28 July 2023

WORK ADVANCES ON MAKUUTU DEMONSTRATION PLANT, PHASE FIVE DRILLING ON TRACK TO SUPPORT RESOURCE UPGRADE

- **Activity increasing at Makuutu Demonstration Plant with commencement of earthworks and construction, the installation contract is being carried out by a local Ugandan company;**
- **Makuutu Demonstration Plant to validate test work and provide the strong basis for grade control, mine design, material handling, metallurgical reconciliation, and construction while maximising Stage One DFS results;**
- **Phase Five drilling advancing:**
    - **All 76 rotary air blast (RAB) holes (1,663 metres) completed across EL00147, EL00247 and RL00007;**
    - **Core drilling progressing with 29 holes drilled for 558 metres completed of 4,380 metre program to support upgrade in the Mineral Resource Estimate classification from inferred to indicated over RL00007;**
- **Makuutu ranked amongst the world's largest and most advanced, development-ready ionic adsorption clay heavy rare earth element deposits; and**
- **Community engagement continues to progress well.**

The Board of Ionic Rare Earths Limited ("IonicRE" or "The Company") (ASX: IXR) advises on progress at its 60 per cent owned Makuutu Heavy Rare Earths Project ("Makuutu" or "the Project") in Uganda.

"The commercialisation of our recycling technology at our Belfast Facility and our focus on the delivery of the Makuutu Heavy Rare Earths Project in Uganda positions us to provide a secure, sustainable, and traceable supply of magnet REOs," Tim Harrison, Managing Director at IonicRE, said.

"We are harnessing our technology to accelerate our mining, refining and recycling of magnets and heavy rare earths that are critical for the energy transition, advanced manufacturing, and defence."

The Company is progressing the development at the Makuutu Heavy Rare Earths Project through local Ugandan operating entity Rwenzori Rare Metals Limited ("RRM").

At the Makuutu Demonstration Plant technical facility, earthworks have been completed, the facility shed fabricated and delivered to site, and the erection of the technical facility has commenced. Foundation formwork is currently being set out, with concrete footings commencing this weekend and superstructure erection within the next 4 weeks.

The Makuutu Demonstration Plant technical facility will validate metallurgical test work and provide further technical validation basis for grade control, mine design, material handling, metallurgical reconciliation, and construction activity whilst also supporting Project financing and strategic partner activity.

"The progress allows IonicRE and RRM to harness our processing innovations to accelerate and validate mine development with a clear process plan to production and profitability," Harrison said.

"This step will also strengthen talks we have progressed with supply chain partners where further value adding has been identified. It is a globally strategic resource for near-term development and long-term security of magnet and heavy rare earth oxide (HREO) supply," he said.

ON DRILLING AND RESOURCES UPGRADE

"The Phase Five exploration drilling program is on schedule, with 1,663 metres of RAB drilling completed across Exploration Licences (EL) 00147 and 00257 and Retention Licence (RL) 00007."

"Infill core diamond drilling on RL00007 is progressing well, with 29 holes completed, representing 558 metres of the planned 4,380 metres aimed to upgrade the Makuutu Mineral Resource Estimate (MRE), with increased classification of Inferred Resources to Indicated Resources, and support the second Mining Licence Application (MLA) located on the Makuutu western zone due to be submitted before the end of November 2024."

ON FURTHER PERMITTING

"RRM's In-Country Manager has received feedback from a Ministry of Energy and Mineral Development (MEMD) Representative last week advising that the Ugandan Authorities would expedite review of outstanding relevant paperwork within days to allow for the gazetting of updated mining regulations."

"Following that, a finalisation of the Mining Licence Application (MLA) fee payment can be lodged and the review and award of the MLA on RL 1693 (TN03834) shortly thereafter."

ON COMMUNITY ENGAGEMENT

Mr Harrison said, "*the acquisition of the area for the Makuutu Demonstration Plant had involved significant effort from the community stakeholder team as well as other technical specialists across cultural heritage, biodiversity studies and environmental teams who documented surveys and baseline monitoring points as required by the conditions set out in the Makuutu ESIA Certificate received last year."*

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"Discussions with key Ugandan Government stakeholders remain very positive, with our growing Ugandan workforce praised by the MEMD Permanent Secretary, along with local government and community dignitaries, for their thorough engagement programs, noting the technical, environmental, and social licence to operate approvals were obtained with little disruption," he said.

Figure 1: Makuutu Demonstration Plant ground-breaking performed by RRM Country Manager, Patience Singo (left), and Ben Vietnieks (ADT Africa, Right) along with Bugweri District officials at the Makuutu Demonstration Plant site in the Makandwa Village, Makuutu Sub-County.

Figure 2: Demonstration plant earthworks progressing at the site of where the Makuutu Demonstration Plant Technical Facility will be located.

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Figure 3: RRM staff meeting with the local community).

Figure 4: RRM coordinated multi-layered community stakeholder engagement throughout the land acquisition process for the Makuutu Demonstration Plant.

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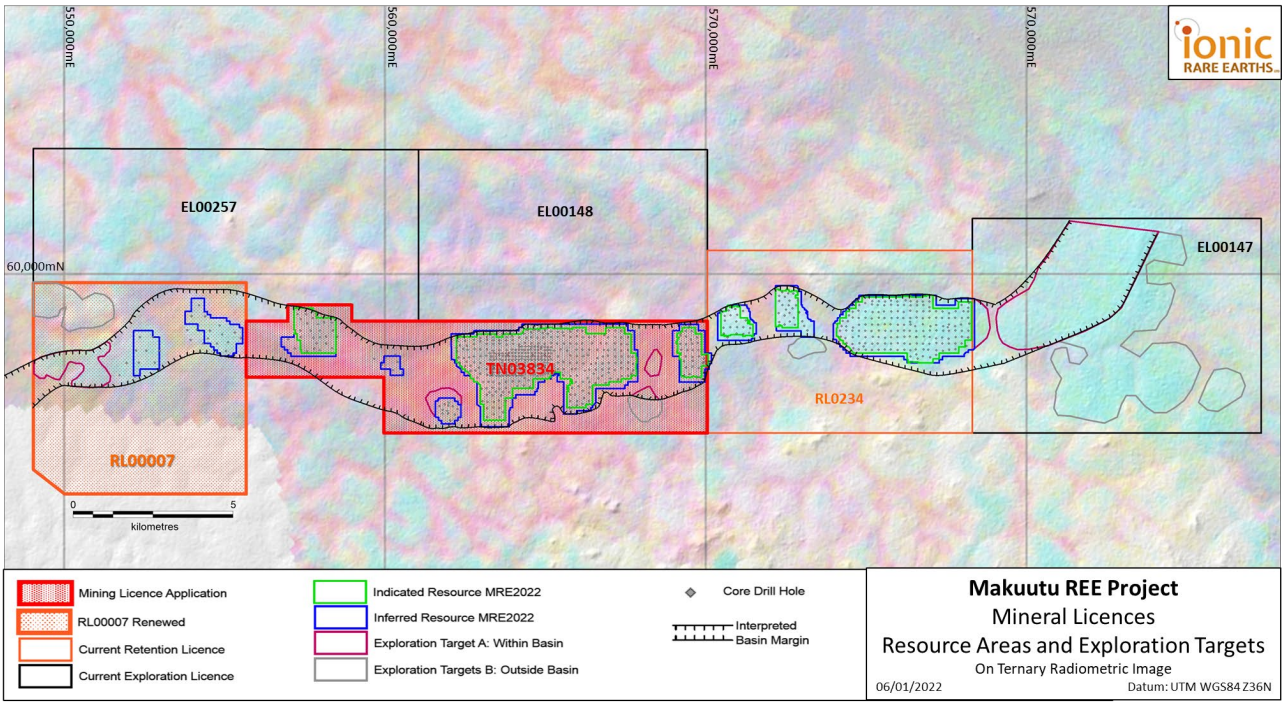

Figure 5: Makuutu Project resource map showing resources and the Makuutu western tenement, RL00007 (highlighted orange), the Stage 1 Mining Licence Application TN03834 (red border) and exploration target areas.

FURTHER INFORMATION ON STAGE ONE MINING LICENCE APPLICATION (TN03834)

The Company, through RRM, has been in regular dialogue with representatives of the Ugandan Ministry of Energy and Mineral Development (MEMD) for an update on the MLA and the Ugandan Government's progress with updating mining regulations.

The time and diligence to legislate Uganda's new mining regulations demonstrates that the Government is intent on securing the right balance between growing the economy and ensuring sustainable mining practices and balancing stakeholder interest.

The longer than expected time taken to update the mining regulations has extended timelines for their gazetting and therefore the approval of Makuutu's MLA for RL 1693 (TN03834). Uganda's mining industry is developing and due care is being taken by the authorities to consult widely on the regulations. The MEMD has pledged its commitment to have the Regulations gazetted as soon as appropriate reviews are completed.

The Makuutu Heavy Rare Earths Project has the Government's full support and is set to become Uganda's flagship mine.

To demonstrate MEMD commitment to fast-track licencing decision making, and to ensure delays in considering the Makuutu mining licence over RL 1693 are minimised, the Department of Geology, Survey and Mines (DGSM) has committed to reviewing the Stage 1 DFS to ensure any areas of clarification can be identified and actioned immediately to support the swift evaluation of the MLA.

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With no further inter-government department queries anticipated, it is expected that the new regulations will be gazetted within the next fortnight.

Authorised for release by the Board.

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Table 1: Mineral Resources by Area (ASX: 3 May 2022), RL00007 Resource Areas shaded blue.

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.

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 flagship Makuutu Rare Earths Project in Uganda, 60% owned by IonicRE, 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 20 March 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

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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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