

Company Announcement, 2 November 2021

GGG Submits Responses for Kvanefjeld Project White Paper

- **Greenland Minerals has submitted formal responses to comments raised during the public consultation on its Kvanefjeld Project which concluded on 13 September 2021**
- **The responses form a 'White Paper' which addresses all issues raised during public consultation or submissions to the Greenland Government**
- **GGG believes many queries raised are addressed by its existing Environmental and Social Impact Assessments**
- **Publication of the White Paper is an important step in Kvanefjeld's permitting.**

Greenland Minerals Ltd ('GGG' or 'the Company') is pleased to advise that on 29 October 2021 it submitted its responses for the public consultation 'White Paper' on its 100%-owned Kvanefjeld rare earth project to the Government of Greenland (GoG). The White Paper addresses feedback and concerns lodged via the Government's online portal, and those raised during public meetings. The GoG is also required to add its comments prior to publication of the White Paper.

GoG initiated Kvanefjeld public consultation on 18 December 2020 after the Environmental and Social Impact Assessments (EIA, SIA) had both been accepted as meeting Greenland's Guidelines for public consultation after a rigorous review and revision process. The consultation period closed on 13 September 2021 after 38 weeks, the longest public consultation period for a mining project in Greenland. The publication of a White Paper represents an important step in Greenland's permitting process.

GGG acknowledges community concerns and debate around Kvanefjeld among stakeholders in Greenland through the consultation period. However, after working through all feedback carefully, the Company is satisfied that every relevant specific issue raised in the public consultation process has already been identified and addressed in the EIA and SIA. The EIA and associated Technical Reports contain an extensive amount of information, and the consultation feedback highlights that conveying the level of detail effectively has been challenging, particularly with limited stakeholder understanding of Greenland's rigorous permitting and assessment process.

In its White Paper, GGG aimed to provide responses to concerns and identify where further detail can be found in the EIA and SIA. It will make the draft consultation responses available on its website, as the responses provide important guidance to where information can be found in the EIA and Technical Reports.

The EIA report is supported by 132 Technical Reports (which are referenced in the EIA) and available on the Government website. Every section of the EIA, and all expert reports prepared to support the conclusions contained in the EIA, were reviewed by Greenland's Environmental Agency for Mineral Resource Activities (EAMRA), Greenland's Institute of Natural Resources (GINR), and Greenland's independent scientific advisors, the Danish Centre for the Environment (DCE).



Following a multi-year review-revision process the DCE and GINR concluded ‘that the Kvanefjeld Project is very likely to be carried out without more extensive environmental effects than described in the EIA report, provided that Best Available Technologies (BAT) and Best Environmental Practice (BEP) are used in all processes.’

Background to Kvanefjeld Project Permitting

Greenland has a clear process for companies seeking approval of projects. It incorporates legislation and guidelines produced by the GoG agencies where appropriate. For example, EAMRA produced “Guidelines for preparing an Environmental Impact Assessment (EIA) report for mineral exploitation in Greenland”. The Company has scrupulously adhered to all legislation and guidelines.

Initially, Terms of Reference (ToR) for project impact assessments (IA) are required. Terms of Reference establish agreed and approved scope and contents of impact assessments.

In July 2011, after extensive consultation, the Company drafted the first version of ToR for an EIA and an SIA.

Subsequent changes to the design of the Project, and an amendment to the Mineral Resources Act in 2014, prompted the development of updated ToR in 2014.

Public consultation on the updated ToR occurred between late August and early October 2014 and comments received during the consultation process were consolidated in a White Paper.

The Company produced a further update of the ToR incorporating the comments collated in the White Paper. The revised ToR establishing the final scope and contents of the Company’s EIA and SIA were approved by the GoG in late 2015. The ToR is the framework upon which the approved EIA and SIA were based.

A first version of the EIA was prepared by Orbicon and submitted to the EAMRA in 2015.

Project developments and feedback from the regulators were incorporated in revised versions of the EIA prepared by GHD in 2018 and 2019. GHD brought broader international and rare earth specific experience to build on the work by Orbicon.

The same rigorous approach was applied to each issue identified in the ToR. The steps in this approach were:

- Step 1. Describe baseline
- Step 2. Describe impact(s) on the environment
- Step 3. Provide assessment of impacts
- Step 4. Identify mitigation measures
- Step 5. Describe predicted outcomes.

In 2019, the Project received feedback from the regulators identifying a number of out-standing issues which required resolution before the environmental consequences of the Project could be considered to have complied with the Guidelines. In order to best respond to issues identified by the regulator, an internationally renowned consultant, Shared Resources, was engaged in March 2020 to review the existing EIA and determine how best to address the outstanding issues.

Shared Resources worked closely with GML and expert international consultancies to address the regulators comments during 2020, with a considerable number of additional studies commissioned and previous studies being updated with additional analysis by international experts. During this review process, EIA improvement opportunities were also identified to better align the EIA format with international standards.

The EIA is supported by 132 Technical Reports which are referenced in the EIA and are available on the Naalakkersuisut website. A number are listed on pages 105 and 106 of the EIA.

Every section of the EIA, and all the expert reports prepared to support the conclusions contained in the EIA, were reviewed by EAMRA the DCE and GINR, often multiple times. During this review process, feedback and comments from EAMRA, the DCE and GINR were incorporated in both the EIA and specialist reports, as appropriate.

Every assertion and conclusion presented in the EIA has been supported or validated by relevant expert reports and, further, the validations and conclusions were reviewed and accepted by EAMRA, the DCE and GINR.

The DCE and GINR conclude "that Project Kvanefjeld is very likely to be carried out without more extensive environmental effects than described in the EIA report, provided that BAT [Best Available Technology] and BEP [Best Environmental Practice] are used in all processes." (January 26, 2021).

The Company notes that the design and configuration of the Kvanefjeld Project which is described in the EIA was adopted at the insistence of the Government of Greenland after the extensive pre-consultations. The Company acknowledges that significant time has elapsed since the ToR approvals.

The Company emphasizes that there are alternative configurations and development pathways which could be considered and sees the current consultation phase as a basis for their evaluation.



About the Kvanefjeld Project

The Kvanefjeld Rare Earth Project is one of the most significant and advanced emerging rare earth projects globally. The Project is unique with respect to its favourable metallurgy and forecast production profile across all commercially important rare earths. Kvanefjeld is located near existing infrastructure in southern Greenland with year-round direct shipping access to the project area. The Project has been carefully designed to minimise impacts through the consideration of the existing environment.

Rare earth elements are critical to the electric vehicle revolution and renewable energy, as well as many other energy efficient applications. The Kvanefjeld Project is forecast to be a globally significant producer of all commercially important rare earth elements including **neodymium**, **praseodymium**, **terbium** and **dysprosium**, over an initial **37**-year mine life. These rare earths are used to make high powered permanent magnets that are utilised in electric vehicles and wind turbines, along with many other applications. Kvanefjeld is well-placed to meet the major surge in rare earth demand that will be generated by the transition to electric vehicles, along with growth in renewable energy.

Authorised for release by the Board of Greenland Minerals Ltd.

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ABOUT GREENLAND MINERALS LTD.

Greenland Minerals Ltd (ASX: GGG) is an exploration and development company focused on the development of the world-class Kvanefjeld Rare Earth Project. A comprehensive feasibility study was completed in 2015 and updated following pilot plant operations in 2016. The studies demonstrated the unique and highly advantageous strengths of the Kvanefjeld Project and outlined the potential for Kvanefjeld to be developed as a long-life, low cost, and large-scale producer of rare earth elements; key enablers to the electrification of transport systems.

Since 2017 GML has worked closely with major shareholder Shenghe Resources Holding Co Ltd, a leader in rare earth processing, to develop Kvanefjeld as a cornerstone of future rare earth supply. In 2017-18, GML undertook technical work programs with Shenghe Resources Holding Co Ltd that improved the metallurgical performance and simplified the development strategy and infrastructure footprint in Greenland, with optimised Feasibility Study outcomes announced in mid-2019. This defined a significantly enhanced project cost-structure and a direct alignment with downstream processing.

An exploitation (mining) license application for the initial development strategy was reviewed by the Greenland Government through 2016 -2020 and was formally accepted as meeting Greenland Guidelines in late 2020. Fulfilment of the Guidelines means that all aspects of the Kvanefjeld Project are based on international environmental standards and the principles of 'Best Available Technology' and 'Best Environmental Practice'. Statutory public consultation for the project commenced in December 2020.

Greenland Minerals Ltd will continue to advance the Kvanefjeld project in a manner that is in accord with both Greenlandic Government and local community expectations and looks forward to being part of continued stakeholder discussions on the social and economic benefits associated with the development of the Kvanefjeld Project.

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Competent Person Statement – Mineral Resources Ore Reserves and Metallurgy

The information in this report that relates to Mineral Resources is based on information compiled by Mr Robin Simpson, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Simpson is employed by SRK Consulting (UK) Ltd ("SRK") and was engaged by Greenland Minerals Ltd on the basis of SRK's normal professional daily rates. SRK has no beneficial interest in the outcome of the technical assessment being capable of affecting its independence. Mr Simpson 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 Results, Mineral Resources and Ore Reserves'. Robin Simpson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in the statement that relates to the Ore Reserves Estimate is based on work completed or accepted by Mr Damien Krebs of Greenland Minerals Ltd and Mr Scott McEwing of SRK Consulting (Australasia) Pty Ltd. The information in this report that relates to metallurgy is based on information compiled by Damien Krebs.

Damien Krebs is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the type of metallurgy and scale of project under consideration, and to the activity he is undertaking, to qualify as Competent Persons in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). The Competent Persons consent to the inclusion of such information in this report in the form and context in which it appears.

Scott McEwing is a Fellow and Chartered Professional of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as Competent Persons in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). The Competent Persons consent to the inclusion of such information in this report in the form and context in which it appears.

The mineral resource estimate for the Kvanefjeld Project was updated and released in a Company Announcement on February 12th, 2015. The ore reserve estimate was released in a Company Announcement on June 3rd, 2015. There have been no material changes to the resource estimate, or ore reserve since the release of these announcements.