



28 March 2024

**Rainbow Rare Earths Limited**  
**("Rainbow" or "the Company")**  
LSE: RBW

### **Interim Results for the six months ended 31 December 2023**

**Rainbow Rare Earths** is pleased to announce its unaudited results for the six months ended 31 December 2023 ("the Period").

#### **Highlights**

- Global net zero greenhouse gas ("GHG") emissions will require unprecedented levels of critical minerals, including rare earth elements ("REEs").
- Phalaborwa expected to be the highest margin REE project in development today due to its fundamentally different capital and operating cost profile compared to traditional projects. The project remains highly cash generative even at lower rare earth prices.
- Phalaborwa to produce all four of the high-value magnet rare earths: neodymium and praseodymium ("NdPr"), dysprosium ("Dy") and terbium ("Tb"). Forecast CAGR of ca. 10% for rare earth permanent magnets from 2022 to 2033<sup>1</sup> driven by their use in electric vehicles and wind turbines.
- Project backed by U.S. Government, with a US\$50 million funding commitment from the U.S. International Development Finance Corporation ("DFC") announced at COP28, to be invested via strategic shareholder TechMet Limited ("TechMet").
- Successful production of ca. 35kg of mixed rare earth carbonate at the front-end pilot plant in South Africa; this material is being used as feed for the back-end pilot plant in Florida, USA to produce separated rare earth oxides expected in Q2 2024.
- Phalaborwa offers environmental advantages due to the clean-up of legacy issues and the opportunity to fully rehabilitate the site over time. The use of continuous ion exchange ("CIX") and continuous ion chromatography ("CIC") to produce separated rare earth oxides also provides cost and environmental benefits over traditional solvent exchange methods.
- Updated bulk density calculations have increased the Phalaborwa project tonnage by ca. 16% and added over two years to project life; an update to the JORC-compliant Resource is expected in Q2 2024.
- Letter of Intent entered into for an off-take agreement to sell ca. 400-600,000 tonnes of Phalaborwa's gypsum by-product per annum into the South African domestic and surrounding markets, which are anticipating supply shortages of gypsum, thereby providing an additional revenue stream to Rainbow.
- Strategic supply agreement entered into with Less Common Metals ("LCM"), the only rare earth metal and alloy manufacturing facility in the UK and one of the only facilities in the Western world.

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<sup>1</sup> Source: Argus Media Ltd ("Argus"), October 2023

- Memorandum of understanding (“MOU”) entered into with The Mosaic Company (“Mosaic”) with regards to the Uberaba phosphogypsum project in Brazil. Uberaba represents an exciting opportunity to potentially replicate Phalaborwa at a larger scale and initial test-work to date is promising.

**George Bennett, CEO, commented:** *“Phalaborwa is a unique project in the rare earths space. Due to the fact that it is focused on the reprocessing of phosphogypsum stacks to recover rare earths, it has a fundamentally different cost profile to traditional mining projects and it is therefore expected to be the highest margin rare earth project in development today. Its potential to offer exceptional financial returns, its ability to go further down the supply chain to produce separated rare earth oxides, and its strong environmental credentials have seen the project backed by the U.S. Government during the Period, with a US\$50 million funding commitment from the DFC announced at COP28, to be invested via TechMet.*

*We are also excited about the prospects for the Uberaba phosphogypsum project in Brazil, which is being developed in partnership with Mosaic. Initial test-work to date has been encouraging and the project is of a significantly larger scale than Phalaborwa. Furthermore, the addition of Uberaba adds geographical diversification to our portfolio and is in line with our aspiration to be a forerunner in the establishment of an independent and ethical supply chain of the rare earth elements that are driving the green energy transition.”*

### **Market Abuse Regulation ("MAR") Disclosure**

This announcement contains inside information for the purposes of Article 7 of the Market Abuse Regulation (EU) 596/2014 as it forms part of UK domestic law by virtue of the European Union (Withdrawal) Act 2018 ("MAR"), and is disclosed in accordance with the Company's obligations under Article 17 of MAR.

### **Rainbow H1 FY 2024 Interim Results investor presentation**

CEO, George Bennett, will host a presentation and live question and answer session via the Investor Meet Company platform on 3 April 2024 at 11am GMT. Questions can be submitted pre-event via your Investor Meet Company dashboard up until 9am the day before the meeting or at any time during the live presentation.

Investors can sign up to Investor Meet Company for free and add to meet **RAINBOW RARE EARTHS LIMITED** via:

**<https://www.investormeetcompany.com/rainbow-rare-earths-limited/register-investor>**

Investors who already follow **RAINBOW RARE EARTHS LIMITED** on the Investor Meet Company platform will automatically be invited.

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## Notes to Editors:

Rainbow Rare Earths aims to be a forerunner in the establishment of an independent and ethical supply chain of the rare earth elements that are driving the green energy transition. It is doing this successfully via the identification and development of secondary rare earth deposits that can be brought into production quicker and at a lower cost than traditional hard rock mining projects, with a focus on the permanent magnet rare earth elements neodymium and praseodymium, dysprosium and terbium.

The Company is focused on the development of the Phalaborwa Rare Earths Project in South Africa and the earlier stage Uberaba Project in Brazil. Both projects entail the recovery of rare earths from phosphogypsum stacks that occur as the by-product of phosphoric acid production, with the original source rock for both deposits being a hardrock carbonatite. Rainbow intends to use a proprietary separation technique developed by and in conjunction with its partner K-Technologies, Inc., which simplifies the process of producing separated rare earth oxides (versus traditional solvent extraction), leading to cost and environmental benefits.

The Phalaborwa Preliminary Economic Assessment (“PEA”) has confirmed strong base line economics for the project, which has a base case NPV<sub>10</sub> of US\$627 million<sup>1</sup>, an average EBITDA operating margin of 75% and a payback period of < two years. Pilot plant operations commenced in 2023, with the project expected to reach commercial production in 2026, just five years after work began on the project by Rainbow.

More information is available at [www.rainbowrareearths.com](http://www.rainbowrareearths.com).

## CEO Review

### Market

The world is in the midst of a new industrial revolution: the green energy transition. Global net zero GHG emissions will require unprecedented levels of critical minerals, including REEs which are essential components of the permanent magnets used in the production of electric vehicles (“EVs”) and wind turbines. Furthermore, REEs have many highly strategic uses in advanced technologies, including in defence applications, adding to their criticality worldwide; for example, each American F-35 Lightning II fighter jet contains over 400kg of rare earths, the Arleigh Burke DDG-51 missile destroyer contains ca. 2,300kg of rare earths and a Virginia class submarine contains ca. 4,200kg of rare earths<sup>2</sup>.

The International Energy Agency (“IEA”) estimates that the market for REEs has more than doubled over the period from 2017 to 2022, and demand for rare earth permanent magnets is forecast to continue to grow strongly by a CAGR of ca. 10% per annum to 2030, according to Argus.

While the long-term demand drivers for the market remain strong due to the electrification of our transport system, as well as the unstoppable move towards renewable energy solutions, in the short-term the market may continue to see some volatility due to the current weakness of the Chinese economy, a slow-down in the take-up of EVs and the roll-out of wind power generational projects, as well as its reliance on consumer trends worldwide.

Rare earth pricing has been notably weak in 2023 and into 2024. The current price of NdPr oxide of ca. US\$50/kg is estimated to be well below the average breakeven price for the industry and is not deemed to be sustainable over the medium to long-term, with Argus expecting pricing to strengthen by the end of 2024.

Phalaborwa’s rare earths basket includes the ‘heavy’ rare earths Dy and Tb, which are noted to be more at risk of supply disruption than that of the light rare earths due to their scarcity in economic quantities worldwide. The inclusion of Dy and Tb, as well as NdPr, improves the overall value of the Phalaborwa basket in comparison to the industry average.

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<sup>1</sup> Net present value using a 10% forward discount rate

<sup>2</sup> Source: U.S. Department of Defense, March 2024

Furthermore, Phalaborwa’s PEA indicated a comparatively low operating cost of ca. US\$34/kg of separated magnet rare earth oxides (NdPr, Dy and Tb), which provides resilience against all modelled pricing scenarios. By contrast, Canaccord Genuity estimates that the incentive pricing for greenfield ex-China projects is likely to be over US\$100/kg.

### Operational update

#### ***Phalaborwa – South Africa***

Rainbow’s primary focus is the Phalaborwa project in South Africa, which represents an exciting, near-term production opportunity of all four of the magnet rare earths required for the green energy transition.

The operation will involve the processing of phosphogypsum stacks, which are the by-product of historic phosphoric acid production on the site. This resource sits at surface in a “cracked” chemical form, which is why it has a fundamentally different cost profile to traditional rare earth development projects.

Rainbow is using proprietary technology developed in conjunction with its partner K-Technologies, Inc. (“K-Tech”), to allow for the material to be processed first into a mixed rare earth carbonate, before being refined further into separated rare earth oxides of 99.5% purity.

The Phalaborwa PEA published in October 2022 (using spot rare earth pricing of ca. US\$112/kg NdPr oxide at the time) confirmed strong base line economics for the project, which has a base case NPV<sub>10</sub> of US\$627 million, an average EBITDA operating margin of 75% and a payback period of less than two years. Recent analysis has confirmed that Phalaborwa is expected to be the highest margin rare earth project in development today, which provides resilience against pricing volatility.

Rainbow is currently carrying out a Definitive Feasibility Study (“DFS”) at Phalaborwa, which is on track to be completed in the last quarter of 2024/early 2025. Following completion of the DFS, a Final Investment Decision will be made by the Board prior to construction and the expected commencement of operations by the end of 2026.

#### *Pilot plant*

A key component of the DFS is the operation of a pilot plant to confirm and optimise the operating parameters for the unique flowsheet developed in conjunction with K-Tech to deliver separated rare earth oxides from the Phalaborwa phosphogypsum.

The pilot plant comprises a front-end circuit that produces a mixed rare earth carbonate and a back-end circuit that utilises CIX and CIC to produce separated rare earth oxides. The innovative application of this established technology has been pioneered by K-Tech in the rare earth space and replaces traditional solvent extraction which uses toxic and flammable solvents and diluents and requires more than 100 separate stages.

The front-end pilot plant is located at the Johannesburg facilities of the Council for Mineral Technology (“Mintek”), a global leader in mineral processing, extractive metallurgy, and related fields. The front-end piloting programme has successfully completed all three of its planned campaigns to date, with the integrated whole circuit 24/7 campaign completed in March 2023. Throughout its duration of operation, the front-end pilot plant has produced ca. 35kg of mixed rare earth carbonate as planned and this material is being shipped in progressive batches to the back-end pilot plant in Florida for separation.

During operation the following key opportunities for optimisation of the front-end plant process were identified and are expected to result in capex and opex savings:

- improvement in the impurity and rare earths leach temperature conditions from the 40°C set out in the PEA to 30°C, delivering a significant ca. 50% saving in energy requirements;
- the successful regeneration of two key reagents in the leach solution, improving on our founding principles of circularity; and
- optimisation of the second stage acid leach circuit which has reduced the number of counter current decantation thickeners required from 12 to six.

As part of the optimisation process, Rainbow worked with K-Tech to establish the optimal mixed rare earth product for the back-end CIX / CIC system, which is located at K-Tech's premises in Lakeland, Florida, USA. Having first successfully produced a mixed rare earth sulphate, it was decided to further beneficiate the product, removing certain unwanted elements, with the optimal end product for separation agreed as a cerium-depleted mixed rare earth carbonate, providing a higher-grade feedstock to the back-end separation circuit. A summary of the progress made with the back-end flowsheet is as follows:

- successful impurity removal in the initial ion-exchange step providing suitable feed solution for group separation;
- successful separation of the uneconomic lanthanum and cerium group;
- successful group separation in the first step of the chromatography stage, delivering a NdPr group, grading ca. 68%, as feed for purification in the subsequent individual chromatography separation steps;
- considerable upgrading of the concentration of the Dy and Tb from a combined feed grade of 0.9% to 14.6%, which requires separation from the samarium, europium and gadolinium ("SEG") group; and
- good separation of the SEG group at a grade of ca. 63%, which provides the strong potential for an additional valuable product line.

The current focus of the pilot plant test work at K-Tech is to optimise the second stage of the chromatography process to produce a 99.5% NdPr product, expected in Q2 2024. This will be followed by separation of Dy and Tb oxides.

#### *Resource update*

Phalaborwa currently has a total mineral resource estimate ("MRE") of 30.4 Mt at 0.44% TREO, with the high-value, permanent magnet elements Nd and Pr representing 29% of the TREO in the rare earths basket, as well as economic quantities of Dy and Tb. The MRE is reported at a 0.2% TREO cut-off grade.

During the Period, Rainbow's technical team was focused on evaluation of the density at depth of the two phosphogypsum stacks that make up the Resource at Phalaborwa. On the advice of Ardaman and Associates, Inc., a Tetra Tech Company ("Ardaman"), a revised drilling technique was used for a drilling campaign carried out in the Period to provide representative samples from the stacks. These were submitted to Ardaman for comprehensive bulk density testing and the results revealed a clear correlation of higher bulk density with increasing depth.

The increased bulk density reported by Ardaman has resulted in a significant increase of ca. 16% in the project tonnes from 30.4 Mt to 35.1 Mt, extending the operating life by over two years at the proposed operating rate.

Samples from the drill campaign will now be assayed for grade by SGS in South Africa to allow for an updated JORC compliant MRE. This work is also expected to upgrade the Inferred Resources to the Measured and Indicated categories.

#### *Environmental*

Phalaborwa is founded on the principles of circularity, reprocessing phosphogypsum which is the by-product of historic phosphoric acid production to produce rare earths required for global decarbonisation. With legacy environmental issues prior to our ownership, Rainbow has the opportunity not only to exploit a secondary source of these critical minerals, but also to clean up the project site. This will involve neutralising the acidic solution currently on top of the gypsum stacks for use in a closed loop process and redepositing benign gypsum on stacks which will be lined in accordance with International Finance Corporation ("IFC") Standards and Equator Principles.

Rainbow recognises the benefits that securing a source of low carbon energy would bring to the project and its stakeholders and is therefore well advanced in the evaluation of a renewable energy power agreement. It is envisaged that renewable energy will provide the bulk of the project's power requirements, thereby further reinforcing its green credentials. While Phalaborwa is a relatively low energy-intensive project with draw requirements of ca. 13.3 MW (as set out in the PEA), management are also exploring the potential for on-site solar back-up power capacity.

As part of the DFS and as required for the permitting process, a new Environmental and Social Impact Assessment is being carried out by WSP Golder and all workstreams for this are on track to allow permit applications to be lodged in 2024.

During the Period, Rainbow signed a Letter of Intent to enter into an offtake agreement with NEXUS Intertrade (Pty) Ltd (“NEXUS”), under which NEXUS will acquire the benign gypsum which is the by-product of the Phalaborwa process and sell it to end users. The ability to sell down the remaining gypsum stacks at the project is expected to allow for complete environmental rehabilitation of the site over time, as well as providing an additional revenue stream to Rainbow.

#### *Supply agreement*

Rainbow aims to be a forerunner in the establishment of an independent and ethical supply chain of the rare earth elements that are driving the green energy transition.

In accordance with this aim, the Company entered into a strategic supply agreement in September 2023 with LCM, a world leader in the manufacture and supply of complex alloy systems and metals. LCM occupies a unique position in the rare earths supply chain in that it is based in Ellesmere Port, Cheshire. As such, it is currently the only rare earth metal and alloy manufacturing facility in the UK and one of the only facilities in the Western world.

LCM had been looking to partner with a supplier with similar values in order to secure ethical supply of the feedstock required for their business and it chose Rainbow after a lengthy evaluation process of the various rare earth development companies globally. This decision was based on Rainbow’s capability to take its rare earth material further downstream to the separated rare oxide stage, as well as due to its low production cost, which gives the Phalaborwa project resilience against rare earth pricing volatility.

A framework will be set out in due course for Rainbow and LCM to negotiate a binding offtake agreement for separated rare earth oxides from Phalaborwa, with the ultimate customer of the rare earth permanent magnets being clearly defined and in alignment with both LCM’s existing customer base and the positioning of both companies in an expanding Western supply chain.

#### ***Uberaba – Brazil***

Following an extensive worldwide search to identify phosphogypsum projects with similar characteristics to Phalaborwa, Rainbow entered into an MOU with Mosaic in July 2023 with regards to the Uberaba project in Minas Gerais, Brazil.

As at Phalaborwa, the Uberaba project will entail the processing of a phosphogypsum stack that is the by-product of phosphoric acid production which was originally based on a hard rock carbonatite. Mosaic’s phosphoric acid operations are ongoing, meaning that new phosphogypsum is deposited on the stacks annually.

Due to the similarities of the feedstock, the Uberaba stack was expected to have a similar grade and rare earth element make-up as those of Phalaborwa and this was confirmed by initial assay analysis, which indicated an average grade of 0.58% TREO and that the basket contains all four of the magnet rare earths NdPr, Dy and Tb, with NdPr representing ca. 25% of the basket.

Following the co-production of a process flowsheet, Rainbow and Mosaic will collaborate on the production of a PEA for this opportunity to extract rare earths.

## **Gakara – Burundi**

Gakara was placed on care and maintenance in June 2021 at the request of the Government of Burundi.

Further to the acquisition of the Phalaborwa project in December 2020 and the subsequent development of processing technology to recover REEs from phosphogypsum as a by-product of phosphoric acid production, the Directors have re-focused the business on secondary sources of REEs where they consider higher returns are available. As such, the decision was made not to invest any further funds in the project and Gakara was fully written down in the Company's accounts for the year to 30 June 2023.

### Corporate

Notwithstanding falling rare earth prices, coupled with a wider difficult environment for small to medium sized resource companies on the London Stock Exchange, Rainbow's successful development was rewarded by continued strong backing for the Company in the market via the completion of a private placement in September 2023 to raise ca. US\$5.5 million. This placing was carried out at a minor discount of 3% to the share price and was supported by the majority of Rainbow's Board, as well as its major shareholder TechMet.

A major endorsement for Phalaborwa's exceptional economic and environmental credentials was achieved via the announcement at the U.N.'s Climate Change Conference, COP28, that the DFC had committed US\$50 million for the project, to be invested via strategic shareholder TechMet. This funding commitment helps to de-risk the overall capital requirement of ca. US\$295.5 million for Phalaborwa and demonstrates the strategic role the project is expected to play in the establishment of a responsible supply chain for rare earths outside of China.

### **Financial Review**

The financial statements for the Period are dominated by costs totalling US\$8.5 million capitalised for Phalaborwa, bringing the total balance sheet value for the exploration and evaluation assets associated with the project to US\$13.4 million. This included US\$5.7 million to increase Rainbow's economic interests in Phalaborwa from 70% to 85%, with an option to acquire the remaining 15% from Bosveld Phosphates (Pty) Limited via the issue of 38,873,663 new Rainbow shares. Other expenditure at Phalaborwa in the Period included US\$2.0 million relating to the ongoing pilot plant operations, US\$0.4 million for other workstreams associated with the DFS, US\$0.2 million for mineral resource work and US\$0.2 million for Rainbow's technical team and associated costs. At 31 December 2023, the Group had US\$4.0 million of cash available.

The income statement showed a net loss of US\$1.5 million for the Period in line with the comparative period in FY 2023. This includes the Group's administrative costs, business development costs associated with both the Uberaba project in Brazil and Rainbow's wider long-term project pipeline, and costs to maintain the Gakara asset on care and maintenance.

#### *Cautionary Statement:*

*The business review and certain other sections of this interim report contain forward looking statements that have been made by the Directors in good faith based on the information available to them up to the time of their approval of this report. However, they should be treated with caution due to inherent uncertainties, including both economic and business risk factors, underlying any such forward-looking information and no statement should be construed as a profit forecast.*

### **Directors' Responsibility Statement**

We confirm that to the best of our knowledge:

- a) the Condensed set of Interim Financial Statements has been prepared in accordance with IAS 34 '*Interim Financial Reporting*';

- b) the interim management report includes a fair review of the information required by DTR 4.2.7R (indication of important events during the first six months and description of principal risks and uncertainties for the remaining six months of the year);
- c) the interim management report includes a fair review of the information required by DTR 4.2.8R (disclosure of related parties' transactions and changes therein); and
- d) the condensed set of interim financial statements, which has been prepared in accordance with the applicable set of accounting standards, gives a true and fair view of the assets, liabilities, financial position and profit or loss of the issuer, or the undertakings included in the consolidation as a whole as required by DTR 4.2.4R.

This Interim Report has been approved by the Board and signed on its behalf by:

**George Bennett**

Chief Executive Officer

28 March 2024



Condensed Consolidated Statement of Comprehensive Income

For the six months ended 31 December 2023

		6 months ended 31 December 2023 US\$'000 Unaudited	6 months ended 31 December 2022 US\$'000 Unaudited
Revenue		-	-
Production and sales costs		-	-
Gross loss		-	-
Administration expenses	3	(1,461)	(1,500)
<b>Loss from operating activities</b>		<b>(1,461)</b>	<b>(1,500)</b>
Finance income		130	73
Finance costs		(120)	(54)
<b>Loss before tax</b>		<b>(1,451)</b>	<b>(1,481)</b>
Income tax expense		-	-
<b>Total loss after tax and comprehensive expense for the period</b>		<b>(1,451)</b>	<b>(1,481)</b>
<b>Total loss after tax and comprehensive expense for the period is attributable to:</b>			
Non-controlling interest		(9)	(38)
Owners of parent		(1,442)	(1,443)
		<b>(1,451)</b>	<b>(1,481)</b>
<b>Loss per share (cents)</b>			
Basic	4	(0.24)	(0.27)
Diluted	4	(0.24)	(0.27)

The results of each period are derived from continuing operations.

**Condensed Consolidated Statement of Financial Position  
As at 31 December 2023**

		As at 31 December 2023 US\$'000 Unaudited	As at 30 June 2023 US\$'000 Audited	As at 31 December 2022 US\$'000 Unaudited
<b>Non-current assets</b>				
Exploration and evaluation assets	5	13,363	4,830	11,405
Property, plant and equipment	6	24	27	872
Right of use assets		99	37	89
<b>Total non-current assets</b>		<b>13,486</b>	<b>4,896</b>	<b>12,366</b>
<b>Current assets</b>				
Inventory		718	718	858
Trade and other receivables		565	365	426
Cash and cash equivalents		4,002	8,107	2,146
<b>Total current assets</b>		<b>5,285</b>	<b>9,190</b>	<b>3,430</b>
<b>Total assets</b>		<b>18,771</b>	<b>14,086</b>	<b>15,796</b>
<b>Current liabilities</b>				
Trade and other payables	7	(1,689)	(1,250)	(879)
Borrowings	8	(250)	(201)	(101)
Lease liabilities		(47)	(23)	(34)
<b>Total current liabilities</b>		<b>(1,986)</b>	<b>(1,474)</b>	<b>(1,014)</b>
<b>Non-current liabilities</b>				
Borrowings	8	(283)	(285)	(589)
Lease liabilities		(59)	(21)	(56)
Provisions		(55)	(55)	(61)
<b>Total non-current liabilities</b>		<b>(397)</b>	<b>(361)</b>	<b>(706)</b>
<b>Total Liabilities</b>		<b>(2,383)</b>	<b>(1,835)</b>	<b>(1,720)</b>
<b>NET ASSETS</b>		<b>16,388</b>	<b>12,251</b>	<b>14,076</b>
<b>Equity</b>				
Share capital	9	56,303	50,937	41,552
Share based payment reserve		1,634	1,719	1,588
Other reserves		-	-	-
Retained loss		(39,618)	(38,483)	(27,955)
<b>Equity attributable to the parent</b>		<b>18,319</b>	<b>14,173</b>	<b>15,155</b>
Non-controlling interest		(1,931)	(1,922)	(1,079)
<b>TOTAL EQUITY</b>		<b>16,388</b>	<b>12,251</b>	<b>14,076</b>

**Condensed Consolidated Cash Flow Statement**  
**For the six months ended 31 December 2023**

	6 months ended 31 December 2023 US\$'000 Unaudited	6 months ended 31 December 2022 US\$'000 Unaudited
<b>Cash flow from operating activities</b>		
Loss from operating activities	(1,461)	(1,500)
<b>Adjustments for:</b>		
Depreciation	25	189
Share-based payment charge	223	151
<b>Operating loss before working capital changes</b>	<b>(1,213)</b>	<b>(1,160)</b>
Net increase in other receivables	(238)	(25)
Net increase / (decrease) in trade and other payables	(276)	(30)
<b>Cash used by operations</b>	<b>(1,727)</b>	<b>(1,215)</b>
Realised foreign exchange gains	16	73
Finance costs	(31)	(69)
<b>Net cash used in operating activities</b>	<b>(1,742)</b>	<b>(1,211)</b>
<b>Cash flow from investing activities</b>		
Purchase of property, plant & equipment	-	(2)
Exploration and evaluation costs	(7,831)	(817)
<b>Net cash used in investing activities</b>	<b>(7,831)</b>	<b>(819)</b>
<b>Cash flow from financing activities</b>		
Repayment of borrowings	(37)	-
Payment of lease liabilities	(21)	(16)
Proceeds from the issuance of ordinary shares	5,501	125
Transaction costs of issuing new equity	(84)	(16)
<b>Net cash generated by financing activities</b>	<b>5,359</b>	<b>93</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(4,214)</b>	<b>(1,937)</b>
<b>Cash &amp; cash equivalents at the beginning of the period</b>	<b>8,107</b>	<b>4,134</b>
Foreign exchange gain / (loss) on cash & cash equivalents	109	(51)
<b>Cash &amp; cash equivalents at the end of the period</b>	<b>4,002</b>	<b>2,146</b>

**Condensed Consolidated Statement of Changes in Equity**  
**For the six months ended 31 December 2023**

	Share capital	Share- based Payments	Accumulated losses	Attributable to the parent	Non- controlling interest	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
<b>Balance at 1 July 2022 (audited)</b>	<b>41,442</b>	<b>1,467</b>	<b>(26,572)</b>	<b>16,337</b>	<b>(1,041)</b>	<b>15,296</b>
<b>Total comprehensive expense</b>						
Total comprehensive loss	-	-	(1,443)	(1,443)	(38)	(1,481)
<b>Transactions with owners</b>						
Fair value of employee share options in the period	-	151	-	151	-	155
Share option exercised in period, net of costs	110	(60)	60	110	-	184
<b>Balance at 31 December 2022 (unaudited)</b>	<b>41,552</b>	<b>1,558</b>	<b>(27,955)</b>	<b>15,155</b>	<b>(1,079)</b>	<b>14,076</b>
<b>Total comprehensive expense</b>						
Total comprehensive loss	-	-	(10,541)	(10,541)	(843)	(11,384)
<b>Transactions with owners</b>						
Issue of shares during the period for cash	9,485	-	-	9,485	-	9,485
Share placing transaction and other costs	(100)	-	-	(100)	-	(100)
Fair value of employee share options in the period	-	174	-	174	-	174
Share options cancelled in the period	-	(13)	13	-	-	-
<b>Balance at 30 June 2023 (audited)</b>	<b>50,937</b>	<b>1,719</b>	<b>(38,483)</b>	<b>14,173</b>	<b>(1,922)</b>	<b>12,251</b>
<b>Total comprehensive expense</b>						
Total comprehensive loss	-	-	(1,442)	(1,442)	(9)	(1,451)
<b>Transactions with owners</b>						
Issue of shares during the period for cash	5,501	-	-	5,501	-	5,300
Share placing transaction and other costs	(135)	-	-	(135)	-	(135)
Fair value of employee share options in the period	-	222	-	222	-	223
Share option exercised in the period	-	(201)	201	-	-	201
Share options cancelled in the period	-	(106)	106	-	-	-
<b>Balance at 31 December 2023 (unaudited)</b>	<b>56,303</b>	<b>1,634</b>	<b>(39,618)</b>	<b>18,319</b>	<b>(1,931)</b>	<b>16,389</b>

## Notes to the Condensed Financial Statements For the six months ended 31 December 2023

### 1. General information

Rainbow Rare Earths Limited (the “Company” or “Rainbow”, together with its subsidiaries the “Group”), is a company limited by shares domiciled in Guernsey, incorporated on 5 August 2011 with company registration number 53831. The Company’s registered office is Connaught House, St Julian’s Avenue, St Peter Port, Guernsey. The nature of the Group’s operations and its principal activities are set out in the CEO and Financial Reviews.

The financial information for the period ended 31 December 2023 does not constitute the audited statutory accounts but the comparative information has been extracted from those accounts. The report of the auditors on those accounts was unqualified.

This Interim Report has not been audited or reviewed.

A copy of this Half Yearly Report has been published and may be found on the Company’s website at [www.rainbowrareearths.com](http://www.rainbowrareearths.com)

### 2. Basis of preparation

These condensed consolidated interim financial statements for the 6 months ended 31 December 2023 have been prepared in accordance with IAS 34 ‘Interim Financial Reporting’. They do not include disclosures that would otherwise be required in a complete set of financial statements and should be read in conjunction with the 2022 Annual Report and Accounts.

The same accounting policies and methods of computation are followed in the condensed interim financial statements as were followed in the most recent annual financial statements of the Group, which were published on 27 October 2023. There are no newly effective IFRS Standards which have had an impact on the financial statements.

#### (a) Going concern

The Directors have continued to use the going concern basis in preparing these condensed financial statements. The Group’s business activities, together with the factors likely to affect future development, performance and position are set out in the CEO Statement. The financial position of the Group, its cash flow and liquidity position are described in the Financial Review.

The Group’s cash balance at 31 December 2023 was US\$4.0 million (30 June 2023: US\$8.1 million). The Board has reviewed the Group’s latest cash flow forecasts for the period to 30 June 2025, including reasonably possible downside scenarios. This has included the following assumptions:

- Forecast expenditure of US\$4.0 million for ongoing general and administrative costs of the Group over the 18-month period from 1 January 2024 to 30 June 2025, based on the current administrative cost base. The reasonably possible downside scenario includes a 10% contingency for unexpected costs.
- Estimated funding requirements of US\$7.5 million for Phalaborwa, of which US\$4.0 million has been incurred to date or is committed. This includes US\$2.4 million to complete pilot plant test-work, US\$3.7 million to finalise the DFS and US\$0.9 million for Rainbow’s technical team and associated costs. Due to the nature of the work, actual costs and the timing of expenditure may differ to estimates. The forecast includes a 10% contingency for increased technical costs associated with the pilot plant and DFS. The reasonably possible downside scenario adds a further 10% contingency for all Phalaborwa expenditure.
- A continuation of care and maintenance for the Group’s Gakara project in Burundi at a total cost of US\$0.6 million for the 18-month period from 1 January 2024 to 30 June 2025, based on the current administrative cost base. The reasonably possible downside scenario includes a 10% contingency for unexpected costs.

Based on management's reasonably plausible downside scenario outlined above, the Group will need to raise additional finance of at least US\$9.2 million for the period ending 30 June 2025, along with any funds required to progress the Uberaba opportunity in Brazil. Based on the robust economic prospects for the Phalaborwa project, the Board is confident that additional funding will be secured as required. However, the Board accepts that these circumstances indicate the existence of a material uncertainty which may cast significant doubt about the Group's ability to continue as a going concern and therefore it may be unable to realise its assets and discharge its liabilities in the normal course of business. The financial statements do not include the adjustments that would result if the Group was unable to continue as a going concern.

#### **(b) Dividend**

The Directors do not recommend the payment of a dividend for the period (six months ended 31 December 2023: US\$Nil, six months ended 31 December 2022: US\$Nil).

#### **(c) Principal Risks and uncertainties**

There are a number of potential risks and uncertainties inherent in the mining and metals sector which could have a material impact on the long-term performance of the Company, and which could cause the actual results to differ materially from expected and historical results. The Company has taken reasonable steps to mitigate these where possible. Full details are disclosed on pages 46-47 of the Annual Report for the year ended 30 June 2023. The risks and uncertainties are summarised below:

- Project definition risk (High):
  - At Phalaborwa, the PEA published in October 2022 confirmed a processing flowsheet capable of economically extracting the magnet rare earth metals from the gypsum stacks in a low capital and low operating cost environment. The Group's technical team has designed and commissioned numerous commercial plants in Africa, including completion of feasibility studies for rare earth projects, and are therefore familiar with alternative technical options that may need to be deployed if the original strategies prove uneconomic.
  - Pilot test work to confirm the efficacy of the processing flowsheet is underway with the production of a mixed rare earth carbonate in South Africa which has been shipped for pilot testing of the final separation process in the USA. As a result of the pilot test work, changes may be required to the proposed processing flowsheet which could have a detrimental impact on the economics of the project as set out in the PEA. The results of the pilot test work programme to date have been in line with the PEA.
  - A DFS will need to be completed to provide sufficient confidence for project development, which may not deliver results in line with the PEA.
- Permitting risk (High):
  - New and updated permits and licences will be required to develop the Phalaborwa project including, but not limited to, a water use licence, waste management licence and air emissions licence. Rainbow is working with specialist consultants to compile the technical reports required for the permitting process and is aiming to make the relevant applications in parallel with work on the DFS.
  - Whilst the timeframe for the issuance of permits is difficult to predict, the Phalaborwa project will clean up legacy environmental issues at the site, including treating the acid water currently associated with the unlined gypsum stacks and re-stacking the processed gypsum on new lined stacks designed in accordance with IFC Performance Standards and the Equator Principles. Accordingly, the Group is confident that the relevant permits will be issued to allow the project to proceed.
- Financing risk (High):
  - The Group's ability to continue to develop the Phalaborwa project and other new business opportunities will rely upon its continued ability to access financing, both at the corporate and project level. The strong economic returns set out in the PEA for Phalaborwa are expected to ensure funding is available to deliver the DFS and, ultimately, the development of the Phalaborwa project.
  - Management maintains strong relationships with key sources of finance. Rainbow has a history of securing funding required for the Group's growth plans, including support from its cornerstone investors, and management expects to be able to secure additional funding as required.

- Rare earth prices (High):
  - Rainbow is focused on the identification and development of secondary rare earth deposits that can be brought into production quicker and at a lower cost than traditional hard rock mining projects, with a focus on the permanent magnet rare earth elements neodymium and praseodymium, dysprosium and terbium.
  - Whilst analysts are predicting strong growth in demand for rare earths, prices have been volatile in the past and are currently at levels substantially below the base case set out in the Phalaborwa PEA. Whilst the Phalaborwa PEA confirmed a low-cost operation that has resilient economics in lower rare earth price environments, if the underlying rare earth basket price falls or remains at low prices for the long term, this reduces potential revenue that will impact the long-term profitability of the project and could impact the commercial viability of any development.
- Co-development risk (Medium):
  - The Group’s assets include projects that will be conducted in joint arrangements or with associates, which reduces the Group’s ability to control and manage risk and places reliance on partners not controlled by the Group. For the earlier stage projects, Rainbow’s rare earths processing expertise and ownership, directly or under licence in the relevant territories, of the IP rights to develop an economic processing flow sheet similar to Phalaborwa is expected to ensure that suitable commercial terms can be agreed for the long term development of these assets.
  - At Phalaborwa, Bosveld Phosphates (Pty) Limited (“Bosveld”) has a 15% interest in the project and, as current owner of the site, their assistance is required to ensure the assets necessary for the project development are transferred at the necessary time into the joint venture vehicle and they remain liable for the historic environmental liabilities associated with the project site. Rainbow has the option to acquire the 15% minority interest from Bosveld by issuing 38,873,663 ordinary shares of no par value in Rainbow Rare Earths Limited. This will enable the Group to fully control that project and creates a strong incentive for Bosveld to ensure it takes the necessary steps to allow the project to be developed.
  - The Group’s development pipeline, including the Uberaba property in Brazil and the opportunity with OCP in Morocco, are at a much earlier stage of development. The legal framework for the development of a commercial operation for these opportunities has not been fully defined and terms may not be agreed with the owners of these assets to allow a development to occur.
- Country and Political (Medium):
  - Rainbow’s operations are located in South Africa, Brazil and Burundi. Emerging market economies are generally subject to greater risks, including legal, regulatory, tax, economic and political risks, and these risks are potentially subject to rapid change.
  - In South Africa, general elections will be held in May 2024, which could lead to an increase in political and social instability. The well-publicised challenges for state energy provider Eskom mean there are ongoing requirements for load-shedding / power outages in the country, albeit the power requirements for the industrial sectors are prioritised versus other sectors. South Africa’s stance on geopolitical matters is at times contrarian to Western interests.
  - On 12 April 2021, the Government of Burundi suspended the export of concentrate produced at Gakara. This was followed on 29 June 2021 with a suspension of all mining and exploration activity. All operations remain on care and maintenance. Due to the re-focus of Rainbow’s business on the Phalaborwa asset and growth opportunities from the associated processing technology, the Directors do not envisage investing significant amounts in Burundi to develop a formal mineral resource and therefore the net assets of the Gakara cash generating unit were impaired to nil in the 2023 Annual Report and Accounts.

### 3. Administrative expenses

	<b>6 months ended 31 December 2023</b>	<b>6 months ended 31 December 2022</b>
	<b>US\$'000</b>	<b>US\$'000</b>
	Unaudited	Unaudited
Corporate expenses	1,254	1,171
Burundi administration	207	329
	<b>1,461</b>	<b>1,500</b>

Burundi administrative expenses incurred in the six months ended 31 December 2023 include all costs associated with maintaining the Gakara project on care and maintenance.

### 4. Loss per ordinary share

Loss per ordinary share is calculated by dividing the net loss for the period attributable to ordinary equity holders of the parent by the weighted average number of ordinary shares outstanding during the period.

The Company was loss making for all periods presented, therefore the dilutive effect of share options has not been taken account of in the calculation of diluted earnings per share, since this would decrease the loss per share for each of the period reported.

The calculation of the basic loss per share is based on the following data:

	<b>6 months ended 31 December 2023</b>	<b>6 months ended 31 December 2022</b>
	<b>US\$'000</b>	<b>US\$'000</b>
	Unaudited	Unaudited
The loss for the period attributable to ordinary equity holders of the parent company	(1,442)	(1,443)
	<b>Number</b>	<b>Number</b>
	<b>'000</b>	<b>'000</b>
Weighted average number of Ordinary shares for the purposes of basic and diluted loss per share	607,767	524,963
<b>Loss per Ordinary share</b>	<b>Cents</b>	<b>Cents</b>
Basic and diluted	(0.24)	(0.27)

### 5. Exploration and evaluation assets

	<b>Gakara US\$'000</b>	<b>Phalaborwa US\$'000</b>	<b>Total US\$'000</b>
At 1 July 2022 (audited)	8,635	1,953	<b>10,588</b>
Additions	-	817	<b>817</b>
At 31 December 2022(unaudited)	<b>8,635</b>	<b>2,770</b>	<b>11,405</b>
Additions	-	2,060	<b>2,060</b>
Impairment	(8,635)	-	<b>(8,635)</b>
At 30 June 2023 (audited)	-	<b>4,830</b>	<b>4,830</b>
Additions	-	8,533	<b>8,533</b>



At 31 December 2023 (unaudited)

-	<b>13,363</b>	<b>13,363</b>
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Costs relating to the Phalaborwa project were capitalised during the Period. The Gakara project has been under care and maintenance throughout the Period and, accordingly, none of the costs meet the requirements under the Group's accounting policy for capitalisation.

The Phalaborwa project represents an opportunity to extract rare earth elements from the chemical re-treatment of gypsum stacks and therefore the costs of establishing the commercial viability of development for the project are being capitalised as exploration and evaluation assets under IFRS 6. Additions in the Period include the costs relating to resource testing, building and operating pilot plants in South Africa and USA, and acquiring a further 15% economic interest in the project from Bosveld.

Since acquiring the Phalaborwa project and the subsequent development of processing technology to recover rare earth elements from phosphogypsum as a by-product of phosphoric acid production, the Directors have re-focused the business on secondary sources of rare earth elements where they consider higher returns are available. As such, the Directors no longer intend to invest significant amounts at Gakara to convert the existing resource target to a reserve capable of supporting long term commercial production, resulting in an impairment review being carried out for the Gakara exploration and evaluation assets in the year ended 30 June 2023. Based on an assessment of both the legal and political position in Burundi, the Directors consider that the fair value of the Gakara exploration and evaluation assets calculated in accordance with IAS 36 is nil and an impairment loss has been recognised.

FinBank SA hold security over the fixed and floating assets of Rainbow Mining Burundi SM ("RMB") which include the impaired exploration and evaluation assets associated with the Gakara mining permit in Burundi.

## 6. Property, plant and equipment

US\$'000	Mine development costs	Plant & machinery	Vehicles	Office equipment	Total
<b>Cost</b>					
At 1 July 2022 (audited)	183	2,889	1,582	45	4,699
Additions	-	-	-	2	2
<b>At 31 December 2022 (unaudited)</b>	<b>183</b>	<b>2,889</b>	<b>1,582</b>	<b>47</b>	<b>4,701</b>
Additions	-	-	24	2	26
<b>At 30 June 2023 (audited)</b>	<b>183</b>	<b>2,889</b>	<b>1,606</b>	<b>49</b>	<b>4,727</b>
Additions	-	-	-	-	-
<b>At 31 December 2023 (unaudited)</b>	<b>183</b>	<b>2,889</b>	<b>1,606</b>	<b>49</b>	<b>4,727</b>
<b>Depreciation</b>					
At 1 July 2022 (audited)	99	2,668	855	34	3,656
Charge for period	13	2	158	-	173
<b>At 31 December 2022 (unaudited)</b>	<b>112</b>	<b>2,670</b>	<b>1,013</b>	<b>34</b>	<b>3,829</b>
Charge for period	12	3	159	2	176
Impairment	59	216	410	10	695
<b>At 30 June 2023 (audited)</b>	<b>183</b>	<b>2,889</b>	<b>1,582</b>	<b>46</b>	<b>4,700</b>
Charge for period	-	-	2	1	3
<b>At 31 December 2023 (unaudited)</b>	<b>183</b>	<b>2,889</b>	<b>1,584</b>	<b>47</b>	<b>4,703</b>
<b>Net Book Value at 31 December 2023 (unaudited)</b>	<b>-</b>	<b>-</b>	<b>22</b>	<b>2</b>	<b>24</b>
Net Book Value at 30 June 2023 (audited)	-	-	24	3	27
Net Book Value at 31 December 2022 (unaudited)	71	219	569	13	872

As set out in note 5 the Directors recognise that the ongoing suspension of all activities of RMB in Burundi and the subsequent decision not to commit investment for the conversion of the Gakara resource target to reserves requires an impairment review for the tangible fixed assets relating to the project in accordance with IAS36. Based on an assessment of both the legal and political position in Burundi, the Directors consider that the fair value of the property, plant and equipment associated with the Gakara project calculated in accordance with IAS 36 is nil and an impairment loss has been recognised.

FinBank SA hold security over the fixed and floating assets of RMB which include the impaired property, plant, and equipment in Burundi.

## 7. Trade and other payables

	As at 31 December 2023 US\$'000 Unaudited	As at 30 June 2023 US\$'000 Audited	As at 31 December 2022 US\$'000 Unaudited
Trade payable	818	124	43
Accrued expenses	357	736	316
Taxes and social security	380	290	361
Burundi land taxes payable	100	100	80
Amounts due to staff and management	34	-	11
Provision for employment disputes	-	-	68
<b>Total trade and other payables</b>	<b>1,689</b>	<b>1,250</b>	<b>879</b>

The Directors consider that the carrying value of trade and other payables approximate to their fair value.

## 8. Borrowings

	As at 31 December 2023 US\$'000 Unaudited	As at 30 June 2023 US\$'000 Audited	As at 31 December 2022 US\$'000 Unaudited
Finbank Loan	324	363	557
Warrant liability	209	123	133
<b>Total borrowings</b>	<b>533</b>	<b>486</b>	<b>690</b>
Payable within 12 months	250	201	101
Payable after more than 12 months	283	285	589
	<b>533</b>	<b>486</b>	<b>690</b>

### FinBank Loan

The FinBank loan facility in Burundi is expressed in BIF and carries an interest rate of 15%. Repayment terms agreed from February 2023 require payments of BIF30 million per month until April 2027 covering both principal and interest on a reducing balance basis. During 2023 the devaluation of the BIF to US\$1:BIF2,840.54 at 30 June 2023 reduced the US dollar value of the liability by US\$133k.

Under the terms of this loan, FinBank has security over the fixed and floating assets of RMB, the shares of RMB, and the cash held in RMB's FinBank bank accounts. Interest on the loan amounted to US\$26k (2022: US\$42k).

### Warrant Liability

On 21 February 2020, 2,000,000 warrants were issued to Pipestone Capital Inc, in which George Bennett, the Company's CEO, has a beneficial interest. The warrants were issued in lieu of interest on a US\$1 million bridging loan provided to the Company, which was repaid in full in December 2021. The warrants have a contractual life of four years at an exercise price of 4.55 pence per warrant. The Pipestone warrants are recognised as a financial liability at fair value through profit and loss with changes in value included under finance costs/income. Subsequent to the balance sheet date the contractual term of the warrants has been extended by a further two years.

## 9. Share capital

	<b>As at 31 December 2023</b>	<b>As at 31 December 2022</b>	<b>As at 30 June 2023</b>
Issued share capital (nil par value) US\$'000	Unaudited 56,303	Unaudited 41,552	Audited 50,937
Number of shares in issue ('000)	630,317	526,406	598,859

The table below shows a reconciliation of share capital movements:

	<b>Number of shares</b>	<b>US\$'000</b>
<b>At 1 July 2022</b>	524,405,810	41,442
November 2022 – Options exercised (Cash receipts)	2,000,000	110
<b>At 31 December 2022</b>	<b>526,405,810</b>	<b>41,552</b>
May 2023 – Share placing (Cash receipts)	72,452,846	9,386
<b>At 30 June 2023</b>	<b>598,858,656</b>	<b>50,937</b>
November 2023-share placing (Cash receipts)	30,000,000	5,366
November 2023-Options exercised (nil value options)	1,458,000	-
<b>At 31 December 2023</b>	<b>630,316,656</b>	<b>56,303</b>

On 26 September 2023, the Company agreed conditionally to issue 30 million shares at a price of 15 pence per share, raising gross cash proceeds of US\$5.5 million (before costs of \$135k).

The first tranche of 25,786,541 ordinary shares was issued on 5 October 2023. The second tranche of 4,213,459 ordinary shares was issued on 6 December 2023 following shareholder approval at the Company's Annual General Meeting held on 21 November 2023.

In addition, George Bennett, Rainbow's CEO, has exercised 1,458,000 nil priced share options originally issued in January 2021.

## 10. Related party transactions

<b>US\$'000</b>	<b>Six months to 31 Dec 2023</b>			<b>Six months to 31 Dec 2022</b>		
	<b>Charged in period</b>	<b>Settled in period</b>	<b>Closing Balance</b>	<b>Charged in period</b>	<b>Settled in period</b>	<b>Closing Balance</b>
Benzu Minerals (Proprietary) Limited <sup>1</sup>	-	-	-	1	(1)	-
MPD Consulting Limited <sup>2</sup>	2	(3)	1	3	(1)	2
Magna Capital (Guernsey) Limited <sup>3</sup>	647	(647)	-	10	-	10
	<b>649</b>	<b>(650)</b>	<b>1</b>	<b>13</b>	<b>(1)</b>	<b>12</b>

*The above table does not include remuneration of Directors and senior management.*

1. Benzu Minerals (Proprietary) Limited is connected to Cesare Morelli who is currently engaged as the acting General Manager of RMB. In addition to the comparative amounts disclosed, which relate to costs associated with the drilling programme at Phalaborwa in 2022, salary was paid to Cesare Morelli via Benzu Minerals (Proprietary) Limited.
2. MPD Consulting Limited, in which Pete Gardner, the Company's CFO, has a beneficial interest, has recharged certain costs relating to UK support incurred on behalf of the Group.
3. Magna Capital (Guernsey) Limited ("Magna"), in which Adonis Pouroulis, the non-executive Chairman of the Board of Directors, has a beneficial interest, was engaged in December 2022 to assist the Company with its strategy to consolidate

ownership of the Phalaborwa project and lift the notarial bonds in South Africa issued in favour of third parties which may have impacted the ability of Bosveld to transfer the rights to the Phalaborwa project to a new entity as envisaged. The transaction was concluded in July 2023 and a success fee of £500k was paid to Magna.

#### **11. Post balance sheet events**

No events after the reporting date were identified that would affect the group of companies significantly or cause its financial results to be materially misstated.