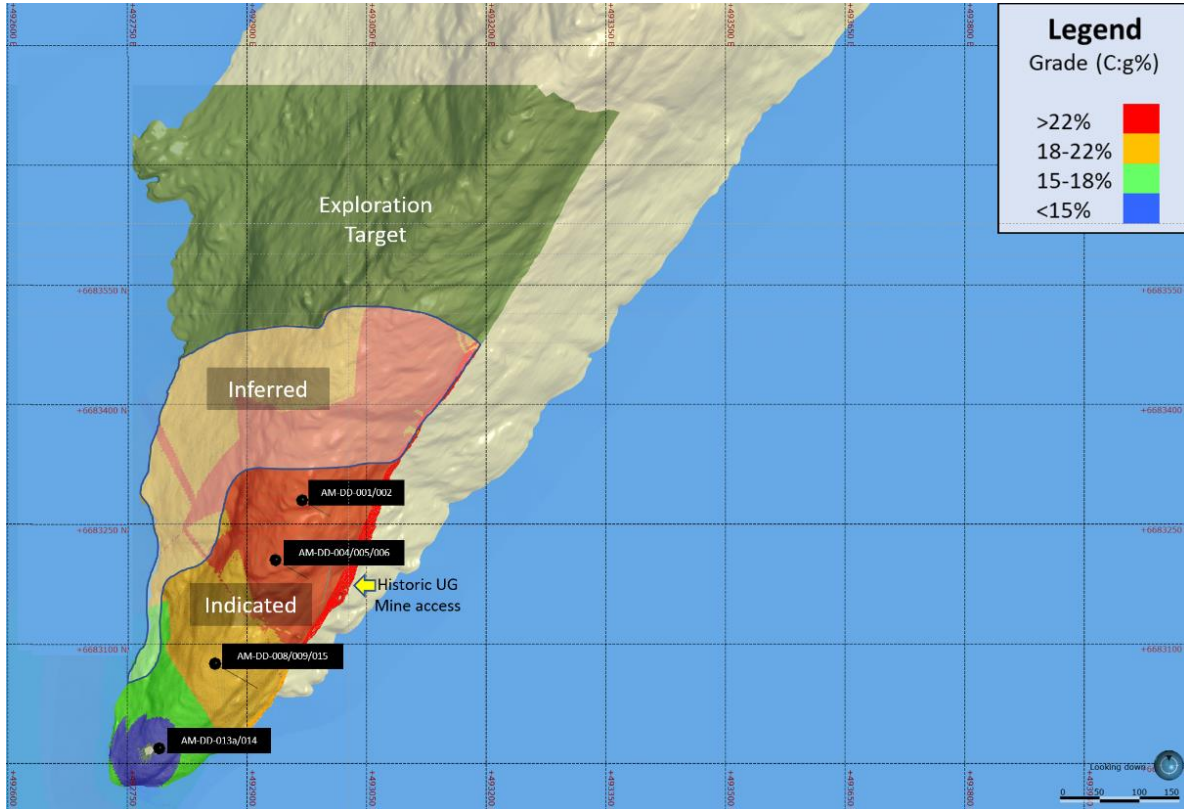
In accordance with the JORC Code (2012), the potential quantity and grade of the above Exploration Target for the Amitsoq Island Deposit is conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource in respect of the area covered by the Exploration Target and it is uncertain if further exploration will result in the estimation of a Mineral Resource in respect of that area.

The data used for the revised Exploration Target includes all drilling, surface channel sampling and field mapping carried out during the 2021 field season as well as information validated from previous surface mapping and investigations.

The Exploration Target is constrained within the area immediately north (along strike) and west (down dip) from the previously reported MRE (Figure2). In the case of the Amitsoq Island Deposit, given the apparent continuity seen in the initial drill results and from the extended field mapping, the Competent Person considers an appropriate range for the Exploration Target tonnage to be between 5-15Mt and the range of grade (at a cut off of 0.0% Cg) to be between 18-22%.

In addition to the diamond drilling, 18m of surface exposure of the graphitic body were channel sampled in 12 channel sample locations. Some of the channel samples were located on the drill lines and several also sampled around the historic mine location.

The graphite deposit at Amitsoq Island is subdivided into an upper and lower unit (UGL and LGL) and both units outcrop along the eastern slope of the island. Historical mining was carried out on the higher grade LGL unit and the upper levels of the mine are still accessible with care and allowed the field team to investigate limited exposures of the deposit underground.



**Figure 2. Outline of the area defined as Exploration Target (green) showing the relationship with the current Mineral Resource outline (marked Indicated and Inferred) and drilling (marked with black dots and drill hole numbers)**

The surface exposure of both the LGL and UGL units is visible and can be followed over a strike length of several kilometres. The 2021 field team carried out detailed surface mapping over the southernmost 1km strike length of the units adjacent to the drill pads and for approximately 600m further north.

A revised Exploration Target calculation for the Kalaaq Deposit is being undertaken and will be announced also, in due course.

### **Methodology**

Geological domain modelling was carried out using the Seequent Leapfrog Geo software® and used a combination of the drill intersection results along with the surface mapping and channel sample results. Continuity appears to be good along strike as evidenced from the continuous exposure on surface and, based on pre-drilling interpretation from surface mapping and structural analysis, the drilling intercepted the deposit generally where expected and thickness was in most cases thicker than expected. A high degree of confidence in the geological continuity of the deposit structure is thus interpreted, at least in the vicinity of the drilling and mapping.

Drilled thicknesses were variable with a minimum of <1m and a maximum of 17m with a mean of 5m. the LGL unit has a mean thickness of 7.5m while the UGL is thinner with a mean of 3m.

The assay results from the drilling, along with the observed contact styles seen on surface, indicate that the contact between deposit and host rock are very sharp with little or no transition zone. The grade is consistent and continuous in nature in both the LGL and UGL units.

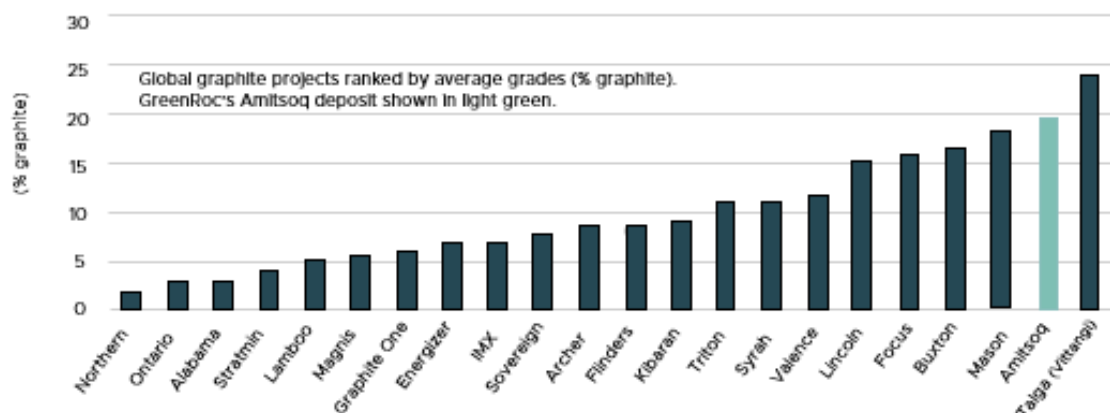
Block Modelling was performed after compositing the assay grades within the domained deposit boundaries to a 1m composite. A sub-blocked model was created in order to allow better block definition along the boundaries. The model was also rotated to orientate the y axis with 030°N. Grade modelling for the Mineral Resource statement was performed using ordinary kriging after initial semi-variogram analysis. Further planned drilling will aim to infill the current drilling as well as provide additional intersections at depth with the aim of increasing the reliability of the current 3D modelling and variography.

The kriging was carried out in three expanding search patterns based on the results of the initial variogram modelling. The initial search radius used a 150x200m ellipse and a minimum of four composites. This was followed by two wider searches at 300x500m and 1000x1000m to fill the remaining volume of the modelled domain. The maximum extent of Indicated and Inferred category blocks was constrained by the second search radius (500m in the strike orientation and 300m down dip). All blocks within the third category have not been classified as Mineral Resource and the volume and extent of the blocks filled using the third expanded search have been used as the underlying basis for the Exploration Target range of grade and tonnes outlined above.

### **Peer Group Comparison**

The Amitsoq project is among the very highest-grade graphite projects in the world (see Figure 3) with, to the Company's knowledge, only Talga Group Ltd's ("Talga") Vittangi project

having higher average grades amongst all advanced (ie at least to Resource definition stage) projects globally.



(Source: Industrial Minerals, August 2015, modified by GreenRoc)

**Figure 3. Global graphite projects ranked by average grades. Amitsoq Island Deposit shown in light blue.**

If the upper end of this revised Exploration Target for the Amitsoq Island Deposit is successfully converted into defined Resources following the planned further drilling, this would place Amitsoq not only as one of the highest-grade projects globally but also with Resource tonnes which compare favourably with those of Vittangi (see Table 1). Further, this does not take into account any future Resources to be derived from GreenRoc's separate, high-grade Kalaaq Deposit (for which a revised Exploration Target is awaited).

**Table 1. Comparison between Talga and GreenRoc flagship graphite projects**

Company	Market Cap	Project	Reserves (Mt)	Resources (Mt)	ET (Mt)	Grade (%)	Contained Ore (Mt)	Combined Contained Ore (Mt)	Stage
Talga	A\$412m (ASX: TLG)	Vittangi (Sweden)	2.26			24	0.5447	5.22	Feasibility
				19.5		24	4.673		
GreenRoc	£6.7m (AIM: GROC)	Amitsoq Island (Greenland)		8.28		19.75	1.63	2.53-4.93	Resource
					5-15	18-22	0.9-3.3		

***This announcement contains inside information for the purposes of the UK Market Abuse Regulation and the Directors of the Company are responsible for the release of this announcement.***

### **Glossary**

<b>Cg%</b>	Contained graphite as a percentage of the total rock.
<b>cut-off</b>	The minimum grade required for a mineral or metal to be economically mined (or processed). Material found to be above this grade is considered to be ore, while material below this grade is considered to be waste.
<b>Exploration Results</b>	Exploration Results include data and information generated by mineral exploration programmes that might be of use to investors but which do not form part of a declaration of Mineral Resources or Ore Reserves.
<b>Exploration Target</b>	An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.
<b>graphitic</b>	of, relating to, resembling, or having the structure of graphite.
<b>graphitic carbon</b>	Carbon may be present in rocks in various forms including organic carbon, carbonates or graphitic carbon. Carbon in rocks may be reported as fixed or total carbon (i.e. organic carbon + carbon in carbonate minerals + carbon as graphite) or as graphitic carbon (i.e. total carbon - (organic + carbonate carbon)).
<b>Indicated Resource</b>	Indicated Resources are economic mineral occurrences that have been sampled (from locations such as outcrops, trenches, pits and drill holes) to a point where an estimate has been made, at a reasonable level of confidence, of their contained metal, grade, tonnage, shape, densities, physical characteristics.
<b>Inferred Resource</b>	An Inferred Resource means that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.
<b>JORC</b>	The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ('the JORC Code') is a professional code of practice that sets minimum standards for Public Reporting

	of minerals Exploration Results, Mineral Resources and Ore Reserves.
<b>Maiden Resource</b>	The first Mineral Resource estimate to be completed on a project.
<b>Mineral Resource</b>	A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.
<b>Ore Reserves</b>	The economically mineable part of a Measured or Indicated Mineral Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed, mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction can reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.
<b>strike</b>	The direction and length of a geological feature (for example, a vein or rock formation) measured on a horizontal surface.

### **Forward Looking Statements**

This announcement contains forward-looking statements relating to expected or anticipated future events and anticipated results that are forward-looking in nature and, as a result, are subject to certain risks and uncertainties, such as general economic, market and business conditions, competition for qualified staff, the regulatory process and actions, technical issues, new legislation, uncertainties resulting from potential delays or changes in plans, uncertainties resulting from working in a new political jurisdiction, uncertainties regarding the results of exploration, uncertainties regarding the timing and granting of prospecting rights, uncertainties regarding the timing and granting of regulatory and other third party consents and approvals, uncertainties regarding the Company's or any third party's ability to execute and implement future plans, and the occurrence of unexpected events. Actual results achieved may vary from the information provided herein as a result of numerous known and unknown risks and uncertainties and other factors.

Without prejudice to the generality of the foregoing, uncertainties also exist in connection with the ongoing Coronavirus (COVID-19) pandemic which may result in further lockdown



measures and restrictions being imposed by Governments and other competent regulatory bodies and agencies from time to time in response to the pandemic, which measures and restrictions may prevent or inhibit the Company from executing its work activities according to the timelines set out in this announcement or indeed from executing its work activities at all. The Coronavirus (COVID-19) pandemic may also affect the Company's ability to execute its work activities due to personnel and contractors testing positive for COVID-19 or otherwise being required to self-isolate from time to time.

### **Competent Person Declaration**

The information in this release that relates to Exploration Results and Mineral Resources has been reviewed by Dr John Arthur. Dr Arthur is a Fellow of The Geological Society of London and a Chartered Geologist (FGS CGeol no. 1005744) and 28 years' experience in the minerals and mining industry.

Dr Arthur has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration targets, Exploration Results, Mineral Resources and Ore Reserves", also known as the JORC Code. The JORC code is a national reporting organisation that is aligned with CRIRSCO. Dr Arthur consents to the inclusion in the announcement of the matters based on his information in the form and context in which they appear.

**\*\*ENDS\*\***

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### **About GreenRoc**

GreenRoc Mining Plc is an AIM-quoted company, which is developing mining projects in Greenland in high-demand and high-value critical minerals.

Led by a group of highly experienced mining industry professionals, GreenRoc has a portfolio of 100% owned projects:

- Amitsoq Graphite, one of the highest-grade graphite deposits in the world with a combined Indicated and Inferred JORC Resource of 8.28 million tonnes (Mt) at an average grade of 19.75% giving a total graphite content of 1.63 Mt.
- Thule Black Sands Ilmenite ('TBS'), which has an initial Mineral Resource of 19Mt@ 43.6% Total Heavy Minerals with an in-situ ilmenite grade of 8.9%.
- Melville Bay Iron, which has a Mineral Resource Estimate of 67Mt at 31.4% iron and has been proven to be processable to a high-grade, 70% concentrate with low impurities.
- Inglefield Multi-Element, which has the potential to host a range of mineralisation styles, including iron oxide-copper-gold.