



ASX Announcement

30 April 2024

QUARTERLY ACTIVITIES REPORT – MARCH 2024

HIGHLIGHTS

IONIC TECHNOLOGIES, BELFAST (100% IONICRE)

- Commencement of Magnet Rare Earth Oxide Production at Belfast Demonstration Facility with continuous operation;
- Strong progression towards Commercial Partnerships with Demonstration Plant production schedule now full through to Q3 2025;
- Production of high purity Terbium Oxide boosting collaboration with LCM and Ford;
- First ASX Rare Earth Oxide Producer from recycled wind turbines;

MAKUUTU HEAVY RARE EARTHS PROJECT, UGANDA (60% IONICRE)

- First Mixed Rare Earth Carbonate (MREC) produced at Makuutu Demonstration Plant;
- Large Scale Mining Licence (LML) 00334 awarded by the Ugandan Minister of Energy and Mineral Development for Makuutu Heavy Rare Earths Project;
- Award of LML brings on further supply chain and off-taker engagement;
- Strategic increase in ownership of the Makuutu Rare Earths Project, with IonicRE shareholders approving terms to move to 94% interest;
- Makuutu Exploration Target was upgraded with a 40% increased announced;
- Phase 5 infill and extensional drilling on Retention Licence (RL) 00007 returned clay bearing rare earth assays above MRE cut-off on 125 of 128 holes drilled; and

CORPORATE

- Mr Brett Lynch appointed as Executive Chairman to oversee strategic direction.
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The Board of **Ionic Rare Earths Limited** (“IonicRE” or “the Company”) (ASX: IXR) is pleased to provide its Quarterly Activities Report for the period ending **31 March 2024**.

This report includes development activities at the Company’s 100% owned magnet recycling subsidiary in the UK, Ionic Technologies International Limited (“Ionic Technologies”) and at the 60% owned Makuutu Heavy Rare Earths Project (“Makuutu” or “the Project”) in Uganda.



In the March quarter, IonicRE has continued to make substantial advancement in its project development and operational capabilities. As an emergent key player in the global rare earths market, IonicRE has not only solidified its position but also set the stage for significant growth. Notably, the Company has had groundbreaking advancements at the magnet recycling Demonstration Plant at the Belfast Facility, in addition to being awarded a Large-Scale Mining Licence (LML 00334) for the Makuutu Rare Earths Project. Further, from a corporate level, the Company officially announced the appointment of Mr Brett Lynch, as Executive Chairman.

The following report outlines the critical operations, developments, and outlook as the Company moves closer to its goal of becoming an alternative supplier of magnet and heavy rare earths critical for energy transition, advanced manufacturing, and defence.

IONIC TECHNOLOGIES (100% IONICRE)

Ionic Technologies continues to pioneer the recycling of Neodymium-Iron-Boron (NdFeB) permanent magnets to high purity separated magnet rare earth oxides (REOs), enabling the creation of sustainable, traceable, and sovereign rare earth supply chains.

Magnet Recycling Demonstration Plant

During the March quarter, Ionic Technologies commenced continuous production of separated magnet rare earth oxide (REO) at our magnet recycling Demonstration Plant located at our Belfast, UK facility. This milestone underscores our unwavering commitment to excellence and signals our readiness to meet the escalating demands of a rapidly evolving market landscape.

Ionic Technologies commenced operations processing an end of life (EOL) permanent magnet from a decommissioned wind turbine generator. The permanent magnet composition included 26.7% neodymium (Nd), 5.4% praseodymium (Pr), 1.0% dysprosium (Dy) and 1.4% holmium (Ho).

Following the completion of process commissioning, Ionic Technologies successfully separated NdPr from heavy rare earth elements (REE) DyHo (see Figure 2) which will undergo further separation to produce high purity Dy₂O₃ and Ho₂O₃ product.

The first production of NdPr oxide grading greater than 99.8% (NdPr)₂O₃ (total REO content of 99.99%) at continuous demonstration scale was announced (ASX: 25 March 2024, see Figure 3) and follows previous successful production of both maiden Nd₂O₃ grading 99.7% and Dy₂O₃ grading 99.8% (ASX: 12 June 2023). Also, during the March quarter, the Company produced maiden batches of high purity Terbium (Tb) oxide, grading > 99.5% Tb₄O₇ (ASX: 19 March 2024).

The initial production of (NdPr)₂O₃, and subsequent Dy₂O₃ and Tb₄O₇ to be produced, supports our collaboration with partners Less Common Metals (LCM) and Ford Technologies. Ionic Technologies will supply REOs to LCM, who will produce alloys for magnet production to be developed in Europe, with the sintered magnets to be supplied to Ford Technologies in Halewood, UK, to produce electric motors for evaluation, demonstrating a UK magnet rare earth supply chain as part of a UK Government sponsored CLIMATES initiative (ASX: 12 September 2023).

Following the successful commissioning and first continuous production from the Demonstration Plant, Ionic Technologies is now entering late-stage negotiations in relation to strategically significant production campaigns, with a view to progressing towards commercial agreements to roll the technology out to western end users. The continuous Demonstration Plant will also support the completion of a Feasibility Study into a commercial scale facility, expected by mid-2024 (ASX: 6 December 2023).

ionic rare earths

Additionally, has a full production schedule through to Q3 2025 (ASX: 15 April 2024), with several supply chain participants, OEMs and potential strategic partners visiting Northern Ireland facility to evaluate plant performance and production output first hand.



Figure 1: NdPr oxalate product produced post separation (left), and calcination feed (right).

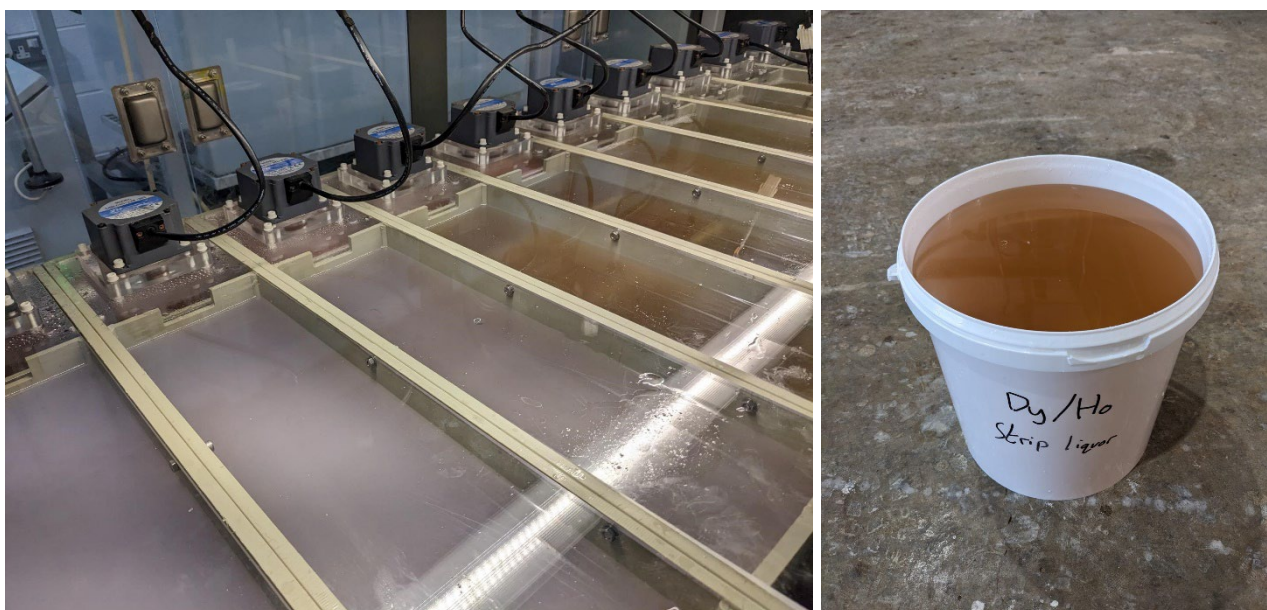


Figure 2: Separation circuit showing extraction gradient advancing to the right with DyHo (orange organic) being extracted from NdPr rich feed stream (pink) (left), and the right image showing DyHo strip liquor accumulating for heavy REE separation.



Figure 3: First NdPr oxide (>99.8% grade) production achieved from continuous operations at Ionic Technologies' Belfast Demonstration Plant.

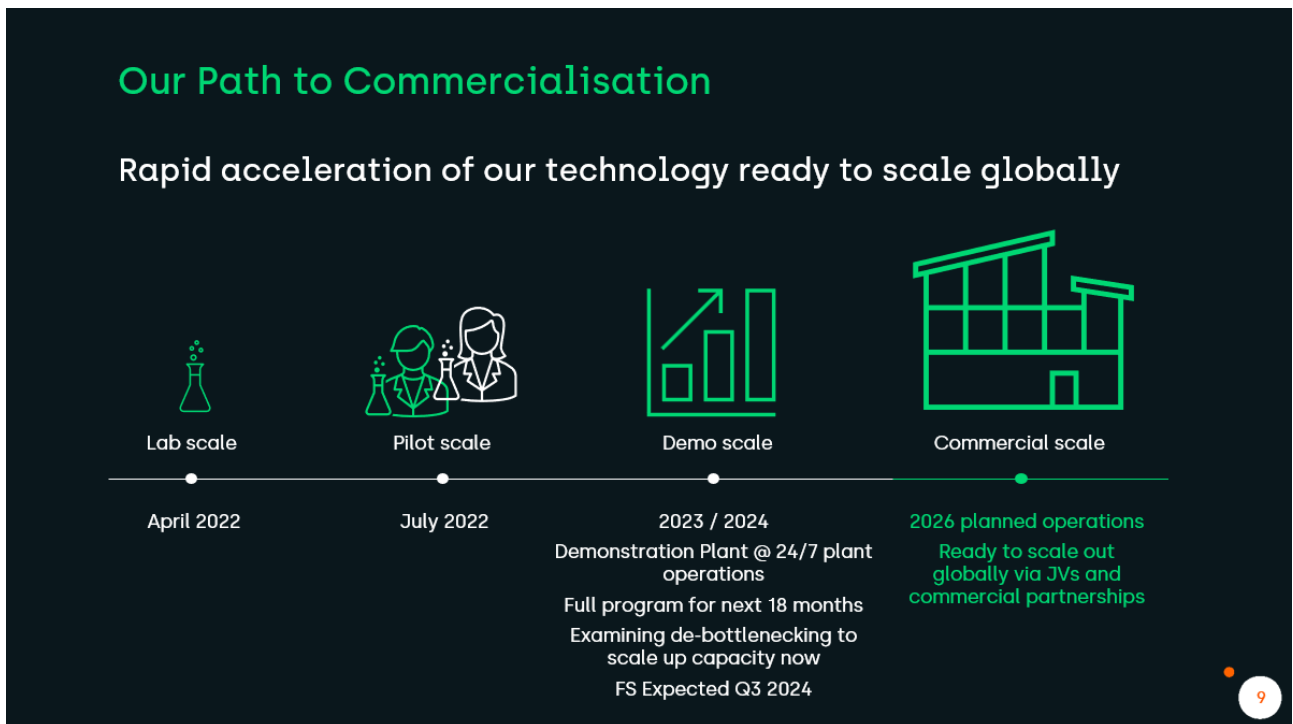


Figure 4: Ionic Technologies path to production.

MAKUUTU HEAVY RARE EARTHS PROJECT (60% IONICRE, MOVING TO 94%)

Makuutu currently ranks amongst the world's largest and most advanced ionic adsorption clay (IAC) deposits, and as such, a globally strategic resource for near term, low capital development, and long-term security of magnet and heavy REO supply.

Makuutu is being developed by Rwenzori Rare Metals Limited ("Rwenzori"), a Ugandan private company which owns 100% of the Makuutu Project. IonicRE is a 60% owner of Rwenzori, and during the quarter (ASX: 11 December 2023), announced it had signed a conditional share purchase agreement to acquire an additional 34% interest in the strategic Makuutu Rare Earths Project, taking its ownership to 94% on completion. During the March quarter, IonicRE shareholders approved the transaction terms and pending completion of conditions precedent, the transaction is expected to be completed in Q4 2024.

The increase in ownership represents a watershed moment for the Company with ownership at a 94% interest, opening a multitude of potential funding and offtake scenarios in financing the development of the Project. The Company continues discussions with partners on a transaction to acquire the remaining 6%.

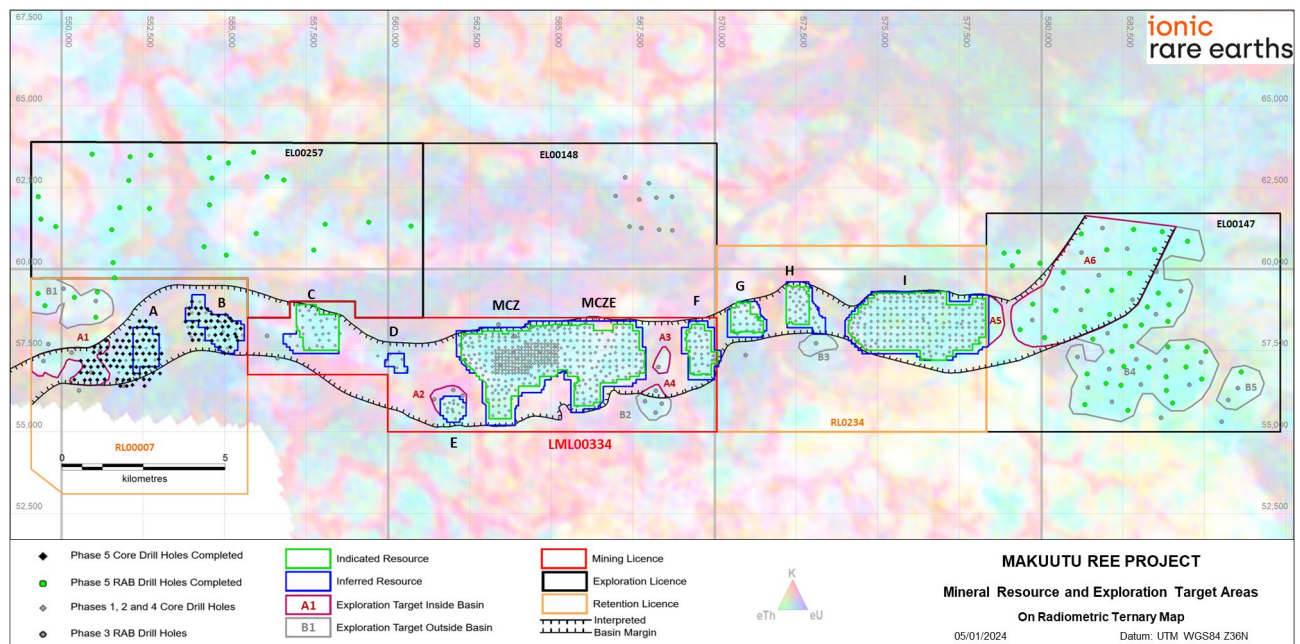


Figure 5: Makuutu Project Stage 1 Mining Licence LML00334 (red border), which has been formally awarded 17 January 2024, as part of the larger Makuutu Heavy Rare Earth Project.

Award of Large-Scale Mining Licence 00334

In January, the IonicRE Board was extremely pleased to announce that Rwenzori was formally granted large-scale Mining Licence (LML00334) over the central Makuutu tenement (previously Retention Licence 1693) (ASX: 18 January 2024). LML00334 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.

The Stage 1 Mining Licence LML00334, as shown in Figure 5, 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 4 and Table 5 and ASX: 3 May 2022) is estimated at 532 million tonnes at 640 ppm Total Rare Earth Oxide (TREO) with a cutoff grade of 200 parts per million (ppm) TREO minus Cerium Oxide (CeO₂).



Figure 6: 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.

First Mixed Rare Earth Carbonate Produced at Makuutu

A significant achievement in the form of the first production of Mixed Rare Earth Carbonate (MREC) was attained during the March quarter at the Makuutu Demonstration Plant situated on site in Uganda.

Maiden MREC, derived from Makuutu, boasts a high concentration of both magnet and heavy rare earth elements (REEs), serving as a pivotal alternative and strategically positioned future source for addressing the supply constraints associated with Dysprosium (Dy) and Terbium (Tb), of which approximately 98% of the global supply originates from China.

The production of maiden MREC marks a notable advancement in the supply chain, fostering engagement with off-takers and providing sample products for assessment by customers and strategic partners. Furthermore, this development positions Makuutu favourably for a targeted Final Investment Decision slated for later in 2024, with full commercial production planned for 2026.

Progress at the Demonstration Plant facility in Makuutu remains ongoing, with additional MREC production scheduled as part of Phase 1 activities for the remainder of the first half of 2024. This significant milestone has been achieved within a mere two months since the award of its large-scale mining license and nine months since the commencement of facility construction in Uganda.

The production of MREC serves to underscore Makuutu's status as the most advanced Ionic adsorption clay project currently under development, with its products not committed to China and poised to supply new supply chains seeking to decouple from existing sources.



Figure 7: First MREC produced onsite at the Makuutu Demonstration Plant in Uganda.

Exploration Target Upgrade

During the March quarter, the Company announced a significant 40% increase to the Exploration Target at Makuutu (ASX: 27 February 2024). The updated overall Makuutu Exploration Target has therefore been revised upward to 285 – 766 million tonnes grading 400 – 700 ppm total rare earth oxide (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 successful maiden Rotary Air Blast (RAB) drilling on Exploration Licence (EL) 00257, completed as part of the Phase 5 drill program provided the majority of the basis for the increase.

Of the 76 RAB drill holes completed in Phase 5 across EL 00147, EL00257, and Retention Licence (RL) 00007, 69 holes reported assays with clay-hosted rare earth intersections above the current resource cut-off. Drilling across EL00147 has increased confidence in the existing Exploration Target defined for Exploration Licence 00147 with no further change incorporated into the Exploration Target.

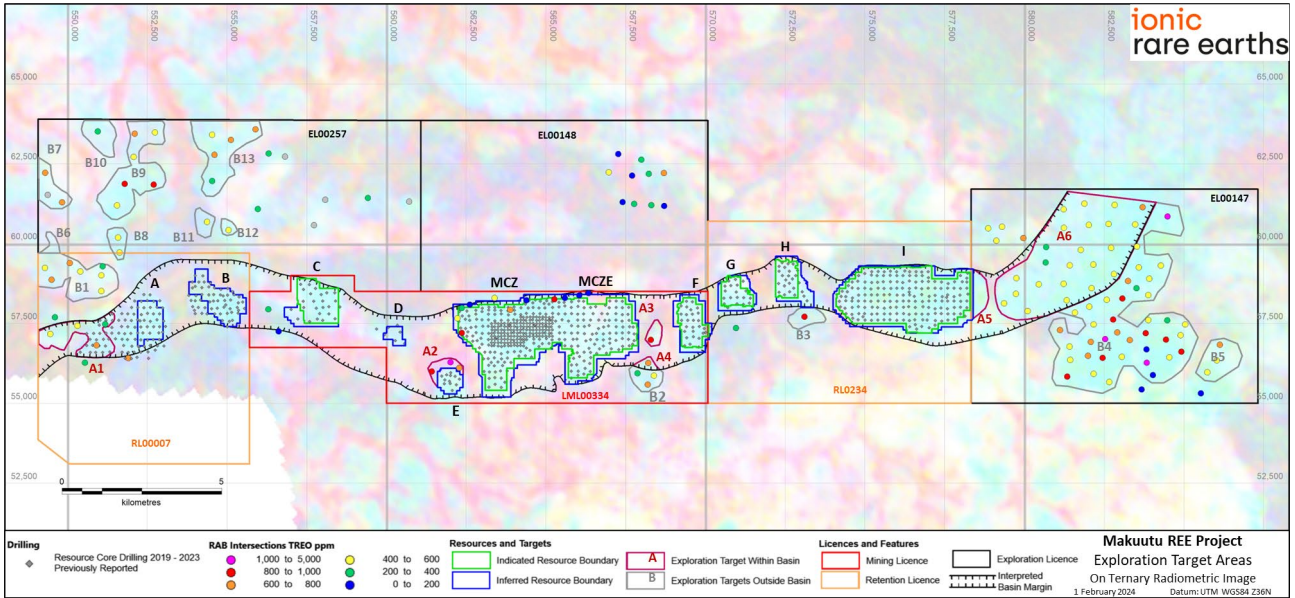


Figure 8: Makuutu project showing location of Exploration Target and Mineral Resource Areas.

Table 1: Makuutu Exploration Target.

Zone	Target ID	Tonnes Range (millions)		TREO ppm Range	
		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	700
	B5	8	28	400	600
	B6	1	3	400	600
	B7	10	32	500	700
	B8	2	5	400	600
	B9	25	83	500	700
	B10	6	20	200	500
	B11	2	6	300	600
	B12	2	6	300	500
	B13	21	70	500	700
Totals		285	766	400	700

Exploration Target ranges estimated from:

Selected Areas: RAB drilling intercepts >200ppm TREO-CeO₂ exceeding 2 metres interval thickness.

Maximum Tonnes: Area of target area x RAB intercepts above MRE cut-off grade x MRE clay insitu dry bulk density (1.7)

Minimum Tonnes: Targets A1 to A6: 50% of the Maximum Tonnes: Targets B1 to B14: 30% of the Maximum Tonnes

Maximum TREO ppm: Average of RAB drilling intercepts above MRE cutoff grade rounded up to nearest 100 ppm.

Minimum TREO ppm: Average of RAB drilling minus 100ppm rounded to nearest 100ppm.

Table 2: Exploration Target by Licence at Makuutu.

Tenement	Tonnes Range (millions)		TREO ppm Range	
	Minimum	Maximum	Minimum	Maximum
LML00334	10	26	500	600
RL00007	29	73	400	600
RL00234	2	6	600	800
EL00147	175	436	400	600
EL00257	69	225	400	600
Totals	285	766	400	700

Exploration Target ranges estimated based upon notes provided in Table 1.

Phase 5 Infill Drilling

During the March quarter, the Company announced the remaining assays for the 128-hole Phase 5 resource infill and extension drilling program was completed on Retention Licence (RL) 00007.

Tranche 2 (ASX: 1 February 2024) and Tranche 3 infill drilling results (ASX: 21 February 2024) reported clay bearing rare earth mineralisation above the MRE cut-off grade across all 72 holes announced, with the best intervals being the following;

- 4.4 metres at 1,412 ppm TREO from 1.2 metres in RRMDD789
- 8.1 metres at 1,261 ppm TREO from 3.7 metres in RRMDD822
- 3.9 metres at 1,077 ppm TREO from 2.3 metres in RRMDD831
- 5.3 metres at 1,044 ppm TREO from 2.7 metres in RRMDD784
- 17.1 metres at 1,003 ppm TREO from 4.8 metres in RRMDD778
- 10.2 metres at 991 ppm TREO from 1.7 metres in RRMDD818
- 5.6 metres at 997 ppm TREO from 4.3 metres in RRMDD790
- 9.5 metres at 824 ppm TREO from 1.1 metres in RRMDD825
- 14.6 metres at 812 ppm TREO from 3.7 metres in RRMDD834
- 16.2 metres at 713 ppm TREO from 4.0 metres in RRMDD771
- 11.0 metres at 691 ppm TREO from 4.0 metres in RRMDD770
- 14.6 metres at 684 ppm TREO from 6.1 metres in RRMDD772

The results follow the positive Tranche 1 assays (ASX: 23 November 2023), with 125 of the 128 holes returning clay hosted rare earth intersections above the mineral resource estimate (MRE) cut-off grade.

The program is intended to increase resource estimation confidence from inferred to indicated status on resource Areas A and B, and to test extensions of those areas to expand the mineral resource area. Figure 1 is a plan of the Makuutu MRE and exploration target areas with MRE Areas A and B located on the western end of the deposit located within RL00007.

The upgraded Makuutu MRE is expected to be announced in May 2024.

BRAZILIAN REFINING AND RECYCLING JOINT VENTURE

Post the end of the March quarter, the Company announced that it has entered into a Binding Agreement (**the Agreement**) with ASX listed Viridis Mining and Minerals Limited (ASX: VMM) (“Viridis”) to form a 50:50 joint venture company (**JV Co**) with the aim of establishing a significant leading role in the future global supply chain for Rare Earth Elements (REE) (ASX: 3 April 2024).

The Joint Venture aims to construct a refinery and magnet recycling facility in Brazil utilising Ionic Technologies' separation technology, demonstrated now at IonicRE's Belfast magnet recycling Demonstration Plant, where magnet REO production is successfully underway.

The Joint Venture Deal

The joint venture agreement is seen as an outstanding opportunity for IonicRE to advance the strategy of the Company to become a leading supplier to the western world, of high quality, secure and dependable magnet and heavy rare earths, critical to the multitude of dependent industries and energy transition affecting billions of people around the globe. Forming a 50:50 Joint Venture with Viridis, IonicRE secures strategic opportunity leveraging their technology and IP to do so ensuring a successful outcome for both companies and for all stakeholders. This joint combination advances the growth strategy for both companies by several years and draws on the support and alignment of several state agencies of Brazil, a nation that is both rich in rare earths and aims to become a global leader in rare earth production and supply.

Both Companies will co-fund the JV Co and the proposed Brazilian production facility on a 50:50 basis and a Scoping Study is targeted for completion by the end of 2024. Pending a decision to proceed the JV Co would then aim to complete a preliminary feasibility study (PFS) within the following 18 months.

Integrating World-Class Geology with World-Leading Technology

Both Companies recognise that this opportunity brings a stronger sum-of-the-parts operation combining assets, skillsets, IP, technology, personnel, and enterprise, than by progressing independently. Thereby accelerating their respective business plans and aligning with the RE supply chain strategic ambitions of Brazil.

CORPORATE

Appointment of Executive Chairman

On 24 January 2024 the Company announced the appointment of Mr Brett Lynch to the role of Executive Chairman. Mr Lynch is an experienced executive with a strong background in mining and mining-related businesses across Australia, Asia, USA, and emerging markets.

He has over 30 years' experience in international business development and management, with an outstanding track record of delivering shareholder value. He has a Bachelor of Mining Engineering at University of Melbourne.

From 2019 until August 2023, Mr Lynch was Managing Director of Sayona Mining Limited (ASX: SYA), where he was instrumental in defining a North American, low-carbon-footprint lithium supply chain into the North American market. During his time with Sayona, Mr Lynch oversaw its growth from a junior explorer to an ASX 200 company.

On joining the Company, Mr Lynch made a \$1.5 million investment in the Company (ASX: 24 January 2024).

Capital Raising

Post the March quarter (ASX: 24 April 2024), the Company received firm commitments from existing sophisticated investors to raise \$5.5 million (before costs) through the issue of 423,076,923 fully paid ordinary shares ("Shares") at an issue price of \$0.013 per Share ("Placement"). Participants will receive 3 free attaching unlisted options for every 4 shares issued with an exercise price of \$0.02 (being a 54% premium to the issue

price of Shares under the Placement) and a 4-year term which will see 317,307,690 unlisted options ("Options"). 216,967,454 free attaching unlisted Options will be issued utilising the Company's existing placement capacity pursuant to Listing Rule 7.1, with the balance to be issued subject to shareholder approval. The issue price under the Placement represents a 25.3% discount to the volume weighted average price ("VWAP") of IonicRE shares over the past 10 trading days. Shares issued under the Placement will be issued utilising the Company's existing placement capacity pursuant to Listing Rule 7.1 and are expected to be issued on or about Wednesday, 1 May 2024. The Shares issued under the Placement will rank equally with IonicRE's existing Shares quoted on the ASX.

Mr. Brett Lynch, IonicRE's Executive Chairman, will subscribe for 38,461,539 Shares (\$500,000) under the Placement plus 28,846,154 free attaching Options with an exercise price of \$0.02 and a 4-year term, subject to receiving approval at a general meeting of shareholders to be held this quarter. This is in addition to Mr Lynch's \$1.5 million equity investment in January 2024 when he joined the Board of the Company.

Canaccord Genuity (Australia) Limited and MST Financial Services Pty Limited acted as Joint Lead Managers to the Placement, with Canaccord acting exclusively as Global Coordinator and Sole Bookrunner (Global Coordinator) to the offer.

Forward Outlook

Looking ahead, IonicRE is set to capitalise on the robust infrastructure and supportive policy environment for its Ionic Technologies' Magnet Recycling facility in Belfast, UK. With continuous production now achieved, and a full operational schedule now until Q3 2025, the Company is progressing several groups towards commercial partnerships across key target markets for growth, specifically Europe, the US and Asia.

The Makuutu Project has transitioned from development to production, now producing MREC at its Demonstration Plant on site. MREC product will be dispatched to several parties as part of advanced offtake and strategic partner negotiations as part of a plan to advance the Project towards a Final Investment Decision in late 2024. An updated Makuutu MRE is expected to be announced in May 2024.

This year is set to be transformative for IonicRE as it continues to navigate towards the forefront of the rare earths market offering a path to resilient supply chain solutions. With the continued integration of sustainable practices and the expansion of operational capabilities, IonicRE is well-positioned to meet the increasing global demand for magnet and heavy rare earths.

The Company's strategic initiatives and ongoing project developments suggest a dynamic and promising trajectory into the next phase of its growth.

Corporate

During the quarter, the Company expended approximately \$2,044,000 on Ionic Technologies demonstration and study activities, and \$1,282,000 on Makuutu exploration, demonstration plant and study activities reported above.

Payments to related parties of the entity and their associates totalled \$220,100 and consisted of \$37,500 Non-executive Director fees and \$182,600 Executive Director fees.

Mineral Concessions Held

IonicRE is pleased to advise the following information, pursuant to ASX Listing Rule 5.3.3, for the quarter ended 31 March 2024, and to the date of this announcement.

1. No mineral exploration tenements were acquired or disposed of during the period;
2. Mineral exploration tenements held are set out below in Table 3; and
3. No farm-in or farm-out agreements were entered into during the period.

Table 3: 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 4: Makuutu Rare Earth Project Resource Tabulation of REO Reporting Groups at 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	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

Table 5: Mineral Resources by Area (ASX: 3 May 2022).

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.

For more information about IonicRE and its operations, please visit www.ionicre.com.

Authorised for release by the Board.

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About Ionic Rare Earths Limited

Ionic Rare Earths Limited (ASX: IXR or IonicRE) is leading the secure supply of magnet rare earths, leveraging our sustainable technology, pioneering magnet recycling to drive the next generation of wind turbines, electronic vehicles, defence, and advanced manufacturing.

Our vision is a closed-loop supply chain that minimises environmental impact and maximises access to critical, strategic raw materials, through targeted global expansion and empowering new benchmarks in sovereign capability and innovation.

Ionic Technologies International Limited (“Ionic Technologies”), a 100% owned UK subsidiary, 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 and has moved to continuous production in March 2024, providing a first mover advantage in the industrial elemental extraction of REEs from recycling. In September 2023, Ionic Technologies announced collaboration partnerships with Ford Technologies, Less Common Metals (LCM) and the British Geological Survey (BGS) 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.

The Makuutu Rare Earths Project in Uganda, (60% owned; moving to 94% in Q2 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 REO. In March 2023, IonicRE announced a positive stage 1 Definitive Feasibility Study (DFS) for the first of six tenements to progress to a mining licence, which was awarded in January 2024. Makuutu is now producing mixed rare earth carbonate (MREC) from a Demonstration Plant on site to advance offtake negotiations.

IonicRE has also executed a transformational 50/50 joint venture refinery and magnet recycling facility in Brazil with Viridis Mining and Minerals Limited (ASX: VMM) to separate high value magnet and heavy rare earths from the Colossus Project’s full spectrum of REOs.

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

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.

ASX Announcements

- 25 March 2024 Ionic Technologies Starts Continuous Magnet REO Production
- 19 March 2024 Ionic Technologies produces high purity Terbium Oxide
- 14 March 2024 Ionic Technologies advancing wind turbine recycling activity
- 13 March 2024 First Mixed Rare Earth Carbonate produced at Makuutu
- 7 March 2024 IonicRE Nearing First Rare Earth Production at Makuutu
- 27 February 2024 Makuutu Exploration Target Upgraded 40%

- 21 February 2024 Makuutu Phase 5 Infill Tranche 3 Drill Results
- 16 February 2024 Makuutu Earn-In Final Milestone Fee
- 6 February 2024 121 Mining Investment Cape Town Presentation
- 1 February 2024 Amended December Quarterly Activities Report
- 1 February 2024 Makuutu Phase 5 Infill Tranche 2 Drill Results
- 31 January 2024 IonicRE Executive Changes
- 29 January 2024 IonicRE completes placement
- 25 January 2024 IonicRE Presenting at MST Financial African Mining Forum
- 24 January 2024 IonicRE appoints Brett Lynch as Executive Chairman
- 22 January 2024 Magnet Recycling Moves to 24-7 Operations in Belfast
- 18 January 2024 Mining Licence Signed for Makuutu Heavy Rare Earth Project
- 2 January 2024 Makuutu Mining Licence Provisionally Awarded

Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity
Ionic Rare Earths
ABN
84 083 646 477
Quarter ended ("current quarter")
31 March 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(1,282)	(7,955)
(b) development	-	-
(c) production	-	-
(d) staff costs	(728)	(2,111)
(e) administration and corporate costs	(1,375)	(3,104)
1.3 Dividends received (see note 3)		
1.4 Interest received	11	74
1.5 Interest and other costs of finance paid	(44)	(44)
1.6 Income taxes paid		
1.7 Government grants and tax incentives	580	1,195
1.8 Other (provide details if material)	(2,044)	(4,444)
1.9 Net cash from / (used in) operating activities	(4,882)	(16,389)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	(430)	(1,245)
(d) exploration & evaluation	-	-
(e) investments	-	(600)
(f) other non-current assets	(20)	(91)

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	Net cash from / (used in) investing activities	(450)	(1,936)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	2,401	9,213
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	215
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	(425)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	Net cash from / (used in) financing activities	2,401	9,003
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	4,538	11,117
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(4,882)	(16,389)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(450)	(1,936)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	2,401	9,003

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	233	45
4.6	Cash and cash equivalents at end of period	1,840	1,840

5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts		Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	1,653	4,352
5.2	Call deposits	187	186
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,840	4,538

6. Payments to related parties of the entity and their associates		Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	220
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i>		
<i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end		-
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(4,882)
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(4,882)
8.4 Cash and cash equivalents at quarter end (item 4.6)	1,840
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	1,840
8.7 Estimated quarters of funding available (item 8.6 divided by item 8.3)	0.4
<i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	
8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer: No, final capital expenditure on demonstration plants at both the Makuutu Rare Earths project in Uganda and the magnet recycling facility in Northern Ireland were finalised by quarter end.	
8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer: Yes, as announced after quarter end on 24 April 2024, the Company has raised \$5.5 million (before costs). In addition, the Company has liquid investments in ASX listed company with a current value >A\$3.0 million.	
8.8.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer: Yes, for reasons stated in 8.8.2 above.	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 30 April 2024



Signed: M Licciardo, Company Secretary

Authorised: By the Board

(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.