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ASX Announcement

18 January 2024

MAKUUTU HEAVY RARE EARTH PROJECT MINING LICENCE SIGNED BY UGANDAN GOVERNMENT

- **The Ugandan Minister of Energy and Mineral Development, the Honourable Dr Ruth Nankabirwa Ssentamu, has signed and issued Large Scale Mining Licence (LML) 00334 for the Makuutu Heavy Rare Earths Project;**
- **This mining licence approval is the first large scale mining licence awarded in Uganda;**
- **Award of the mining licence brings on further supply chain and off-taker engagement, and positions Makuutu for targeted Final Investment Decision later in 2024 and first production in 2026;**
- **The Demonstration Plant at Makuutu continues to advance, with first Mixed Rare Earth Carbonate production on track for Q1 2024;**
- **Ugandan Directorate of Geological Survey and Mines has also announced approval for renewal of highly prospective Exploration Licence 00147, covering the majority of the Company's existing exploration target; and**
- **Makuutu is the most advanced Ionic adsorption clay project in development today with product not committed to China and will supply new supply chains looking to decouple from existing sources.**

The Board of Ionic Rare Earths Limited ("IonicRE" or "The Company") (ASX: IXR) is pleased to announce that Rwenzori Rare Metals Limited ("Rwenzori"), owner of the Makuutu Heavy Rare Earth Project ("Makuutu" or "the Project"), has formally received the granted large-scale Mining Licence (LML00334) over the central Makuutu tenement (previously Retention Licence 1693).

Large Scale Mining Licence (LML) 00334 was officially signed on Wednesday 17th of January 2024, at a ceremony in Kampala, by the Ugandan Minister of Energy and Mineral Development (MEMD), the Honourable Dr Ruth Nankabirwa Ssentamu. The award represents the first large scale mining licence to be issued in Uganda under the Mining Act of 2022. This further supports the flagship project status awarded to Makuutu in 2022 and reflects the strong support received from Uganda in the development of the Project towards operations.

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Figure 1: Ugandan Minister of Energy and Mineral Development (MEMD), the Honourable Dr Ruth Nankabirwa Ssentamu, right, signing LML00334, with Mr Patience Singo, Country Manager, Rwenzori, left, and Mr Warren Tregurtha, CEO, Rwenzori, centre.

In December 2023 (ASX: 11 December 2023), IonicRE announced an agreement with partners in Rwenzori to increase the Company's stake in Rwenzori and the Makuutu Project from 60% to 94%, and further to this is also in discussions with partners on the remaining 6% ownership.

Ionic Rare Earths Managing Director, Mr Tim Harrison, said the formal mining license award has been a diligent process as the Ugandan stakeholders wanted long-term investment security for flagship projects:

> *"The official award of the mining licence is a tremendous achievement by all stakeholders involved," Harrison said.*
>
> *"We thank the Ugandan Government, and having navigated the new process together, we look forward to continue to invest in our Project at Makuutu as we advance towards operations,"* Harrison said.
>
> *"The formal awarding of the mining license at Makuutu to Rwenzori enables discussions with potential strategic and supply chain partners to progress to the next stage to bring Makuutu and a new supply of magnet and heavy rare earths to market."*
>
> *"With this award, and discussions underway with potential partners, the Project is aiming for Final Investment Decision later this year, and first product to customers in early 2026."*
>
> *"Progress continues to be made at Makuutu's Demonstration Plant, which will also be critical in de-risking the commercialisation of the Project through the production of value added, mixed rare earth carbonate (MREC) for our partners to qualify and validate."*

"It 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."

"With the formal award of the mining licence in Uganda, it now 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 commissioning our Demonstration Plant at Makuutu."

Large Scale Mining Licence LML00334 Award

The Stage 1 Mining Licence LML00334, 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 2 and Table 3 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_2).

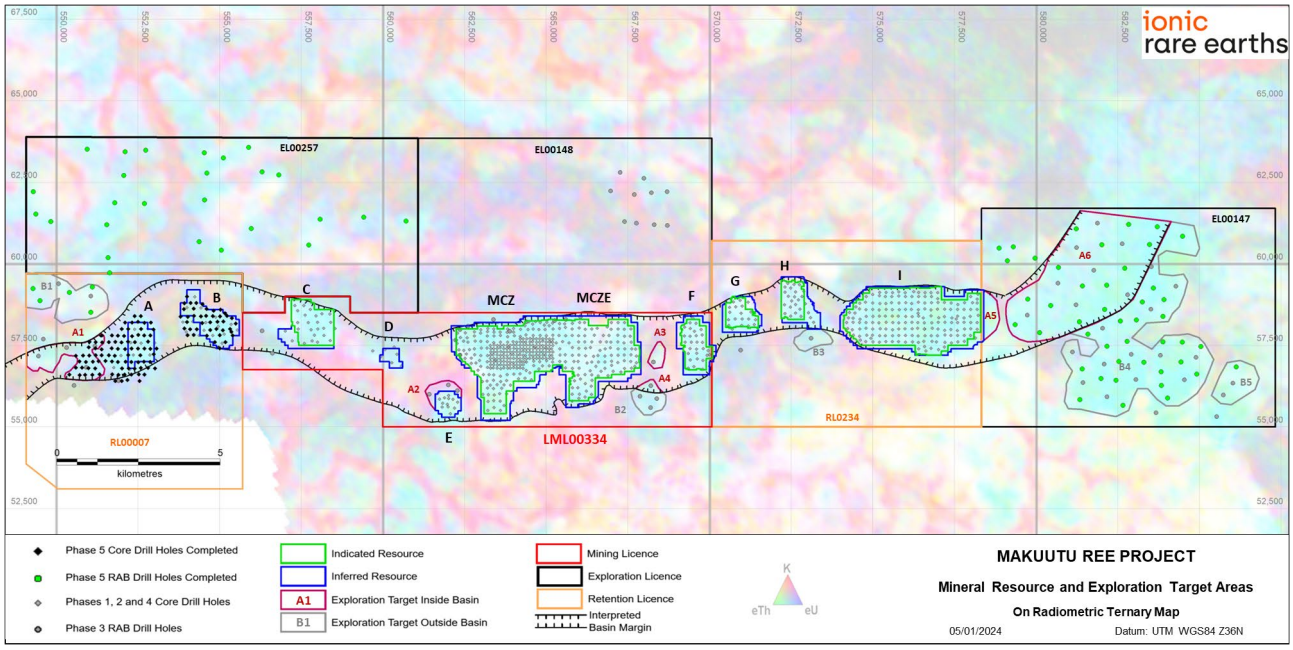


Figure 2: Makuutu Project Stage 1 Mining Licence LML00334 (red border), which has been formally awarded, as part of the larger Makuutu Heavy Rare Earth Project.

The official award of LML00334 follows the publishing of Notice of Grant of a Large-Scale Mining Licence in the Ugandan Gazette on the 9th of January 2024, post the provisional award previously announced (ASX: 2 January 2024), 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. Prior to any mining activity commencing, the Company must compensate landowners and will continue to work with local stakeholders and government to resolve the remaining 5% of unsecured land access agreements.

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Figure 3: Left to right, Mr Patience Singo, Country Manager, Rwenzori, Mr Warren Tregurtha, CEO, Rwenzori, Ugandan MEMD, Hon. Dr Ruth Nankabirwa Ssentamu, and Mr Vincent Kedi, Commissioner Licensing and Administration, at the LML00334 signing ceremony.



Figure 4: Rwenzori team with LML00334, Mr Patience Singo, Country Manager, Mr Warren Tregurtha, CEO, and Ms Deborah Namirimu, Stakeholder Engagement & Communications Lead.

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Renewal of Exploration Licences 00147 and 00148

In December 2023, the Company, through Rwenzori, also applied for the renewal of Exploration Licences 00147 and 00148. EL00147, the easternmost exploration tenement, has a significant Exploration Target (ASX: 01 June 2022), and subsequently 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 existing Makuutu Exploration Target (ASX: 1 June 2022), which is additional to the current Makuutu MRE, indicated a range for additional potential mineralisation at Makuutu estimated at;

216 – 535 million tonnes grading 400 – 600 ppm TREO*

*This Exploration Target is conceptual in nature but is based on reasonable grounds and assumptions. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

The Exploration Target ranges are listed in Table 4 and locations shown on Figure 1.

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.

Table 1: Makutu Rare Earth Project Tenement status and details.

Licence ID	Licence Type	Application Date	Granted Date	Expiry / Renewal Date	Area (km^2)
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	01/09/2023	Approved - Pending	Pending	60.30
EL00148	Exploration	01/09/2023	Approved - Pending	Pending	48.15

Table 2: Makuutu Rare Earth Project Resource Tabulation of REO Reporting Groups at 200ppm TREO-CeO_2 Cut-off Grade (ASX: 3 May 2022).

Resource Classification	Tonnes (millions)	TREO (ppm)	TREO-CeO_2 (ppm)	LREO (ppm)	HREO (ppm)	CREO (ppm)	Sc_2O_3 (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

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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_2 (ppm)	Tonnes (millions)	TREO (ppm)	TREO-CeO_2 (ppm)	Tonnes (millions)	TREO (ppm)	TREO-CeO_2 (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
Total Resource	**404**	**670**	**450**	**127**	**540**	**360**	**532**	**640**	**430**

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

Table 4: Makuutu Exploration Target (ASX: 1 June 2022), EL00147 areas shaded.

		Tonnes Range (millions)		TREO ppm Range	
Zone	Target ID	Minimum	Maximum	Minimum	Maximum
Inside Basin	**A1**	14	28	400	600
	A2	2	5	600	800
	A3	2	5	600	800
	A4	2	4	500	700
	A5	4	8	400	600
	A6	90	180	400	600
Outside Basin	**B1**	15	45	500	700
	B2	4	12	400	600
	B3	2	6,	600	800
	B4	73	220	400	600
	B5	8	28	400	600
Total		**216**	**535**	**400**	**600**

Highlighted rows providing Exploration Target Estimate for EL00147 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 H1 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 mining licence which was awarded in January 2024. 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.

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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. 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. 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. 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.

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