

**ASX ANNOUNCEMENT**

Heavy Rare Earths Limited (ASX:HRE)  
29 April 2024

**MARCH 2024 QUARTERLY ACTIVITIES REPORT  
AND APPENDIX 5B**

- **Metallurgical variability program indicates a sizeable extent of the currently defined Cowalinya Inferred Mineral Resource comprises preferred material types that exhibit high leachability (>75%) of magnet rare earths and low consumption (<40 kg/t of undersize leach feed) of acid**
- **Tax offset refund of \$312,168 received from the Australian Government’s Research and Development (R&D) Tax Incentive program**
- **Cash balance as at 31 March 2024 was \$1.22 million**

Heavy Rare Earths Limited (“HRE” or “the Company”) is pleased to announce its March 2024 quarterly activities report for the seventh quarter since listing on the Australian Securities Exchange (ASX).

**Cowalinya Rare Earth Project, Western Australia**

The Company’s 100 per cent-owned Cowalinya project comprises three granted exploration licences E63/1972, E63/2144 and E63/2145 approximately 110 kilometres north-north-east of Esperance.

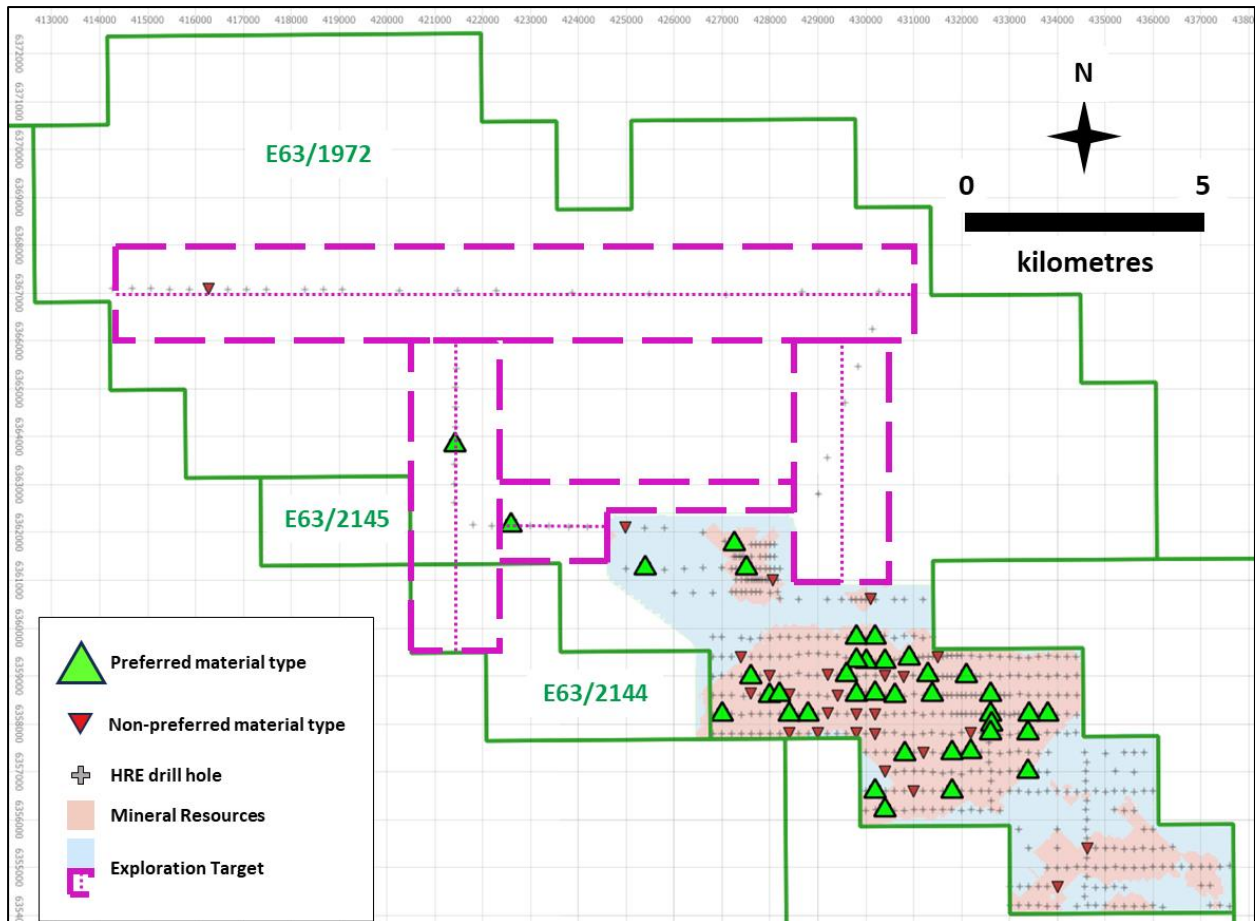
The project hosts a sizeable inventory of saprolite-hosted rare earths in Inferred Mineral Resources of **159 million tonnes @ 870 ppm TREO<sup>1</sup>** (refer to ASX announcement 3/10/2023) with excellent expansion potential as evidenced by a substantial Exploration Target of **280-1390 million tonnes @ 330-1330 ppm TREO** (refer to ASX announcement 23/10/2023).

**Metallurgical Program**

During the quarter, HRE reported the results of a comprehensive metallurgical variability program which commenced in Q3 2023 and involved sizing and diagnostic leach testing of 63 (mainly 6-metre) mineralised saprolite composites from 55 drill holes across the Cowalinya project. Fifty-seven of the composites were from within the Cowalinya Inferred Mineral Resources and the remainder from the project’s Exploration Target area (Figure 1). The variability work followed earlier phases of the metallurgical program in 2022 and 2023 where simple screening of 13 mineralised composites demonstrated a two-fold rare earth upgrade to -25µm undersize in 37.2% of the bulk saprolite feed mass (refer to ASX announcement 13 December 2022), and acid leaching of the undersize extracted an average of 82.9% of the payable magnet rare earths Pr, Nd, Tb and Dy, consuming an average of 18.1 kg of 32% hydrochloric acid per tonne of undersize feed for preferred material types (refer to ASX announcement 12 July 2023).

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<sup>1</sup> Using a 400 ppm TREO-CeO<sub>2</sub> grade cut-off



**Figure 1: Cowalinya metallurgical composites showing distribution of preferred and non-preferred material types.**

The results from the metallurgical variability program are consistent with earlier phases of the program and presented in Table 1. The most significant improvement has been the reduction in mass to  $-25\mu\text{m}$  undersize rejects thereby reducing feed tonnage to the leach plant. All other measured parameters have largely remained the same, with preferred material types, characterised by high leachability ( $>75\%$ ) of the magnet rare earths and low consumption ( $<40$  kilograms per tonne of undersize leach feed) of 32% hydrochloric acid, potentially occupying a sizeable extent of the currently defined resource (Figure 1).

A parallel bench-scale program to develop a downstream flowsheet to a mixed rare earth carbonate (MREC) is nearing completion and results are anticipated to be reported during Q2 2024.

**Table 1: Summary of expanded diagnostic leaching program (preferred material types).**

	TREO UPGRADE	MASS RECOVERY TO UNDERSIZE (% of total mass)	MAGNET RARE EARTHS (MREO) EXTRACTION TO LEACH	TOTAL RARE EARTHS EXTRACTED (ppm TREO)	EXTRACTED MREO/TREO	ACID CONSUMPTION (kg HCl/t of leach feed)
<b>AVERAGE</b>	<b>1.8</b>	<b>32.3%</b>	<b>84.9%</b>	<b>1486</b>	<b>30.6%</b>	<b>24.8</b>
<b>PREVIOUSLY REPORTED AVERAGE</b>	<b>1.8</b>	<b>42.1%</b>	<b>82.9%</b>	<b>1462</b>	<b>31.1%</b>	<b>18.1</b>

TOTAL RARE EARTHS (TREO) =  $La_2O_3 + CeO_2 + Pr_6O_{11} + Nd_2O_3 + Sm_2O_3 + Eu_2O_3 + Gd_2O_3 + Tb_4O_7 + Dy_2O_3 + Ho_2O_3 + Er_2O_3 + Tm_2O_3 + Yb_2O_3 + Lu_2O_3 + Y_2O_3$ .

MAGNET RARE EARTHS (MREO) =  $Pr_6O_{11} + Nd_2O_3 + Tb_4O_7 + Dy_2O_3$ .

ACID is 32% hydrochloric acid (HCl).

AVERAGE calculated on 45 composites which satisfy both >75% MREO leach extraction and <40 kg of 32% HCl per tonne of leach feed (i.e., SM01, SM02, SM03, SM04, SM06, SM07, SM12, SM13, SM14, SM16, SM22, SM24, SM26, SM34, SM36, SM38, SM40, SM42, SM44, SM45, SM47, SM48, SM49, SM50, SM51, SM62, SM68, SM72, SM73, SM74, SM77, SM78, SM79, SM80, SM82, SM93, SM94, SM96, SM99, SM105, SM106, SM113, SM114, SM120, SM125).

PREVIOUSLY REPORTED AVERAGE calculated on 8 composites which satisfy both >75% MREO leach extraction and <40 kg of 32% HCl per tonne of leach feed (i.e., SM01, SM02, SM03, SM04, SM06, SM07, SM12, SM13) (refer to ASX announcements 12 July 2023 and 15 September 2023).

### Duke Rare Earth Project, Northern Territory

The Company's 100 per cent-owned Duke project comprises two granted exploration licences EL33101 and EL33194 approximately 50 kilometres north-west of Tennant Creek. The exploration models being investigated by HRE at Duke are Browns Range-style unconformity-related hydrothermal mineralisation, and ion-adsorption mineralisation in saprolite developed on the extensive but poorly outcropping Warrego Granite.

No work was completed by HRE on the Duke project during the quarter. In the previous quarter assays from a 450-sample soil survey delineated an extensive rare earth soil anomaly adjacent to thick rare earth intersections in historic drilling of saprolite over the Warrego Granite. This, and a separate copper-bismuth-gold soil anomaly, represent targets for shallow drilling by HRE during 2024.

### Merino and Perenjori Rare Earth-Uranium Projects, Western Australia

The Company's 100 per cent-owned Merino and Perenjori projects are located within 225 kilometres of the port city of Geraldton. Together they comprise five exploration licences: E59/2795, E59/2796 and E59/2844 (Merino), and E70/6397 and E70/6398 (Perenjori). Both project areas show potential to host ion adsorption-type rare earths in palaeochannels on Archaean granitic basement and "calcrete-type" uranium. Virtually no exploration for these deposit types is evident from historic reports.

No work was completed by HRE on the Merino and Perenjori projects during the quarter. A limited program of passive seismic and soil sampling is planned for Q2 2024.

### Research and Development Tax Incentive Claim

During the quarter, the Company received a tax offset refund of \$312,168 for eligible R&D activities undertaken by HRE on the Cowalinya rare earth project during FY2023. These funds

were received from the Department of Industry, Science, Energy and Resources (AusIndustry) under the Australian Government's Research and Development (R&D) Tax Incentive program.

The Company anticipates lodging a further claim with AusIndustry for work completed on Cowalinya during FY2024.

### Additional Information

The table below compares the Company's actual expenditure against the 2-year Use of Funds table contained in the Company's IPO Prospectus dated 5 July 2022:

Use of funds as contained in the Prospectus	2-Year Use of Funds as contained in the Prospectus	Actual amount spent to date
Drilling – exploration & resource upgrade	\$2,340,000	\$1,915,685
Assaying	\$440,000	\$328,574
Metallurgical process development	\$325,000	\$105,838
Project Studies	\$400,000	\$73,683
Duke project exploration	\$100,000	\$151,505
Merino project exploration	-	\$43,570
Perenjori project exploration	-	\$22,115
Payment for Cowalinya vendors – exercise of option	\$300,000	\$300,000
Costs of the Offers	\$640,000	\$649,000
Administration & working capital	\$1,455,000	\$1,552,120
<b>Total</b>	<b>\$6,000,000</b>	<b>\$5,142,090*</b>

\* The amount above excludes any research and development tax incentive grants received.

Since listing on ASX in August 2022, the Company has spent a significant amount on executing its exploration strategy to increase shareholder wealth. The amount spent to date has been dominated by drilling and assay resulting in a material increase in the Company's Inferred Resources and the establishment of a maiden Exploration Target at its Cowalinya rare earth project. Over the coming months, exploration expenditure is not anticipated to be as high as previous quarters as the Company further advances its key metallurgical program for Cowalinya, undertakes first-pass surface exploration at its Merino and Perenjori rare earth-uranium projects, and examines project acquisition opportunities.

### Appendix 5B related party payments

Amounts included in section 6.1 of the Appendix 5B relate to Director's fees paid for the March 2024 quarter.

## Interests in Mining Tenements

Below is a summary of the mining tenements held by the Company at the end of the quarter:

Mining Tenement	Location	Beneficial Percentage held	Interest acquired/farm-in or disposed/farm-out during the quarter
E63/1972 – Cowalinya Project	WA, Australia	100%	-
E63/2144 – Cowalinya Project	WA, Australia	100%	-
E63/2145 – Cowalinya Project	WA, Australia	100%	-
EL33101 – Duke Project	NT, Australia	100%	-
EL33194 – Duke Project	NT, Australia	100%	-
E70/6397 – Perenjori Project	WA, Australia	100%	-
E70/6398 – Perenjori Project	WA, Australia	100%	-
E59/2795 – Merino Project	WA, Australia	100%	-
E59/2796 – Merino Project	WA, Australia	100%	-
E59/2844 – Merino Project	WA, Australia	100%*	-

\* Subject to grant.

-- Ends --

This announcement has been approved by the Board of HRE.

### For more information, please contact:

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### About Heavy Rare Earths Limited

Heavy Rare Earths Limited (ASX:HRE) is an Australian rare earth exploration and development company. HRE's key exploration project is Cowalinya, near Esperance in Western Australia. This is a clay-hosted rare earth project with a JORC Inferred Resource of 159 Mt @ 870 ppm TREO and a desirable rare earth composition where 28% are the valuable magnet rare earths and 23% the strategic heavy rare earths.

### Competent Persons Statement

The Exploration Results contained in this announcement were compiled by Mr. Richard Brescianini. Mr. Brescianini is a Member of the Australian Institute of Geoscientists (MAIG). He is a director and full-time employee of Heavy Rare Earths Limited. Mr. Brescianini has more than 35 years' experience in mineral exploration and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 JORC Code.

The Mineral Resources and Exploration Target contained in this announcement were compiled by Mr. Robin Rankin. Mr Rankin is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM) and accredited as a Chartered Professional by the AusIMM in the Geology discipline. He is the Principal Consulting Geologist and operator of independent geological consultancy GeoRes. Mr Rankin has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 JORC Code.

## Appendix 5B

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

Name of entity

HEAVY RARE EARTHS LIMITED

ABN

35 648 991 039

Quarter ended ("current quarter")

31 March 2024

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	-	-
(b) development	-	-
(c) production	-	-
(d) staff costs	(50)	(120)
(e) administration and corporate costs	(159)	(519)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	7	28
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Government grants and tax incentives	312	312
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>110</b>	<b>(299)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire or for:		
(a) entities	-	-
(b) tenements	-	-
(c) property, plant and equipment	-	-
(d) exploration & evaluation	(190)	(599)
(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 (9 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>(190)</b>	<b>(599)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
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	-	-
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 (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>-</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	1,303	2,121
4.2	Net cash from / (used in) operating activities (item 1.9 above)	110	(299)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(190)	(599)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-

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

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (9 months) \$A'000</b>
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>1,223</b>	<b>1,223</b>

<b>5.</b>	<b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	<b>Current quarter \$A'000</b>	<b>Previous quarter \$A'000</b>
5.1	Bank balances	1,223	1,303
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
<b>5.5</b>	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>1,223</b>	<b>1,303</b>

<b>6.</b>	<b>Payments to related parties of the entity and their associates</b>	<b>Current quarter \$A'000</b>
6.1	Aggregate amount of payments to related parties and their associates included in item 1	74
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

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



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

<b>7. Financing facilities</b>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
<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>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 <b>Total financing facilities</b>	-	-
7.5 <b>Unused financing facilities available at quarter end</b>		-
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.	<div style="border: 1px solid black; padding: 5px; min-height: 100px;"> <p>N/A</p> </div>	

<b>8. Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1 Net cash from / (used in) operating activities (item 1.9)	110*
8.2 (Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	(190)
8.3 Total relevant outgoings (item 8.1 + item 8.2)	(80)
8.4 Cash and cash equivalents at quarter end (item 4.6)	1,223
8.5 Unused finance facilities available at quarter end (item 7.5)	-
8.6 Total available funding (item 8.4 + item 8.5)	1,223
8.7 <b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	15.29
<i>* The amount in Item 1.9 includes the FY23 Research and Development tax incentive grant received during the quarter.</i>	
<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 April 2024

Authorised by: The Board of Directors

## Notes

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