



ASX Announcement

02 January 2024

## **MINING LICENCE PROVISIONALLY GRANTED AT MAKUUTU HEAVY RARE EARTHS PROJECT BY UGANDAN DGSM**

- **Makuutu Central Zone Large Scale Mining Licence (LML) 00334, has been provisionally granted over Retention Licence (RL) 1693, pending receipt of formally signed documents and gazetting in Uganda;**
- **Mining Licence approval will be the first large scale mining licence awarded in Uganda;**
- **Grant of the Mining Licence paves way for further supply chain engagement to support sustainable, secure, and traceable magnet and heavy rare earth supply to the new economy;**
- **Makuutu Demonstration Plant continues to advance, with first Mixed Rare Earth Carbonate (MREC) on track for Q1 2024;**
- **IonicRE has reached agreement with its partners in Rwenzori Rare Metals Ltd to move up to a 94 percent interest in Makuutu; and**
- **Makuutu remains the most advanced Ionic adsorption clay project in development today with product not committed to China, and available to supply new supply chains looking to decouple sourcing from existing sources.**

The Board of Ionic Rare Earths Limited (“IonicRE” or “The Company”) (ASX: IXR) is pleased to announce that on the 28<sup>th</sup> of December 2023, the Ugandan Directorate of Geological Survey and Mines (DGSM), have provisionally granted the Stage 1 Large scale Mining Licence (LML00334) over Retention Licence (RL) 1693 for the Makuutu Heavy Rare Earths Project.

This represents the first large scale mining licence to be awarded in Uganda under the Mining Act 2022, which was announced on the Ugandan Mining Cadastre [portal](#) (see Figure 1). The Ugandan Minister of Energy and Mineral Development (MEMD), the Honourable Dr Ruth Nankabirwa Ssentamu, is expected to sign the documents this week prior to gazetting.



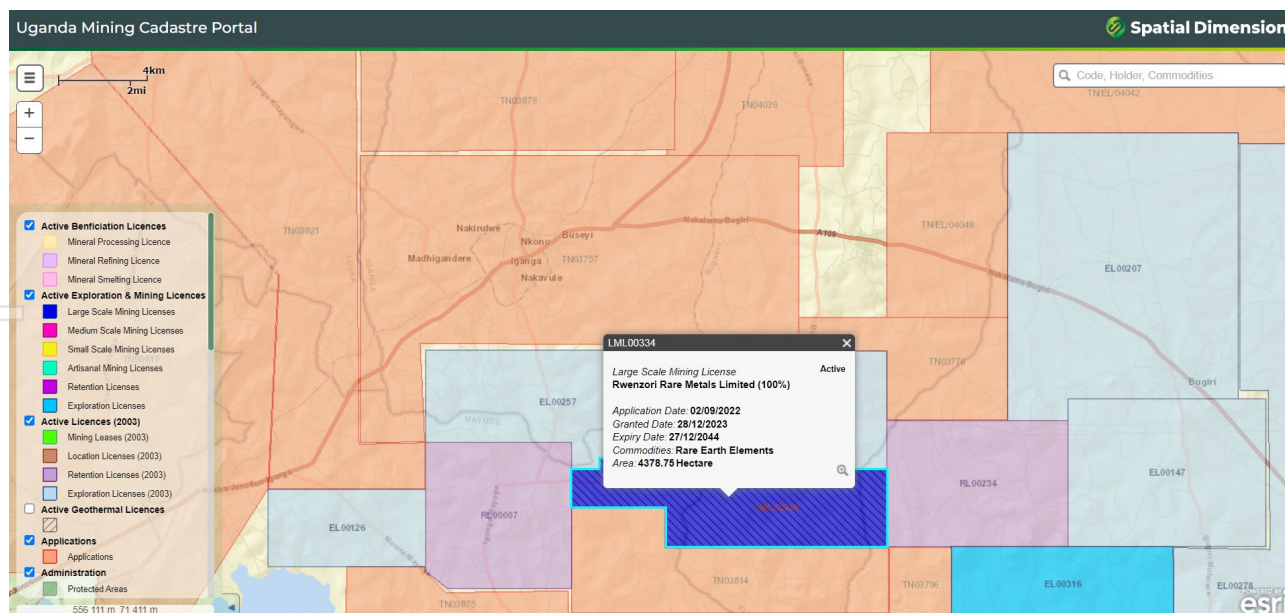
Ionic Rare Earths Managing Director, Mr Tim Harrison, said the provisional award is part of the official commitment from the Government of the Republic of Uganda and clears the path for the Makuutu Project and the ongoing development of Uganda's mining industry.

*"This is an important step forward for Ionic Rare Earths in mining, refining, and recycling the heavy rare earths critical for the energy transition, advanced manufacturing, and defence," Harrison said.*

*"This reinforces the Makuutu Heavy Rare Earth Project as one of the world's largest and most advanced development-ready heavy rare earth element assets, and we look forward to progressing the next steps and commissioning our Demonstration Plant at Makuutu."*

The Stage 1 Mining Licence LML00334 covers the area set out in IonicRE's mining licence application TN03834 as shown in Figure 2, which covers approximately 44 square kilometres of the Project's near 300 square kilometres of tenements at Makuutu. Currently, the Company's greater Makuutu Mineral Resource Estimate (MRE) (refer to Table 3 and Table 4 and ASX: 3 May 2022) is estimated at 532 million tonnes at 640 ppm Total Rare Earth Oxide (TREO) with a cut-off grade of 200 parts per million (ppm) TREO minus Cerium Oxide (CeO<sub>2</sub>).

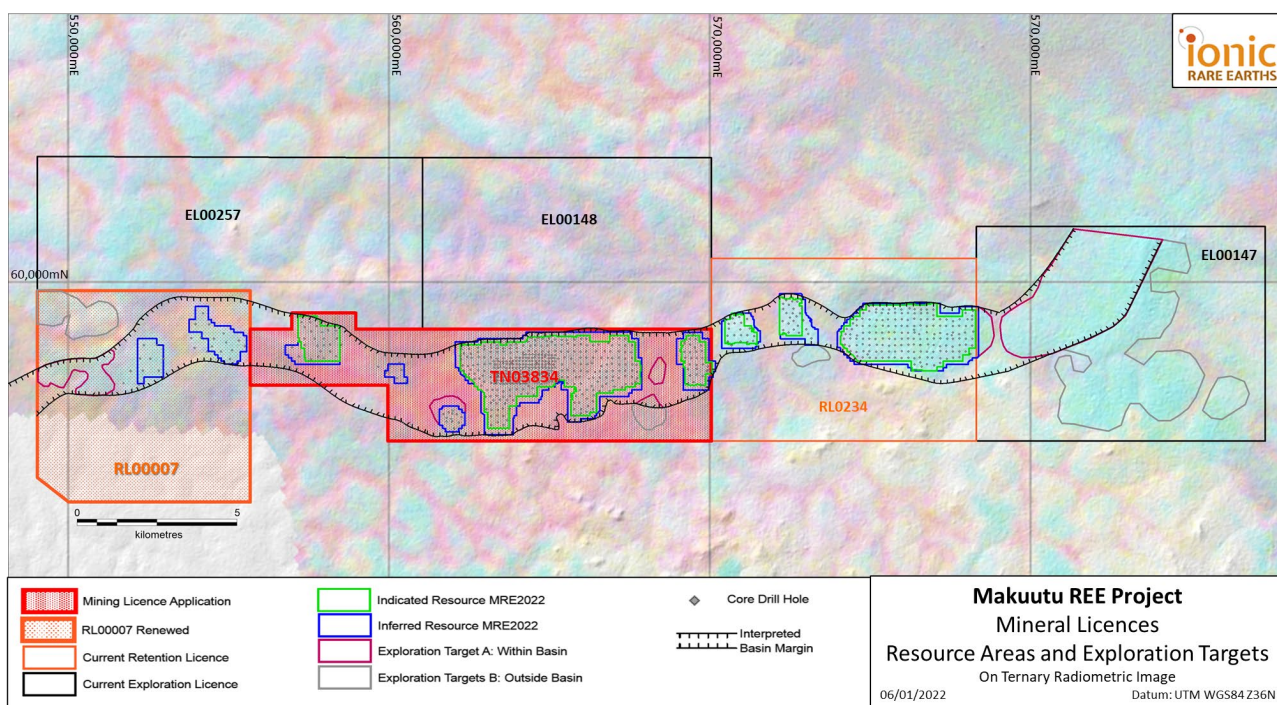
The provisional granting of the mining licence follows the gazetting of updated Mining and Minerals (Licencing) Regulations 2023 to provide a clear framework for mineral development in Uganda, and the submission of documentation which has been reviewed and approved by Ugandan DGSM. As part of the process, the Company secured land access agreements over 95% of the LML00334 area (ASX: 29 November 2023) and completed a verification process on site led by the DGSM with strong support demonstrated from local project stakeholders and landowners.



**Figure 1: Screen view from the Ugandan Mining Cadastre portal showing the active Mining Licence provisionally awarded to Rwenzori Rare Metals Limited (see [link](#)).**

The Company has also applied for the renewal of Exploration Licences 00147 and 00148 and expects this to be completed shortly. EL00147 has a significant Exploration Target (ASX: 01 June 2022), providing further positive reconnaissance drilling results (ASX: 4 September 2023) confirming clay-hosted rare earth element (REE) in 66 of 70 RAB holes drilled across programs in 2021 and 2023, on a broad 500 metre spacing.

The Mineral Resource Estimate and Exploration Targets are expected to be updated in Q1 2024 to incorporate results from the Phase 5 drill program completed in Q4 2023.

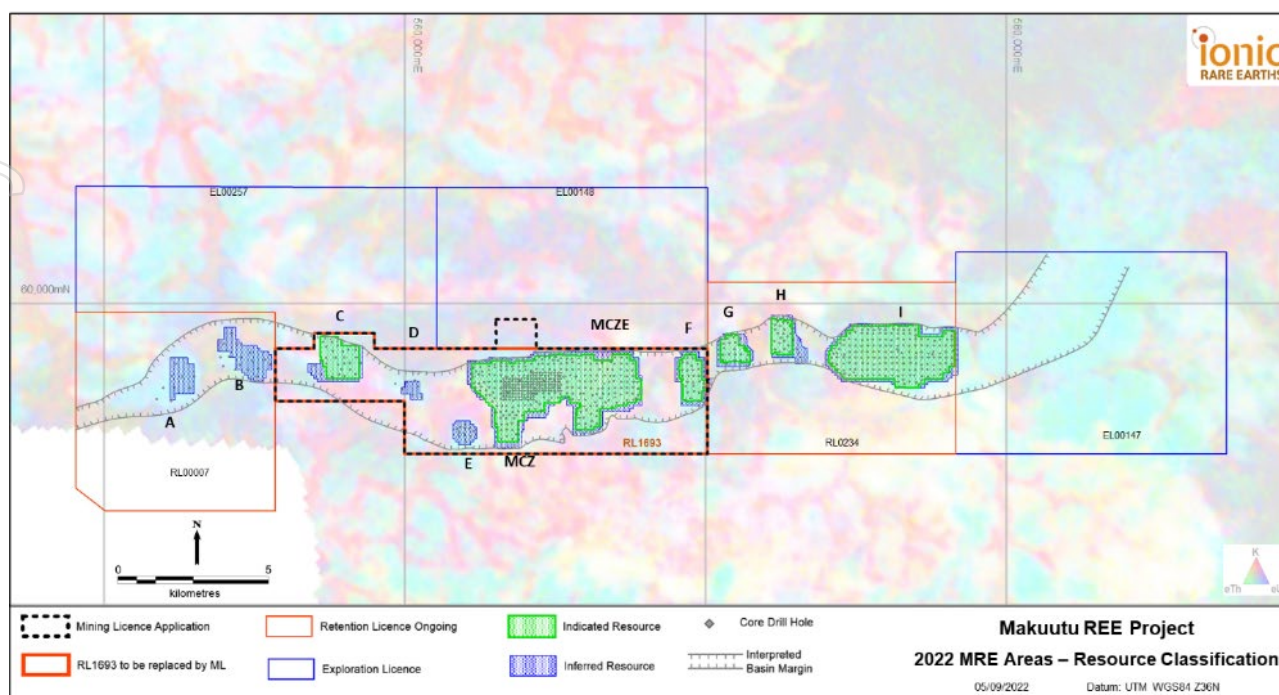


**Figure 2: Makuutu Project Stage 1 Mining Licence Application TN03834 (red border), now LML00334, which has received approval as part of the larger Makuutu Heavy Rare Earths Project.**

**Table 1: Makutu Rare Earths Project Tenement Status and Details.**

| Licence ID | Licence Type | Application Date | Granted Date | Expiry / Renewal Date | Area (km <sup>2</sup> ) |
|------------|--------------|------------------|--------------|-----------------------|-------------------------|
| RL00007    | Retention    | 12/12/2022       | 20/12/2022   | 26/11/2024            | 43.38                   |
| LML00334   | Mining       | 01/09/2022       | 28/12/2023   | 27/12/2044            | 43.78                   |
| RL00234    | Retention    | 26/06/2021       | 06/07/2021   | 05/07/2024            | 47.03                   |
| EL00257    | Exploration  | 15/07/2021       | 21/10/2021   | 20/10/2024            | 55.51                   |
| EL00147    | Exploration  | Pending          | Pending      | Pending               | 60.30                   |
| EL00148    | Exploration  | Pending          | Pending      | Pending               | 48.15                   |





**Figure 3: Makuutu Project resource map showing LML00334 (previously RL 1693) Mineral Resource Estimate areas.**

**Table 2: Makuutu Rare Earth Project Resource Tabulation of REO Reporting Groups at 200ppm TREO-CeO<sub>2</sub> Cut-off Grade (ASX: 3 May 2022).**

| Resource Classification | Tonnes (millions) | TREO (ppm) | TREO-CeO <sub>2</sub> (ppm) | LREO (ppm) | HREO (ppm) | CREO (ppm) | Sc <sub>2</sub> O <sub>3</sub> (ppm) |
|-------------------------|-------------------|------------|-----------------------------|------------|------------|------------|--------------------------------------|
| Indicated               | 404               | 670        | 450                         | 500        | 170        | 230        | 30                                   |
| Inferred                | 127               | 540        | 360                         | 400        | 140        | 180        | 30                                   |
| Total                   | 532               | 640        | 430                         | 480        | 160        | 220        | 30                                   |

Notes: Tonnes are dry tonnes rounded to the nearest 1.0Mt.

All ppm rounded from original estimate to the nearest 10 ppm which may lead to differences in averages. TREO = Total Rare Earth Oxide

**Table 3: Mineral Resources by Area (ASX: 3 May 2022), LML00334 Resource Areas shaded.**

| Classification        | Indicated Resource |            |                             | Inferred Resource |            |                             | Total Resource    |            |                             |
|-----------------------|--------------------|------------|-----------------------------|-------------------|------------|-----------------------------|-------------------|------------|-----------------------------|
| Area                  | Tonnes (millions)  | TREO (ppm) | TREO-CeO <sub>2</sub> (ppm) | Tonnes (millions) | TREO (ppm) | TREO-CeO <sub>2</sub> (ppm) | Tonnes (millions) | TREO (ppm) | TREO-CeO <sub>2</sub> (ppm) |
| A                     |                    |            |                             | 13                | 580        | 390                         | 13                | 580        | 390                         |
| B                     |                    |            |                             | 26                | 410        | 290                         | 26                | 410        | 290                         |
| C                     | 31                 | 580        | 400                         | 3                 | 490        | 350                         | 35                | 570        | 400                         |
| D                     |                    |            |                             | 6                 | 560        | 400                         | 6                 | 560        | 400                         |
| E                     |                    |            |                             | 18                | 430        | 280                         | 18                | 430        | 280                         |
| Central Zone          | 151                | 780        | 540                         | 12                | 670        | 460                         | 163               | 770        | 530                         |
| Central Zone East     | 59                 | 750        | 490                         | 12                | 650        | 430                         | 72                | 730        | 480                         |
| F                     | 18                 | 630        | 420                         | 7                 | 590        | 400                         | 25                | 620        | 410                         |
| G                     | 9                  | 750        | 500                         | 5                 | 710        | 450                         | 14                | 730        | 480                         |
| H                     | 6                  | 800        | 550                         | 7                 | 680        | 480                         | 13                | 740        | 510                         |
| I                     | 129                | 540        | 350                         | 19                | 530        | 350                         | 148               | 540        | 350                         |
| <b>Total Resource</b> | <b>404</b>         | <b>670</b> | <b>450</b>                  | <b>127</b>        | <b>540</b> | <b>360</b>                  | <b>532</b>        | <b>640</b> | <b>430</b>                  |

Rounding has been applied to 1Mt and 10ppm which may influence averaging calculations.  
Highlighted rows providing Indicated Resource Estimate for LML00334 only.

Authorised for release by the Board.

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## About Ionic Rare Earths Ltd

Ionic Rare Earths Limited (ASX: IXR or IonicRE) is set to become a miner, refiner and recycler of sustainable and traceable magnet and heavy rare earths needed to develop net-zero carbon technologies.

The Makuutu Rare Earths Project in Uganda, 60% owned by IonicRE, moving to 94% ownership in Q1 2024, is well-supported by existing tier-one infrastructure and is on track to become a long-life, low Capex, scalable and sustainable supplier of high-value magnet and heavy rare earths oxides (REO). In March 2023, IonicRE announced a positive stage 1 Definitive Feasibility Study (DFS) for the first of six (6) tenements to progress to a Mining Licence Application (MLA) which is pending in

Uganda. The Makuutu Stage 1 DFS defined a 35-year life initial project producing a 71% rich magnet and heavy rare earth carbonate (MREC) product basket and the potential for significant potential and scale up through additional tenements.

Ionic Technologies International Limited ("Ionic Technologies"), a 100% owned UK subsidiary acquired in 2022, has developed processes for the separation and recovery of rare earth elements (REE) from mining ore concentrates and recycled permanent magnets. Ionic Technologies is focusing on the commercialisation of the technology to achieve near complete extraction from end of life / spent magnets and waste (swarf) to high value, separated and traceable magnet rare earth products with grades exceeding 99.9% rare earth oxide (REO). In June 2023, Ionic Technologies announced initial production of high purity magnet REOs from its newly commissioned Demonstration Plant. This technology and operating Demonstration Plant provides first mover advantage in the industrial elemental extraction of REEs from recycling, enabling near term magnet REO production capability to support demand for early-stage alternative supply chains.

As part of an integrated strategy to create downstream supply chain value, IonicRE is also evaluating the development of its own magnet and heavy rare earth refinery, or hub, to separate the unique and high value magnet and heavy rare earths dominant Makuutu basket into the full spectrum of REOs plus scandium.

This three-pillar strategy completes the circular economy of sustainable and traceable magnet and heavy rare earth products needed to supply applications critical to electric vehicles, offshore wind turbines, communication, and key defence initiatives.

IonicRE is a Participant of the UN Global Compact and adheres to its principles-based approach to responsible business.

## Competent Persons Statement

*Information in this report that relates to previously reported Exploration Targets and Exploration Results has been cross-referenced in this report to the date that it was originally reported to ASX. Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcements.*

*The information in this report that relates to Mineral Resources for the Makuutu Rare Earths deposit was first released to the ASX on 3 May 2022 and is available to view on [www.asx.com.au](http://www.asx.com.au). Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.*

*The information in this report that relates to Ore Reserves for the Makuutu Rare Earths deposit was first released to the ASX on 20 March 2023 and is available to view on [www.asx.com.au](http://www.asx.com.au). Ionic Rare Earths Limited confirms that it is not aware of any new information or data that materially affects information included in the relevant market announcement, and that all material assumptions and technical parameters underpinning the estimates in the announcement continue to apply and have not materially changed.*

*The information in this report that relates to Production Targets or forecast financial information derived from production the production target for the Makuutu Rare Earths deposit was first released to the ASX on 20 March 2023 and is available to view on [www.asx.com.au](http://www.asx.com.au). Ionic Rare Earths Limited confirms that all material assumptions and technical parameters underpinning the Production Targets or forecast financial estimates in the announcement continue to apply and have not materially changed.*

## Forward Looking Statements

*This announcement has been prepared by Ionic Rare Earths Limited and may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Ionic Rare Earths Limited. Actual values, results or events may be materially different to those expressed or implied in this document. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward-looking statements in this document speak only at the date of issue of this document. Subject to any continuing obligations under applicable law and the ASX Listing Rules, Ionic Rare Earths Limited does not undertake any obligation to update or revise any information or any of the forward-looking statements in this document or any changes in events, conditions, or circumstances on which any such forward looking statement is based.*