

27 October 2022

ESIA APPROVAL RECEIVED FOR MAKUUTU RARE EARTH PROJECT

- **Uganda’s National Environmental Management Authority (NEMA) has approved the Makuutu Rare Earth Project’s Environmental and Social Impact Assessment (ESIA)**
- **This vote of confidence positions the Makuutu Rare Earth Project as Uganda’s next mining development, set to unlock unprecedented social and economic benefit through mineral development**
- **The approval follows a 9-month assessment by NEMA culminating in two large public hearings with over 3,800 registered attendees demonstrating strong governmental and local stakeholder support**
- **Social benefits continue to accelerate across local communities in the Bugweri, Mayuge and Bugiri districts and includes employment, support programs and improved social services in one of the poorest parts of Uganda.**
- **The approval of the ESIA is a fundamental requirement for the Mining Lease approval process, expected Q1 2023, and paves the way for development of the mine which will unlock significant stakeholder value**

The Board of Ionic Rare Earths Limited (“IonicRE” or “The Company”) (ASX: IXR) is very pleased to advise that Uganda’s National Environmental Management Authority (NEMA) has approved the Environmental and Social Impact Assessment (ESIA) for the Makuutu Rare Earth Project (“Makuutu” or “the Project”).

Makuutu is being developed by Rwenzori Rare Metals Limited (“RRM”), a Ugandan private company which owns 100% of the Makuutu Project. IonicRE is a 51% owner of RRM, moving to 60% ownership on the completion of a Feasibility Study supporting the Mining Lease Application expected to be submitted to the Ugandan government at the end of October 2022.

In recognition of the flagship nature of the Project and its significance to the country’s development outlook as enshrined in Uganda’s National Development Plan NDP-III, the certificate was awarded at a ceremony held yesterday in Kampala at NEMA’s headquarters.

IonicRE Managing Director Mr Tim Harrison stated;

“I wish to start by thanking all Ugandan Government Ministers and officials for their support of the Makuutu Project and NEMA for their engagement, review, and approval of the ESIA. This is a significant milestone and vote of confidence by the Government and community groups – signifying the pivotal role Makuutu will play in the social, economic development and growth of Uganda.”

“I would also like to convey my gratitude to the local stakeholder communities for embracing the Makuutu Project. The Project aspires to be a significant contributor over a long period of time in Uganda. To employ and train directly from within the local communities, source from local businesses and create further improved services, leading to an overall improved quality of life across the districts that host the Project.”

“My congratulations and thanks extend to the expanding Rwenzori team on the ground at Makuutu, who have worked tirelessly to engage and listen to the needs of local community groups, Kingdom representatives, members of the Bugweri, Mayuge and Bugiri districts and Ugandan Government officials.”

“This Project will set its sights on becoming Uganda’s flagship sustainable mine. Our vision is that Makuutu will provide global customers with an alternative supply of magnet and heavy rare earth elements needed for a Net-Zero Carbon world for 50 years and beyond.”



Figure 1: NEMA Executive presenting the Certificate of Approval for the Makuutu Rare Earth Project ESIA to the Rwenzori team in Uganda.

ESIA Submission

The detailed ESIA report was submitted to NEMA (National Environmental Management Authority) in December 2021. After a review by government stakeholders and respective authorities, a public disclosure process was initiated in May 2022 with stakeholders providing feedback on the ESIA to NEMA.

Following this, two public hearings were held in early August 2022 in Bugweri and Mayuge Districts with significant turnout from NEMA, Ministry of Energy and Mineral Development (MEMD),

government representatives, district leadership, local communities and stakeholders providing strong support for the Project. The total registered attendees at the hearings over the two days amounted to 3,800 persons which indicates a keen interest in the Project by the Ugandan community.

Over the past few months, RRM has hosted key delegations from the Ugandan Parliament and Ministry in an ongoing show of support for Makuutu.

The Minister for Energy and Mineral Development, Rt. Hon. Ruth Nankabirwa Ssentamu with her delegation, invited stakeholders including Project Area Members of Parliament, the District and sub-county leadership of Bugweri, Mayuge, Bugiri and Iganga Districts, media fraternity, non-Government Organisations, the Busoga Kingdom and Chiefdoms and communities to meet with and engage with the local communities.



Figure 2: Uganda's Minister for Energy and Mineral Development, Rt. Hon. Ruth Nankabirwa Ssentamu addressing local community stakeholders at Makuutu earlier in 2022.

Strong partnerships build sustainable social development programs

Social benefits continue to accelerate across the local communities in the Bugweri, Mayuge and Bugiri districts. These programs have delivered employment, support programs and improved social services in one of the poorest parts of Africa.

Some of the improvement's local stakeholders have benefitted from to date include:

- Renovation of the Natural Resource Office Block at Bugweri District;
- Renovation of the Buwaaya police station;
- Due to poor drinking water quality, serviced 17 community boreholes across the Project area;
- Donated 86 tree seedlings to Mayuge District in commemoration of the water and environment week; and
- Donated footballs to Makuutu primary schools in support of youth sports.



Figure 3: Above left, the original Natural Resources Office Block, and the renovated the Natural Resource Office Block at Bugweri District shown on the right.



Figure 4: RRM serviced 17 community boreholes across the project area earlier in 2022 to improve the quality of drinking water available for local community stakeholders.

Resettlement Action Plan (RAP) Progress

The process of developing the Resettlement Action Plan (RAP) commenced in January 2022 and has progressed with additional studies to continue in parallel to the Mining Lease application. The RAP will present the strategy to acquire land for the entire Retention Licence (RL) 1693 (focus of the initial Mining Lease application) over the life of the Project while ensuring that Project Affected Persons (PAPs), including vulnerable people, are not financially or socially disadvantaged.

Presently, a process of stakeholder identification and engagement is in advanced stages of concluding the RAP development process. This process involves engaging directly affected PAPs, key village, sub county and district stakeholders throughout the three districts of Bugweri, Mayuge and Bugiri, plus national stakeholders.

All PAPs have been identified and the majority of their parcels of land mapped. Now the ESIA has been approved by NEMA and the MEMD, the Project will undertake a due diligence process of confirming the areas mapped as well as entering into Memorandums of Understanding (MOU's) with PAPs to support land access.

Mining Lease Application (MLA)

The MLA will focus on the Makuutu Central Zone (MCZ), located within RL 1693, and will provide the basis for initial mining at Makuutu. This area contains an Indicated Resource of 259 million tonnes at 740 ppm TREO-CeO₂ (Table 2 and ASX: 3 May 2002). Advice received indicates that with an initial focus on this 44km² licence the Company will be able to accelerate development as opposed to a MLA over the total Makuutu Project area of approximately 300km² where mining in some areas would not take place for well over 20 years in the future.

Pending the award of the MLA, expected Q1 2023, the Company, via RRM, will be working with Ugandan authorities on a Mineral Development Agreement (MDA) which will establish the fiscal terms for the mine development in Uganda.

Authorised for release by the Board.

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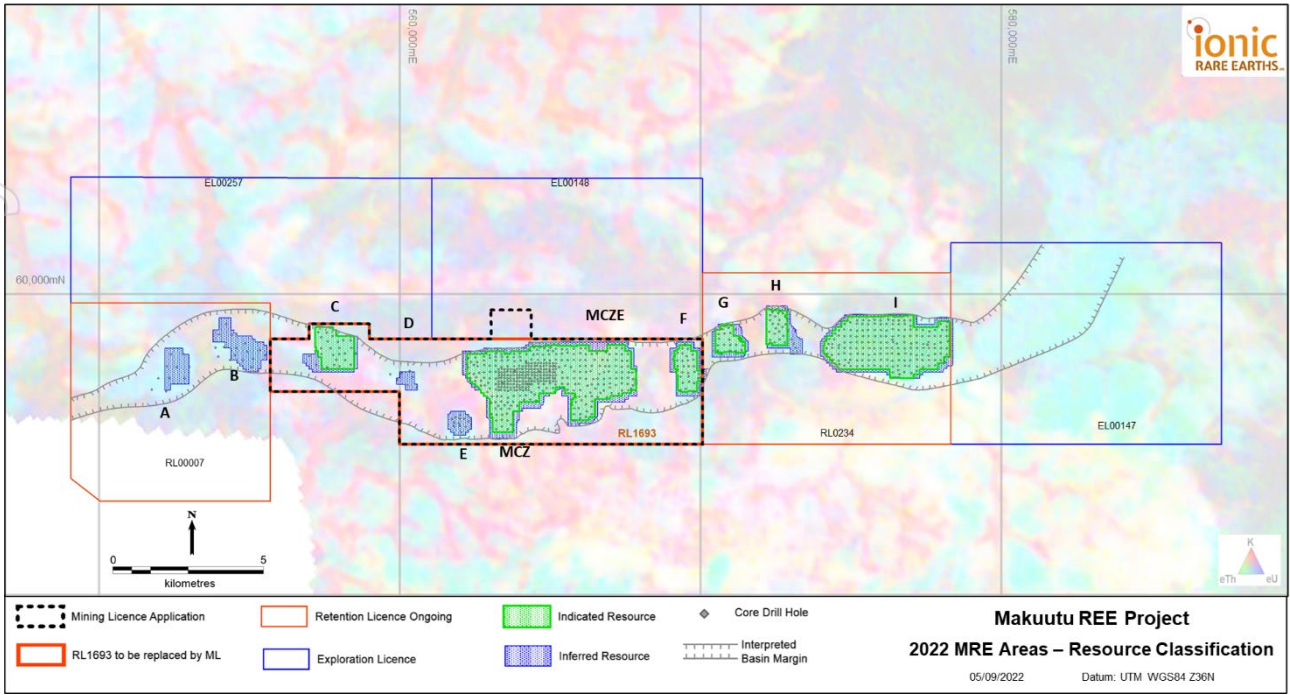


Figure 5: Makuutu Project resource map showing resources located within MCZ (RL 1693 shown with bold red border) and the MLA area shown with a black dashed border

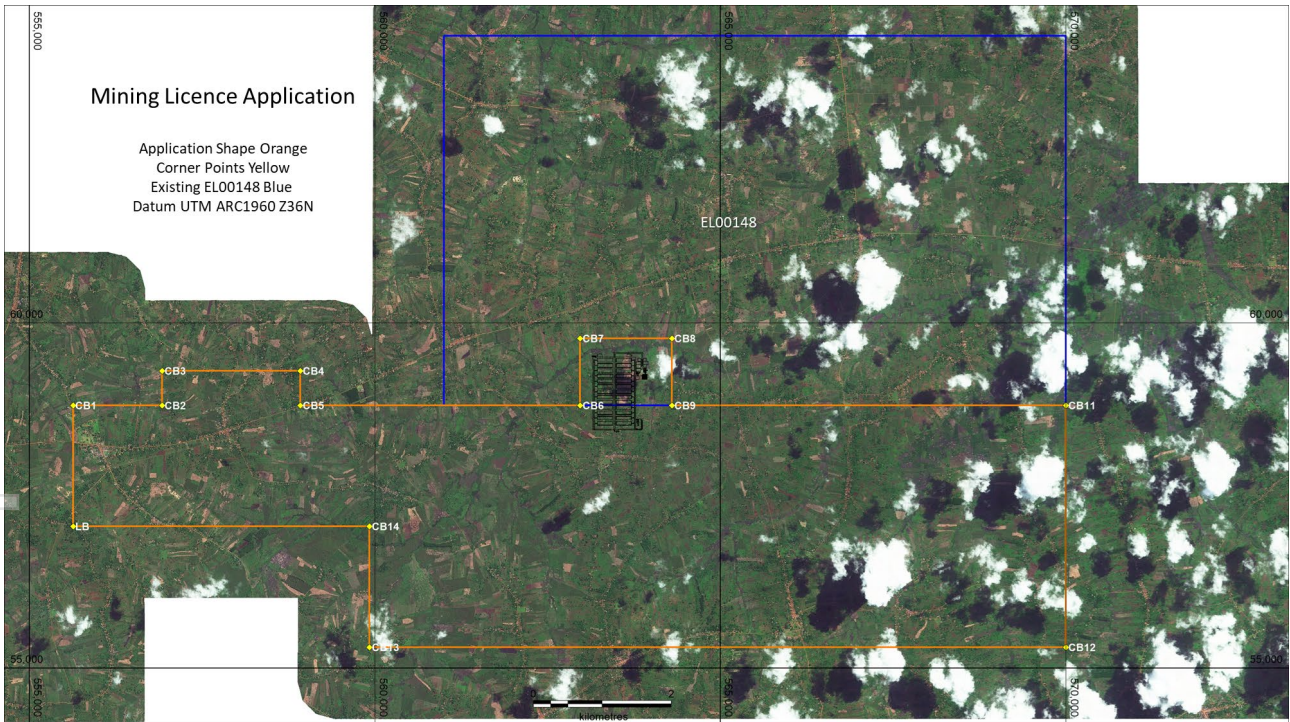


Figure 6: Makuutu Central Mining Licence Application area defined by orange border around RL 1693.

Table 1: Makuutu Resource above 200ppm TREO-CeO₂ Cut-off Grade (ASX : 3 May 2022)

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

Rounding has been applied to 1Mt and 10ppm which may influence averaging calculation.

All REO are tabulated in announcement 3 May 2022 with formulas defining composition of (Light Rare Earth Oxides (“LREO”), HREO and Critical Rare Earth Oxides (“CREO”).

Table 2: Mineral Resources by Area (ASX: 3 May 2022)

Classification Area	Indicated Resource			Inferred Resource			Total Resource		
	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 Indicted Resource Estimate for MLA over RL 1693.

Table 3: Makutu Rare Earths Project Tenement Details

Licence ID	Licence Type	Application Date	Granted Date	Expiry / Renewal Date	Area (km ²)
RL00007	Retention	27/03/2019	27/11/2019	27/11/2022	43.38
RL 1693	Retention	11/07/2017	02/11/2017	01/11/2022	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	19/10/2020	28/12/2020	27/12/2023	60.30
EL00148	Exploration	21/10/2020	28/12/2020	27/12/2023	48.15

About Ionic Rare Earths Ltd

Ionic Rare Earths Limited (ASX:IXR or IonicRE) is focused on developing its flagship Makuutu Rare Earths Project in Uganda into a significant, long life, high margin, supplier of high-value magnet and heavy rare earths oxides (REOs).

IonicRE plans to become a vertically integrated magnet and heavy rare earths supply chain early mover. In August 2021, IonicRE announced plans to develop its own heavy rare earth refinery, or hub, to market its unique and high value magnet and heavy rare earths dominant basket (~73%).

Additionally, in April 2022 IonicRE acquired the 100% stake in a UK based technology company and was recently awarded £1.7 million (approximately A\$2.9 million) from the UK Government to develop a demonstration scale magnet recycling plant. This grant will aim to position the technology as a key participant within the UK Government's aspirations to develop new sources of magnet REOs needed to deliver net-zero carbon across the automotive industry.

IonicRE will create shared value as a miner – refiner – recycler, securing magnet and heavy REOs for renewable energy applications and reduce sovereign risk, and completing the circular economy of rare earths.

About Rwenzori Rare Metals Limited

The Makuutu Rare Earth Project is operated by Rwenzori Rare Metals Limited ("RRM"), a Ugandan company which is 51% owned by IonicRE at present, with the Company moving to 60% ownership on the completion of a Feasibility Study supporting the Mining Lease Application expected to be submitted to the Ugandan government at the end of October 2022.

About Makuutu Rare Earths Project

The Makuutu Rare Earths Project is an ionic adsorption clay (IAC) hosted rare earth element (REE) deposit located 120 km east of Kampala in Uganda and is well serviced by existing high quality infrastructure including roads, rail, power infrastructure and cell communications. The installed infrastructure is illustrated in Figure 7.

The deposit stretches 37 km in length and has demonstrated potential for a long life, low-cost capital source of magnet and heavy REEs. These IAC deposits are prevalent in southern China and Myanmar, which have been the source of the world's lowest cost magnet and heavy REE production, however these deposits are gradually being exhausted and Makuutu represents one of only a handful of such deposits outside of southern China.

The Makuutu deposit is shallow, with less than 3 m of cover over a 9 m average thickness clay and saprolite zone which results in low-cost bulk mining methods with low strip ratio. A maximum thickness of 28.5 m has been identified at Makuutu. Processing is via simple acidified salt desorption heap leaching, breaking the chemical ionic bond which washes the rare earths (in a chemical form) from the ore into a pregnant leach solution (PLS). The PLS is concentrated up using membrane

technology, from which the rare earths are precipitated as a mixed rare earth carbonate product; a product which attracts both a higher payability and achieves a high basket price due to the dominant high value magnet and heavy rare earths which make up over 70% of the product basket.

The Project has the potential of generating a high margin product with a potential operating life exceeding 30 years. The Project is also prospective for a low-cost Scandium co-product.



Figure 7: Makuutu Rare Earths Project Location with major existing infrastructure

Existing Infrastructure

One of the Makuutu Rare Earths Project’s competitive advantages is its proximity to existing infrastructure. The Makuutu site is approximately 10km from Highway 109 which is a sealed bitumen road connecting to Kampala, to Kenya and on to the Port of Mombasa. All weather access roads connecting the site to the adjacent sealed bitumen highway are already existing. A rail line lies within 10 kilometres north of the Makuutu site near the town of Iganga. There are four hydroelectric power plants located within 65 km of the project area, with total installed generating capacity of approximately 810 MW, providing an abundant supply of cheap power to the Project.

Water will be sourced at the project by harvesting water from the Makuutu site, given the Project location in a positive rainfall environment, and a net positive process water balance will require membrane processes to be used to manage site discharge water for reagent recovery. Excess water management will be a key focus of the Project to ensure environmental standards are met and reagent consumption is minimised.

A workforce of semi-skilled and artisanal workers is available in nearby towns and population centres. The closest major population centre is Iganga, which has a population of 50,000. The town of Mayuge

is approximately 10 km from the Project site and the intent is to source local operations staff from the immediate districts and train staff accordingly. The operation is to be staffed by a residential workforce. No fly in – fly out is envisaged, and the number of expatriate staff is intended to be low, and to be phased out over time.

Industrial facilities are available in the city of Jinja, approximately 40 km from the Project area. Additional industrial facilities are available on the outskirts of Kampala.

Competent Persons Statement

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.

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.