

18 October 2023

## MAKUUTU DEMONSTRATION PLANT UPDATE

- **Construction progressing at the Makuutu Demonstration Plant with foundations laid, steel columns and structure for Technical Facility erected;**
- **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;**
- **Land access agreements for the wider Makuutu Project area progressing rapidly post Ugandan Government approval on land access process received in mid-September; and**
- **Makuutu’s basket contains 71% magnet and heavy rare earths content, and is one of the most advanced heavy rare earth projects globally available as a source for new supply chains emerging across Europe, the US, and Asia.**

Ionic Rare Earths Limited (“IonicRE” or “the Company”) (ASX: IXR) is pleased to advise progress in the construction of the Technical Facility and Demonstration Plant at the Makuutu Rare Earths Project (“Makuutu”) in Uganda, through local Ugandan operating entity Rwenzori Rare Metals Limited (“RRM”).

At the Makuutu Demonstration Plant technical facility, civils have been completed along with the installation of the technical facility steel frame structure, with concrete slabs also poured for the agglomerator and heap desorption crib areas. Boundary fence installation and the upgraded site access road have also progressed towards completion. The technical facility schedule for completion has been revised and is now expected to be finalised in November with a target to commence heap desorption column test work by the end of 2023.

The Makuutu Demonstration Plant technical facility will aim to further optimise 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.

IonicRE’s Managing Director Mr Tim Harrison said the progress at Makuutu over the past 6 weeks has been pleasing as land access agreements are now rapidly being progressed across all 3 districts that hosts the Makuutu Stage 1 Mining Licence Application (MLA) area at Retention Licence (RL) 1693, under TN03834 pending award.

“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 Demonstration Plant at Makuutu is a key milestone for the supply chain engagement with product to be produced here likely to go off to potential partners in early 2024. 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.

“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 rare earth oxides. Along with our Ionic Technologies Belfast recycling facility, Makuutu is key to us harnessing our technology to accelerate mining, refining, and recycling of magnets and heavy rare earths that are critical for the energy transition, advanced manufacturing, and defence”.

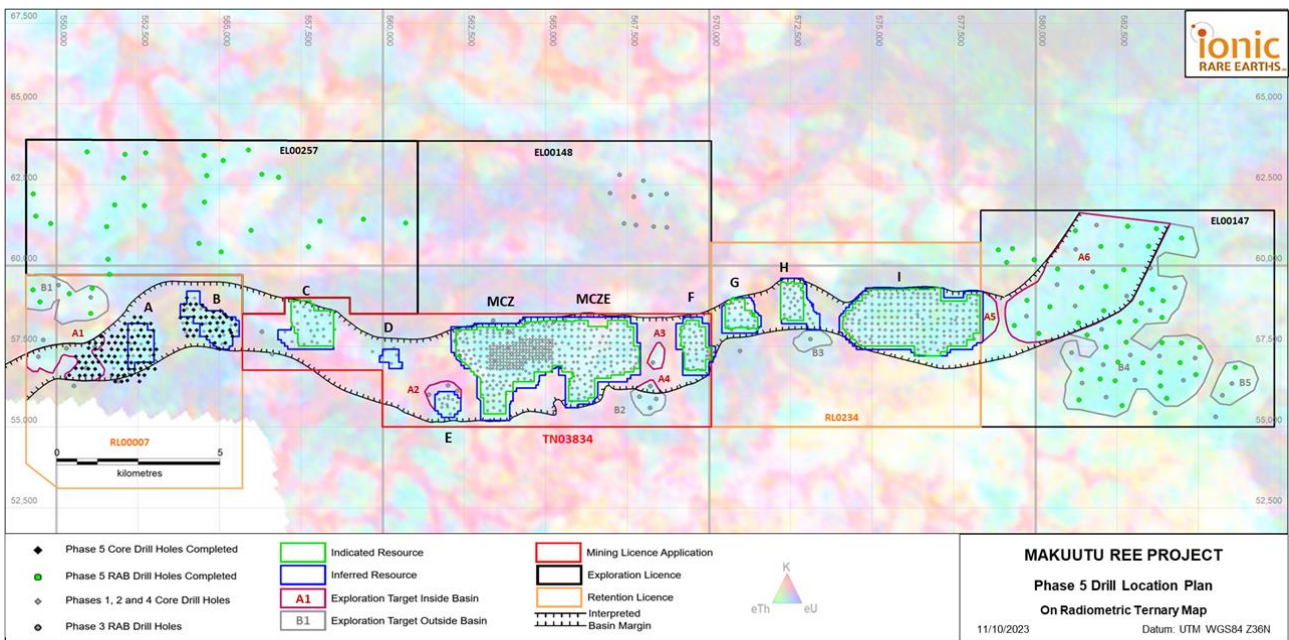


Figure 1: Makuutu Project area showing stage 1 MLA area at RL 1693 / TN03834, pending award.

## DEMONSTRATION PLANT ACTIVITIES

The technical facility structure is anticipated to be completed by late November, complete with electrical and water installations which will mark the end of a nine-month process from initial land acquisition to final construction.

A delay in the dispatch of test work equipment from Perth will see equipment reach Uganda next month prior to installation.

The Company continues to build its Uganda team with several new appointments made, and key input received from newly appointed engineering contractor DRA Global (ASX: 19 September 2023).



Figure 2: Makuutu Demonstration Plant site entrance.



Figure 3: Makuutu Demonstration site prior to works commencing, April 2023.



**Figure 4: Removal of the topsoil layer across the Demonstration Plant facility area.**



**Figure 5: Marking out the Demonstration Plant footworks.**



Figure 6: Casting of ground bases, on left, and excavations for the ground beam on right.



Figure 7: Casting of the Technical Facility ground beam.



Figure 8: Erection of the Technical Facility steel column structure.



Figure 9: Makuutu Technical Facility frame structure erected.



Figure 10: Agglomerator pad concrete slab poured and curing.



Figure 11: Heap desorption crib foundations prior to concrete pour.



**Figure 12: Installing boundary fence posts.**



**Figure 13: Boundary fence installation.**





**Figure 14: Makuutu Demonstration Plant and Technical Facility access road in construction.**

### **UPDATE ON STAGE ONE MINING LICENCE APPLICATION (TN03834)**

The Company, through RRM, remains 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 regard to processing the MLA.

The requirement to gazette the notice of application for a large-scale mining licence under the new regulations was signed by the Hon Dr Ruth Nankabirwa Ssentamu, the Ugandan government minister for Energy and Mineral Development on 15<sup>th</sup> September 2023 and gazetted on the 2<sup>nd</sup> of October.

The Makuutu Heavy Rare Earths Project has the Government's full support and is set to become Uganda's flagship mine (refer also to IXR ASX release on the 11<sup>th</sup> of September for more detail).

Senior members of IonicRE's executive will be travelling to Uganda in the next fortnight to meet with key stakeholders and attend the Ugandan Mineral Wealth Conference in Kampala on the 30<sup>th</sup> and 31<sup>st</sup> of October 2023.

Authorised for release by the Board.

## For enquiries, contact:

For Company

Tim Harrison

Ionic Rare Earths Limited

[investors@ionicre.com](mailto:investors@ionicre.com)

+61 (3) 9776 3434

For Media

Nigel Kassulke

Teneo

[Nigel.Kassulke@Teneo.com](mailto:Nigel.Kassulke@Teneo.com)

+61 (0) 407 904 874

For Investor Relations

Peter Taylor

NWR Communications

[peter@nwrcommunications.com.au](mailto:peter@nwrcommunications.com.au)

+61 (0) 412 036 231

## 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, 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. In September 2023, Ionic Technologies announced with the support of the UK government, collaboration partnerships to build a domestic UK supply chain, from recycled REOs to metals, alloys and magnets and supplying UK based electric vehicles (EV) manufacturing, with potential to replicate across other key markets.

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 integrated strategy completes the circular economy of sustainable and traceable magnet and heavy rare earth products needed to supply applications critical to EVs, 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**

*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.*