

29 October 2021

QUARTERLY REPORT FOR THE PERIOD ENDING 30 SEPTEMBER 2021

HIGHLIGHTS

- **Major milestone reached with completion of Phase 4 drill program, ahead of schedule**
- **The Ugandan DGSM has approved IonicRE's application to convert Exploration Licence 1766 to Retention Licence 00234 plus approved new northwestern tenement application Exploration Licence 00257**
- **Makuutu Feasibility Study, ESIA and Community Engagement activity ramps up**
- **IonicRE investigating standalone rare earth refining asset to maximise unique basket and long-term shortfall in supply**
- **Strategic partnering discussions ongoing**
- **Ms. Jill Kelley and Mr. Max McGarvie appointed to the Board as Executive Director and Non-Executive Director respectively**

Ionic Rare Earths Limited (ASX: IXR) ("IonicRE" or "the Company") is pleased to provide its Quarterly Report for the period ending 30 September 2021, including exploration and development activities at its 51% owned Makuutu Rare Earths Project ("Makuutu") in Uganda.

Makuutu is one of the world's largest scale ionic adsorption clay (IAC) hosted Rare Earth Element (REE) deposits, located 120 km east of Kampala in Uganda. The Makuutu Mineral Resource Estimate (ASX: 3 March 2021) was announced as being 315 million tonnes at 650 ppm Total Rare Earth Oxide (TREO) with a cut-off grade of 200 parts per million (ppm) TREO minus Cerium Oxide (CeO₂).

Ionic Rare Earths Managing Director Mr Tim Harrison commented on the Company's activities during the quarter:

"This quarter represents yet another quarter of material progress at Makuutu and for IonicRE. The recent completion of the Phase 4 drill program, where we had four rigs mobilised with three drill teams operating, completed the largest drill program at Makuutu to date. The larger program was enabled by the rate at which the team was able to execute the program and the ultimate confidence the Company has in the Project. The larger Phase 4 drill program aligns with our plans to increase

the resource confidence of the bulk of the existing resource base at Makuutu, to a target exceeding 250 million tonnes Measured and Indicated. Such a target will potentially provide a 25-year base for the Feasibility Study.”

“The first tranche of assays has provided an additional benefit indicating an alternative near surface high grade zone in the Makuutu Central eastern zone, and we have a further four tranches of assays at the lab or on route, so we are very excited to get those assays back and progress the next resource update. We expect the final samples to leave Uganda over the next fortnight.”

“We have also had very successful outcome with the results received from the Phase 3 reconnaissance drill program. Completed earlier this year, the results received in July confirmed thick clay zones to the east of the Makuutu Project at EL00147. Pleasingly, the thickness of some of these results exceeded expectations.”

“Additionally, the identification of continuing extensions immediately adjacent to the existing MRE, plus a new zone to the northwest has the potential to greatly extend the life at Makuutu and move towards a multi-generational source of critical and heavy rare earths.”

“Project on the Makuutu Feasibility Study, the Environmental and Social Impact Assessment and Community Engagement programs in Uganda has continued with activity ramping up and the Project site hosting numerous delegations within Uganda.”

“The announcement that IonicRE is evaluating our own dedicated rare earth refining asset is a reflection of the Company’s confidence in the unique appeal in the basket composition at Makuutu, the strategic importance of the basket and the potential upside in that basket value in the future. The resultant discussions with numerous strategic partner groups affirms its unique appeal, driven primarily by the highly desirable nature of the individual rare earths that Makuutu can potentially produce, and its low capital development potential.”

Phase 4 Drilling Program Completed

The Phase 4 infill drill campaign was completed ahead of schedule at the Makuutu Rare Earths Project (“Makuutu”) in Uganda.

Makuutu has been confirmed as one of the world’s largest ionic adsorption clay (IAC) hosted rare earth element (REE) deposits, located 120km east of Kampala in Uganda. The Phase 4 drill program has targeted a near conversion of previously classified Inferred resources across the Makuutu central and eastern zones and is now targeting a reclassification of Measured and Indicated resources in excess of 250 million tonnes as part of the planned Mineral Resource Estimate (MRE), to be updated in late Q1 2022. A significant increase in the MRE classification will form the next planned milestone for the Project in order to move towards completion of a Feasibility Study, including supporting activities, which will enable the submission of a Mining Licence Application (MLA) in the second half of 2022.

The Phase 4 program had prioritised drilling at the previously classified resources across RL 1693 to enable a reclassification to Indicated and Measured category. The drill program was also aimed at converting RL 1693 Exploration Targets to classified resources. The program was expanded to include infill drilling to increase classification confidence on the newly awarded RL00234 (previously EL 1766).

The Phase 4 drill program is illustrated in both Figure 1 and Figure 2, targeting the following areas; Areas C, E, Central Zone, Central Eastern Zone, F, G, H and I. Cumulatively this represents nearly 90% of the existing MRE at Makuutu, as outlined within Table 2.

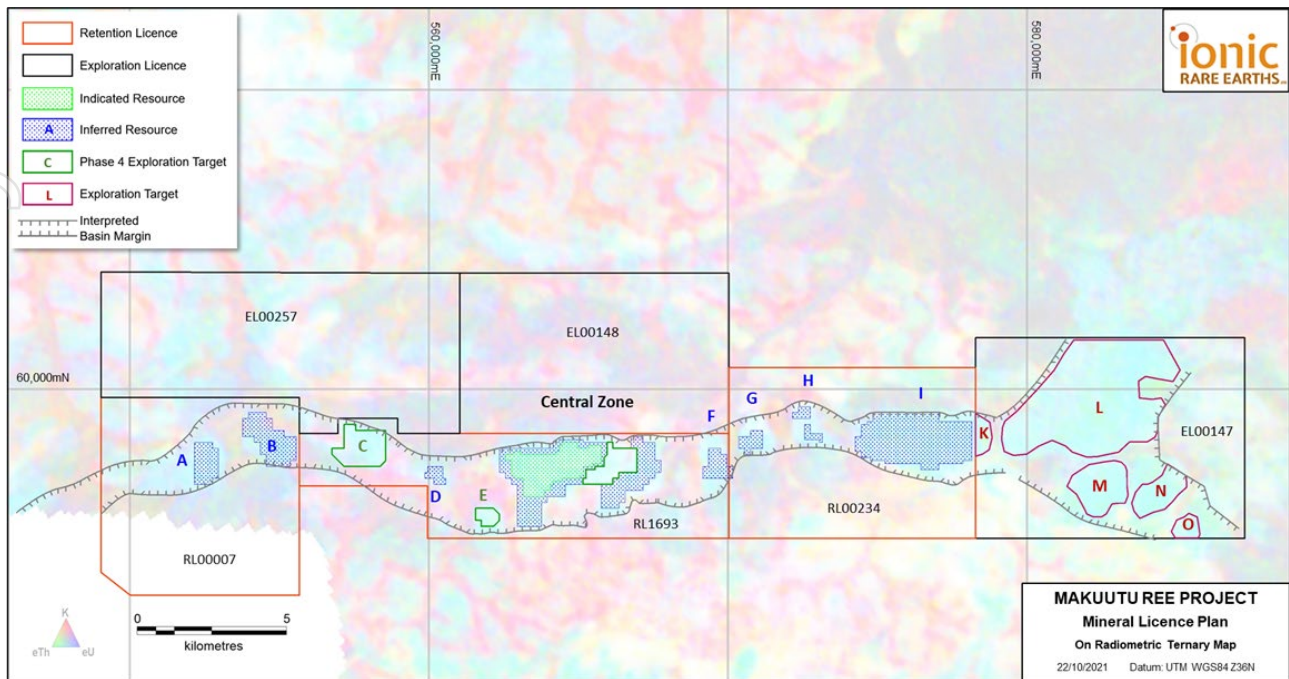


Figure 1: Makuutu Rare Earths Project, showing the recently approved Retention Licence 00234 and Exploration Licence 00257, along with current resource areas and exploration targets across the 37-kilometre-long mineralisation trend.

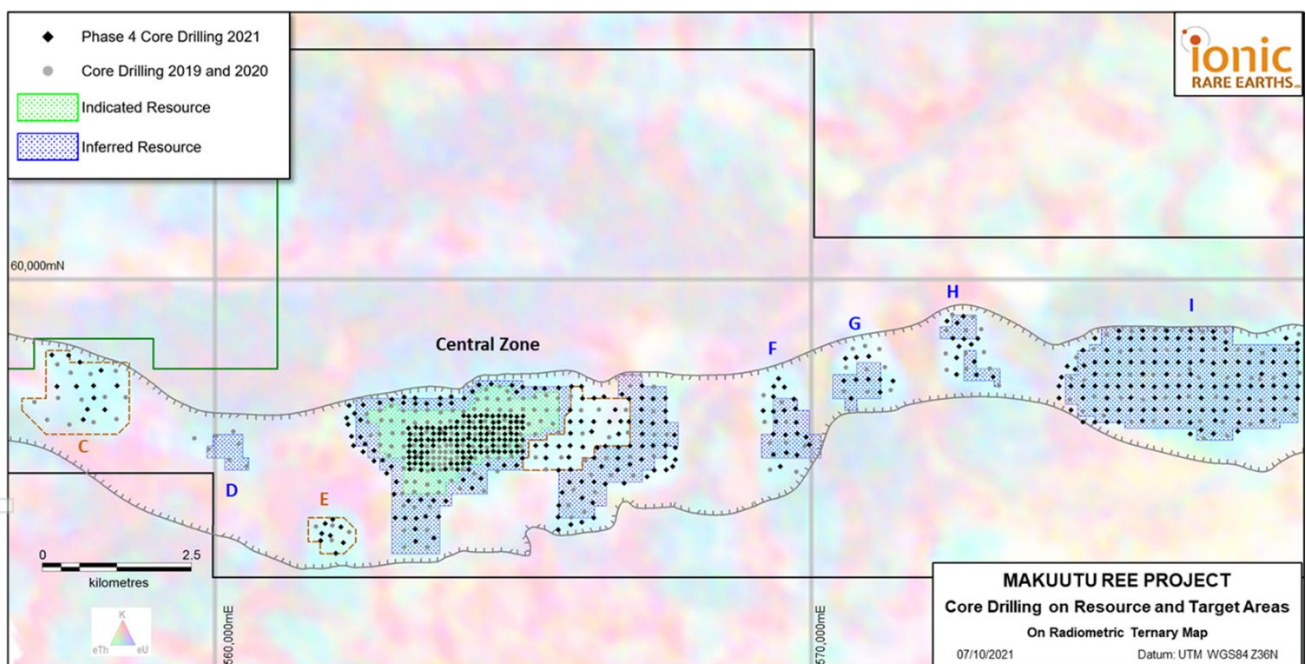


Figure 2: Makuutu resource and exploration target areas with Phase 4 core drilling completed in 2021 (black points) and previous core drilling (grey points).

Tranches two to five have arrived in Australia and are with the assay lab. Unfortunately, significant delays of approximately 12 weeks are being experienced in the delivery of assay results. Tranche two was delivered to the analytical lab in mid-August, tranches three and four in September and tranche five was dispatched from Uganda last week.

All remaining drill core samples are expected to be dispatched from Uganda over the next fortnight.

Phase 3 RAB Drill Program and New Exploration Licence

In July 2021, the Company applied for an additional Exploration Licence (EL) located to the northwest of the current resource area based upon the encouraging results from the Phase 3 Rotary Air Blast (RAB) drill program. As reported on 20 July 2021, the rare earth element (REE) mineralised intercepts on the North-West radiometric target presented an opportunity for further REE mineralisation to exist to the north, and outside of the current licence area. To evaluate the opportunity an application for an EL was submitted over that area with the Ugandan Department of Geological Survey and Mines (DGSM). The application designated TN03573 was recently approved as EL 00257. EL 00257 is illustrated in Figure 1, and also illustrated in Figure 3 in relation to the Phase 3 RAB results announced during the quarter.

EL00257, has been granted for three (3) years and will provide the Company with additional new greenfield exploration potential at Makuutu. The addition of EL00257 now increases the total tenement area of Makuutu to approximately 300 square kilometres.

The Company already has the highly prospective EL00147, which as part of the Phase 3 drill program returned thick REE mineralised clay zones in numerous holes drilled on the tenement (Refer ASX 14 July 2021). Of the 25 holes drilled on EL00147, 23 returned REE grades above the current MRE cut-off providing significant scope for material extension of project life at Makuutu.

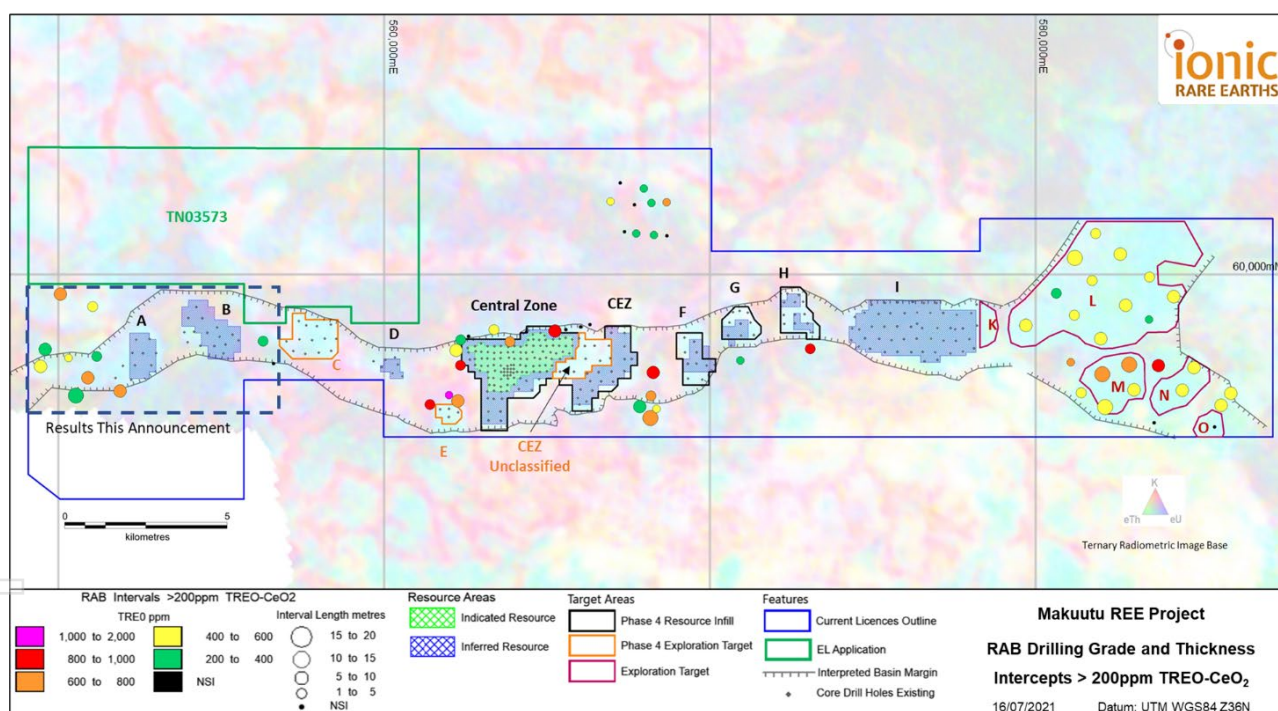


Figure 3: Drill program status plan showing completed drill holes (up to Phase 3) covering the Makuutu Rare Earths Project with the MRE and target areas, and the new EL application TN03573 (awarded EL00257) to northwest of existing Project tenements.

During the quarter, the Company received approval for the conversion of EL 1766 to Retention Licence 00234. RL00234 has been granted for three (3) years and will continue to form a substantial component of the potential increase in scale of Makuutu. As such, at the end of the quarter, all tenements remain in good standing.

Makuutu Rare Earth Project Feasibility Study

During the quarter, the company progressed the Feasibility Study with completion of an initial gap analysis to identify opportunities from the Scoping Study to be included in the study. Several opportunities have been flagged for further analysis and progress remains on track to support the MLA in the second half of 2022.

The ESIA draft is nearing finalisation with field work and community engagement programs, including the socio-economic baseline surveys, completed during the quarter. The information is presently being collated and reviewed internally prior to the draft lodgment with the Ugandan National Environmental Management Authority (NEMA) expected within November.

Field work programs, including geotechnical and hydrogeology programs have commenced on site, and the drill collar survey program is approximately 50% complete.

The Company, via subsidiary Rwenzori Rare Metals Limited (“RRM”) now has a fully operational office facility located at Jinja where it is building its base of operations to support ongoing Project related activities and building its owners team in Uganda.

Additionally, the Project team has hosted numerous delegations from government, local councils and the DGSM at the Makuutu site, with feedback providing a very strong endorsement of the Project and commitment demonstrated at community level.



Figure 4: One of the numerous community engagement meetings with local stakeholders at Makuutu Rare Earths Project



Figure 5: IonicRE via subsidiary RRM has contributed health consumables to local district health centres across the Makuutu Project area.

Evaluation of a Standalone Heavy Rare Earth Refinery

On the 9th August 2021, the Company announced a formal evaluation of the business case for the development of a standalone rare earth Separation and Refining facility, to be developed for the downstream processing of mixed rare earth carbonate (MREC) product from Makuutu to produce refined critical and heavy rare earth oxides (CREO, HREO).

A review of existing global HREO refining capacity indicated the majority of capacity exists in China, with minor capacity identified in Vietnam. IonicRE has concluded the development of a dedicated facility, strategically located, has the potential to be a substantial earnings accretive asset, which would enhance and strengthen the engagement and participation of potential strategic partners looking to secure access to product from IonicRE's Makuutu basket, whilst adhering to the highest ESG standards via a secure and traceable supply chain.

The scale of the Separation and Refinery facility is likely to be initially set at approximately 4,000 tonnes per annum REO equivalent feed, reflecting an alignment to the peak projected production capacity announced in the Makuutu Rare Earths Project Scoping Study (ASX: 29 April 2021). Given the potential for Makuutu to support long-life, low-cost REO production for a period of 27 years, and recent exploration results defining further scale for significant additional growth in resources at Makuutu, the development of a standalone Separation and Refining asset provides greater long term strategic importance and upside for the Company.

IonicRE at present owns 51% of Makuutu, however the Company will move to 60% ownership of Makuutu on the completion of the Feasibility Study before October 2022 and has a pre-emptive right over the remaining 40% stake in Makuutu.

The proposed Separation and Refinery facility will be 100% owned by IonicRE and will enable the company to increase payability attained from the MREC basket (70% payability) produced at Makuutu to 100% payability for refined individual REO products. The study will also include a location analysis to help refine the list of potential global sites against an identified criterion, with alignment to demands of potential strategic partners looking to ensure security of supply long-term.

Additionally, the facility will have the capacity to receive MREC product from other producers and as such provides significant long term strategic importance.

The Company remains engaged with various groups with a view to optimizing the configuration of the asset to investigate product offerings and integration with other industrial partners.

Scandium Market Potential

Since the Company announced the initiation of scandium marketing activities on 28 January 2021, the Company has further increased the long-life potential of Makuutu with a substantial near 4 fold increase in the contained Scandium Oxide (Sc_2O_3) resource from 2,300 tonnes to 9,450 tonnes as per the Mineral Resource Estimate announced 3 March 2021 (refer Table 1 – ASX 21/09/21).

The Scoping Study announced 29 April 2021 provided an overview of the potential for Sc_2O_3 production from Makuutu, with initial production produced from 1 module of approximately 20-25 tonnes Sc_2O_3 in Year 1 ramping up to 90-100 tonnes by year 10. Negligible additional cost is incurred in the recovery and production of Sc_2O_3 , which will report to the mixed rare earth carbonate (MREC) product at Makuutu. The low capex development at Makuutu is a clear differentiator to other potential scandium sources and provides IonicRE with a tremendous advantage to help build and establish a key foothold in what the Company expects will be metal of high demand once initial supply can be demonstrated.

Given the potential for a substantial increase in the Sc_2O_3 market in the future, enabled through de-risking a supply chain driven by long term reliable, diverse and secure scandium sources, IonicRE could expect the potential for scandium at Makuutu to be immense. The recent moves by global aluminium giants Rio Tinto (ASX: RIO) and RUSAL (SEHK:486) to enter the scandium markets underlines the potential as a metal of the future.

While the current scandium market is 15-20 tonnes per annum as Sc_2O_3 , the global transportation industry has the potential to turn scandium into a billion-dollar market. The existing market for aluminium across automotive, aerospace, marine, rail and space applications is approximately 7 million tonnes per annum. IonicRE expects there is potential for significant market penetration by aluminium-scandium (Al-Sc) alloys into this market globally, representing scope for the Sc_2O_3 market to grow to approximately 800 tonnes per annum. This market dynamic is illustrated in Figure 1 – ASX 21/09/21.

The adoption of Sc_2O_3 will also be heavily dependent on its price-point. As the market grows, the Sc_2O_3 price is forecast to reduce as economies of scale for production can occur. This reduction in Sc_2O_3 price is expected to facilitate Al-Sc to be used in an increasing number of applications, further growing the potential market. As a result, IonicRE has adopted long term Sc_2O_3 pricing basis reducing from approximately US\$1,500 per kg today, to initial pricing of approximately US\$1,000 per kg and long-term pricing for the peak Makuutu Sc_2O_3 production of approximately US\$700 per kg.

On 9 August 2021, the Company announced plans to evaluate the economics associated with the development a standalone rare earth separation and refinery for the processing of the critical and heavy rare earth dominant MREC from Makuutu. The refinery will also separate and refine Sc to a purity exceeding 99% and is aligned with supply directly for Al-Sc master alloy manufacturing.

The Company continues discussions with global groups interested in development of Al-Sc alloys and is exploring opportunities for collaboration in this sector. Significant recent development has been in the applications for 3D printing, where components can be rapidly produced for niche components used in automotive, aerospace and space applications.

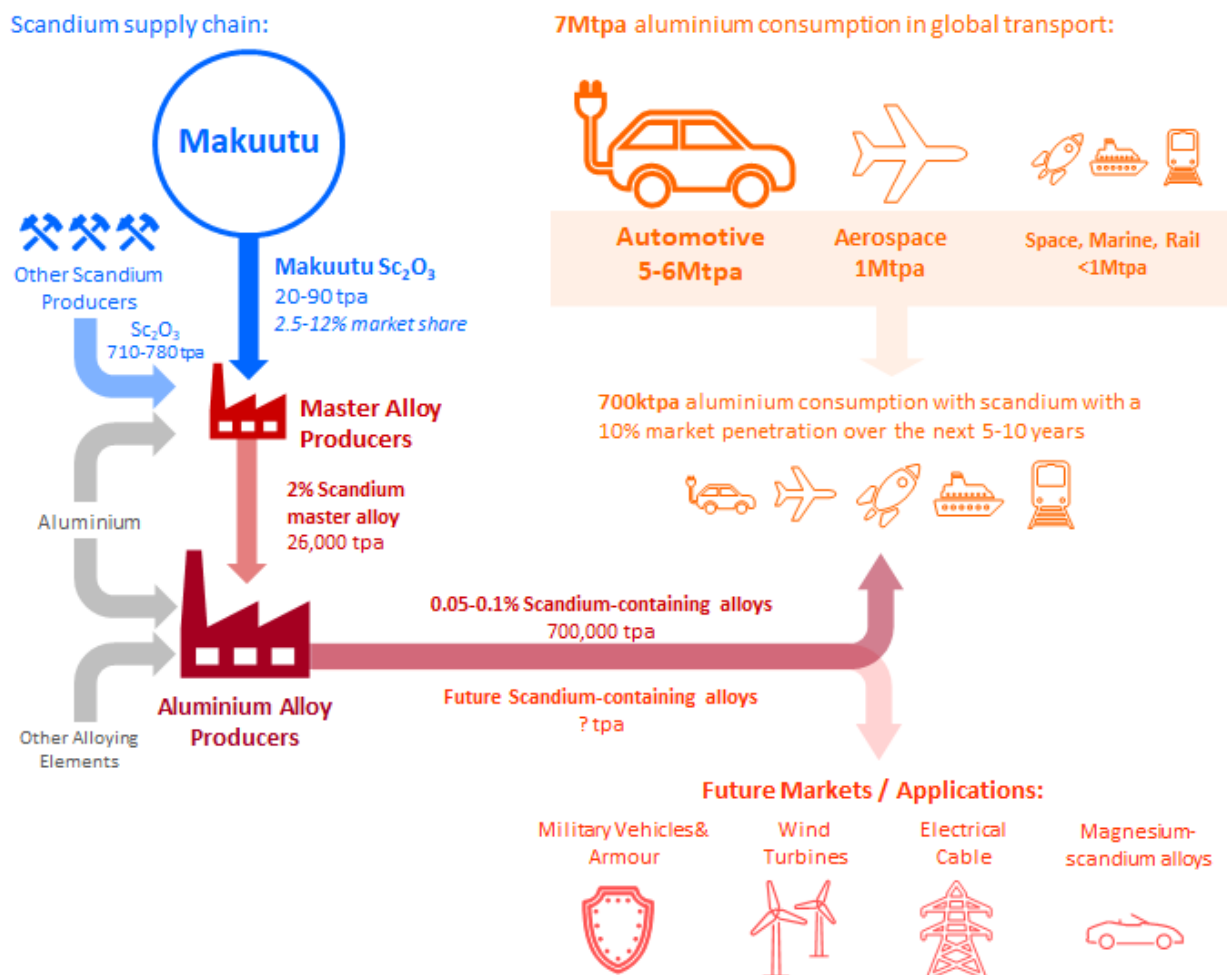


Figure 6: Scandium Oxide market potential

Board Appointments

In July 2021, the Company made two appointments to the Company's Board. Max McGarvie was appointed as a Non-Executive Director of the Company. Mr McGarvie is a senior mining executive with an extensive portfolio of technical/managerial appointments in a career exceeding 45 years in mine development, mineral processing, operational and management roles across Australia, Africa and the Middle East.

Mr McGarvie has a long and distinguished career in the mining industry, a significant portion of this with Iluka Resources Limited and prior entities, including development roles within its mineral sands operation at Eneabba, Western Australia and a major role in returning the Sierra Rutile mineral sands operation in Sierra Leone (operated by Iluka) to profitable operations following the civil war in that country.

Mr McGarvie's career has covered a range of senior roles in the mining sector including Production Manager, Registered Mine Manager and CEO, and he has a deep knowledge and understanding of the African environment and project development in this theatre.

His most recent role was Executive General Manager for Global Advanced Metals Pty Ltd, an international business with operations in Australia, the United States and Japan with customers based primarily in Asia, North America and Europe, where he managed the Australian division of the group, focused on tantalum mining and processing in their Australian operations (including the restart of Wodgina and Greenbushes), and sourcing of tantalum concentrates from the DRC and Rwanda. Prior to this, Mr McGarvie was Managing Director of Bemax Resources and oversaw the integration of WA and NSW assets into the Cristal Global business unit.

As part of its strategy towards increasing its presence in North America, the Company has appointed Ms Jill Kelley as an Executive Director to drive engagement with key stakeholders and potential end-users in the US. The appointment of Ms Kelley is expected to greatly aid the progression of key relationships with global groups, including but not limited to those in the US.

Ms Kelley has previously held roles at the highest levels of international leadership and has played a crucial role in supporting US military operations spanning over 60 countries, collectively known as the US Coalition Allies. Ms Kelley's networks in, and knowledge of, Europe, the Middle East, Asia, and South and Central America have helped advance American interests during the most critical points in current history.

As former honorary ambassador to US Central Command General Mattis and CIA Director David Petraeus, Ms Kelley met regularly with Royals, Presidents, Prime Ministers, and Parliamentarians to foster military, security, and economic relationships. Ms. Kelley received the Pentagon's esteemed Joint Chiefs of Staff Award for her leadership, along with the Multi-National Military Forces Award, an honour only bestowed upon a few individuals.

As a former diplomat, Ms Kelley was the youngest appointed Honorary Consul General to South Korea. Ms Kelley's title was bestowed by the President of the Republic of South Korea for her ability and expertise to influence and advance international security, trade and economic opportunities including her help in passing the ROK Free Trade Agreement.

In 2017, Ms Kelley became President of Military Diplomacy Strategies, an international advisory firm that counsels embassies and advises multi-national companies with an in-depth analysis of geopolitical challenges with security, trade and economic opportunities across the global community. In this role, Ms Kelley made high level introductions, advanced government and corporate relations, helped execute strategic partnerships and oftakes, and facilitated cross-border relationships on a global scale.

Mr Brad Marwood had advised the Board that due to his recent appointment to a second executive role he would not be able to devote the time and attention to IonicRE required as a director. As a result, Mr Marwood has tendered his resignation from the Board.

Corporate

During the quarter, the company expended approximately \$1,952,000 on the exploration and study activities reported above.

Payments to related parties of the entity and their associates totaled \$212,000 and consisted of \$32,000 Director fees, \$7,000 in superannuation related to Director fees and \$173,000 Executive Service fees.

Mineral Concessions Held

IonicRE is pleased to advise the following information, pursuant to ASX Listing Rule 5.3.3, for the quarter ended 30 September 2021 and to the date of this announcement.

1. Apart from the grant of Exploration Licence 00257 and the conversion of Exploration Licence 1766 to Retention Licence 00234, no mineral exploration tenements were acquired or disposed of during the period;
2. Mineral exploration tenements held are set out below:

Common concession name	Location	Nature of Interest	Interest at beginning of Quarter	Interest at end of Quarter
RL 1693	Uganda	Owned	51%	51%*
RL00007	Uganda	Owned	51%	51%*
RL00234	Uganda	Owned	51%	51%*
EL00147	Uganda	Owned	51%	51%*
EL00148	Uganda	Owned	51%	51%*
EL00257**	Uganda	Owned	0%	0%

* IonicRE may earn up to a 60% interest

** Awarded post quarter end

3. No farm-in or farm-out agreements were entered into during the period.

End Notes

The information contained in this announcement related to the Company's past exploration results is extracted from, or was set out in, the following ASX announcements which are referred to in this Quarterly Activities Report:

- Announcement dated 5 July 2021, 'Makuutu Phase 4 Drilling Program Update'
- Announcement dated 14 July 2021, 'Phase 3 Drilling Results Confirm Major Extension Potential at Makuutu'
- Announcement dated 20 July 2021, 'Phase 3 Drilling Results Indicate Potential Extension to Northwest at Makuutu'
- Announcement dated 3 August 2021, 'Third Rig Mobilised with Drilling Activity Advancing Rapidly'
- Announcement dated 9 August 2021, 'IonicRE to Evaluate Standalone Downstream Heavy Rare Earth Separation and Refining Asset'
- Announcement dated 31 August 2021, 'Additional Resource Drilling at Makuutu to Commence'
- Announcement dated 13 September 2021, 'Retention Licence Approved at Makuutu'
- Announcement dated 16 September 2021, 'Makuutu Phase 4 Drilling Tranche 1 Assay Results'
- Announcement dated 11 October 2021, 'Phase 4 Drill Program Completed, Exploration Licence TN03573 Approved for Granting'
- Announcement dated 26 October 2021, 'Exploration Licence 00257 Approved at Makuutu'

Authorised for release by the Board.

For enquiries, contact: Tim Harrison
Managing Director
+61 8 9481 2555

Makuutu Mineral Resource Estimate (refer ASX 3 March 2021)

Table 1: Makuutu Resource above 200ppm TREO-CeO₂ Cut-off Grade

Resource Classification	Tonnes (millions)	TREO (ppm)	TREO-CeO ₂ (ppm)	LREO (ppm)	HREO (ppm)	CREO (ppm)	Sc ₂ O ₃ (ppm)
Indicated Resource	66	820	570	590	230	300	30
Inferred Resource	248	610	410	450	160	210	30
Total Resource	315	650	440	480	170	230	30

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

All REO are tabulated in MRE announcement dated 3 March 2021 with formulas defining composition of Light Rare Earth Oxides (LREO), Heavy Rare Earth Oxides (HREO), Critical Rare Earth Oxides (CREO) and Total Rare Earth Oxides (TREO).

Table 2: Mineral Resources by Area (shaded areas included in Phase 4 Drill Program)

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)
Central Zone	66	820	570	51	730	500	118	780	540
A				12	570	390	12	570	390
B				25	410	280	25	410	280
C				-	-	-	-	-	-
D				6	560	400	6	560	400
E				-	-	-	-	-	-
Central Zone East				37	740	520	37	740	520
F				11	570	390	11	570	390
G				6	660	450	6	660	450
H				4	780	560	4	780	560
I				96	550	350	96	550	350
Total Resource	66	820	570	248	610	410	315	650	440

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

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 Company will move to 60% ownership of Makuutu on the completion of the Feasibility Study and has a pre-emptive right over the remaining 40% stake in the Project.

The deposit stretches 37 km in length and has demonstrated potential for a long life, low-cost capital source of critical and heavy rare earths. These IAC deposits are prevalent in southern China which have been the source of the world's lowest cost critical 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 19.5 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 critical 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 an operation life exceeding 27 years. The Project is also prospective for a low-cost Scandium co-product.

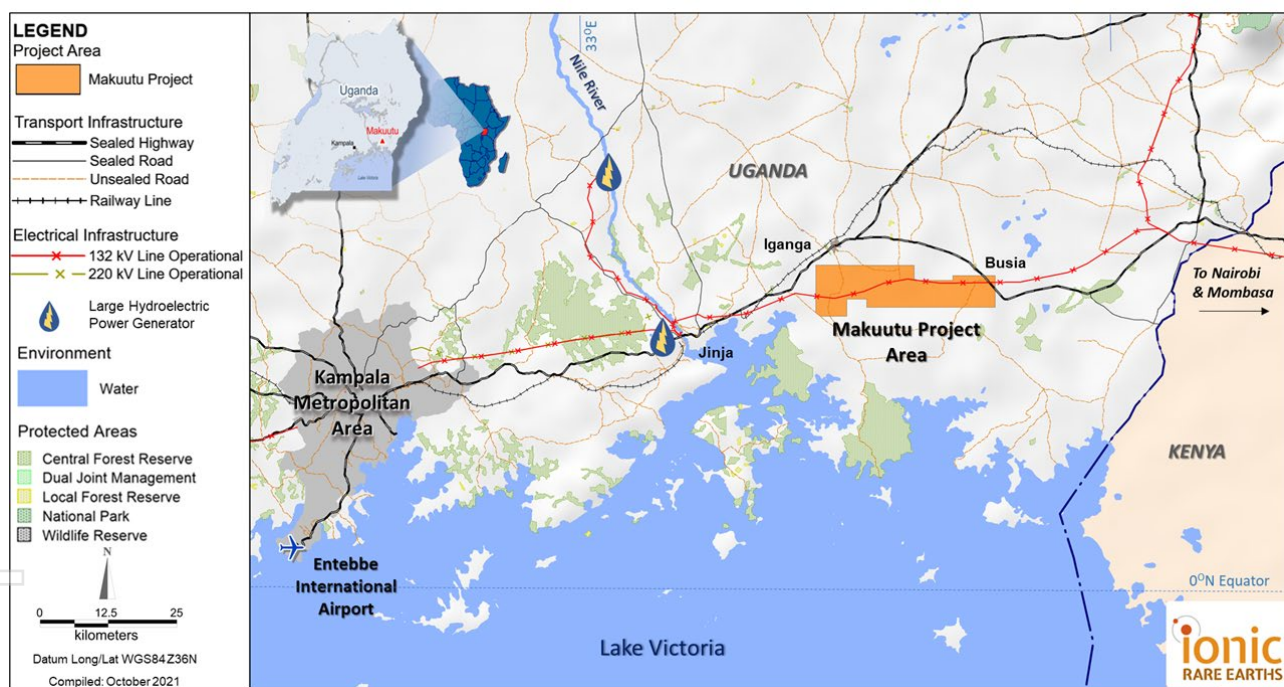


Figure 7: Makuutu Rare Earths Project Location with major existing infrastructure.

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 process 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 Person Statements

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 March 2021 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 Scoping Study results and production targets was first released to the ASX on 29 April 2021 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.

Appendix 5B

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

Name of entity

IONIC RARE EARTHS LIMITED

ABN

84 083 646 477

Quarter ended ("current quarter")

30 SEPTEMBER 2021

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(217)	(217)
(e) administration and corporate costs	(411)	(411)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	-	-
1.8 Other (provide details if material)	-	-
1.9 Net cash from / (used in) operating activities	(628)	(628)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	(71)	(71)
(d) exploration & evaluation capitalised	(1,952)	(1,952)
(e) investments	-	-
(f) other non-current assets	-	-

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 (3 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	(2,023)	(2,023)
3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	1,395	1,395
3.4	Transaction costs related to issues of equity securities or convertible debt securities	-	-
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 – loan to Associate	(288)	(288)
3.10	Net cash from / (used in) financing activities	1,107	1,107
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	11,055	11,055
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(628)	(628)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(2,023)	(2,023)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	1,107	1,107
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	9,511	9,511

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

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	9,478	11,022
5.2	Call deposits	33	33
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)	9,511	11,055

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	212
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<i>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.</i>		

7.	Financing facilities <i>Note: the term "facility" includes all forms of financing arrangements available to the entity. Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
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)	(628)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(1,952)
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(2,580)
8.4	Cash and cash equivalents at quarter end (item 4.6)	9,511
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	9,511
8.7	Estimated quarters of funding available (item 8.6 divided by item 8.3)	3.7
<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: N/A	
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: N/A	
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: N/A	
<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: 29 October 2021

Authorised by: Brett Dickson – Company Secretary
(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.

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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.