

10 November 2023

## **FIRST RARE EARTH PRODUCTION FROM MAKUUTU DEMONSTRATION PLANT ON TRACK FOR Q1 2024**

- **Construction at the Makuutu Demonstration Plant continues to progress well with first Mixed Rare Earth Carbonate (MREC) on track to be produced early in Q1 2024;**
- **Technical facility shed erected, and internals now being constructed to house laboratory and offices;**
- **Grade control drilling for initial trial mine test pit progressing and expected to be completed this month;**
- **Makuutu will soon be producing MREC Product to send to potential customers and offtake parties for testing, where third party interest in partnering with the Company remains very strong;**
- **The provision of MREC product from Makuutu will be a key milestone in the development of the Project with the Mining Licence expected to be granted shortly; and**
- **Makuutu's basket contains 71% high value 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 that excellent progress continues to be made in the construction of the technical facility and Demonstration Plant at the Makuutu Rare Earths Project ("Makuutu") in Uganda, through our local Ugandan operating entity Rwenzori Rare Metals Limited ("RRM").

The Company expects that it will produce its first mixed rare earth carbonate (MREC) from the Makuutu Demonstration Plant early in Q1 2024, which will be a major milestone in the development of the Project. This product will be able to be sent to potential customers and off takers who have showed interest in partnering with the Company to secure magnet and heavy rare earth product from the Project once it becomes an operational mine. The Company expects the near-term award of the mining licence for Makuutu, as announced to the market on 20 October 2023.

The Makuutu Demonstration Plant technical facility will aim to further optimise metallurgical test work outputs and provide technical validation for the detailed review of the Stage One DFS being undertaken by DRA Global. Process commissioning is expected to start later this year once construction has been completed and equipment, in transit from Australia, has been delivered and

installed at the technical facility. Delivery of test work equipment from Perth, split across two container deliveries is expected to start this month and be completed in December enabling the fit out of the facility and laboratories before the end of 2023.



**Figure 1: Makuutu Stage 1 Demonstration Plant.**

Grade control drilling on one of two identified test pit locations is progressing well and is expected to be completed this month.

IonicRE's Managing Director Mr Tim Harrison said the progress at Makuutu, having recently visited site, has been pleasing with the growing momentum.

“The progress allows IonicRE and RRM to harness our processing innovations to accelerate and validate mine development with a clear 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 be sent to potential off-take partners in early 2024. Makuutu 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 magnet and heavy rare earths that are critical for the energy transition, advanced manufacturing, and defence.”

The Company continues to build its execution and Ugandan Demonstration Plant operations 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 safety station.



Figure 3: Makuutu Stage 1 Demonstration Plant with crib foundations in the foreground and Technical Facility in background.





**Figure 4: Construction of Technical Facility laboratory brickwork.**



**Figure 5: Technical Facility concrete slab, drains and sumps finalised and internal laboratory and office brickwork underway.**





**Figure 6: Makuutu Demonstration Plant Stage 1 desorption crib plinths, sump and bunded area.**



**Figure 7: Makuutu stage 1 Demonstration Plant agglomerator pad.**





**Figure 8: Makuutu Stage 1 Demonstration Plant site secured with perimeter fence.**



**Figure 9: Makuutu Demonstration Plant test pit grade control drilling at test pit site No1 on 5m x 5m grid.**





Figure 10: Grade control drilling using a Dando Terrier drill rig.



Figure 11: Grade control drilling at Makuutu Demonstration test pit site No1.





Figure 12: Grade control drilling at Makuutu Demonstration test pit site No1.



Figure 13: Grade control drilling core collection at Makuutu Demonstration test pit site No1.



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, 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.*