

**Ticker:** RBW LN      **Net cash:** US\$4m      **Project:** Phalaborwa  
**Market cap:** £50m      **Price:** £0.10/sh      **Country:** South Africa  
*REC. (unc.): BUY*      *PT (unc): £0.35/sh*      *RISK RATING (unc.): HIGH*

Today's Phalaborwa update shows good progress being made towards guided 2026 first production, with pilot plant commissioning expected in 2Q23, and a helpful MRE update which confirms tonnes and grade and now with 77% in M&I. Additional drilling is planned to reconfirm density and stack depth – we think the potential here is to add tonnes, given the very low (1.1 SG) density estimate used in the MRE. Given the largely confirmatory MRE update, we maintain our estimates today, but would expect to see LOM increase if the additional drilling results in a higher density estimate. **We maintain our BUY rating and 35p/sh price target based on 0.6x NAV<sub>8%</sub>.** We think the upcoming pilot plant campaign could be a major catalyst for Rainbow with excellent risk reward: If Rainbow de-risks CIX-CIC as a separation methodology, the gypsum stacks could be a large addressable opportunity, a bottom cost-quartile source of rare earths (at surface, previously treated, in existing industrial sites), and with Rainbow the early mover. While critics understandably point to the fact that solvent extraction is currently the industry standard REE separation method, we like Rainbow's approach: building the pilot plant, focus on execution, and let the results speak for themselves.

### Phalaborwa update: MRE upgrades 77% to M&I, pilot plant commissioning on track for 2Q23

Rainbow released a Phalaborwa (South Africa) project update. An updated JORC MRE sees total 30.4Mt at 0.44% TREO, of which 23.4Mt or 77% is in M&I categories against the 4Q22 30.7MT at 0.43% TREO inferred resource. Additional drilling is planned to evaluate density at depth of the stacks as advised by US-based gypsum experts, Ardaman and Associates (a Tetra Tech company). The pilot plant is on track for 2Q23 commissioning. Design and fabrication work on the front end (crack and leach) has commenced by Mintek (Johannesburg). The back end continuous ion-exchange (CIX) / continuous ion chromatography (CIC) units have been delivered to K-Tech in Lakeland, Florida for setup and testing.

**Table 1: Updated Phalaborwa JORC-compliant MRE**

	Tonnes Mt	TREO %	% of TREO					Th ppm	U ppm
			Nd	Pr	Dy	Tb	Other		
Measured	7.3	0.5%	24%	5.9%	1.0%	0.3%	69	47	2
Indicated	16.1	0.4%	24%	5.6%	1.0%	0.3%	70	49	2
Inferred	7.0	0.4%	23%	5.5%	1.0%	0.3%	70	45	2
<b>Total</b>	<b>30.4</b>	<b>0.4%</b>	<b>23%</b>	<b>5.6%</b>	<b>1.0%</b>	<b>0.3%</b>	<b>70</b>	<b>48</b>	<b>2</b>
Oct 2022 PEA MRE	30.7	0.43%	23%	5.7%	1.0%	0.3%	70	48	2
Variance %	-0.3	-0.01%	--	0.10%	--	--	-0.10	--	--

Source: Rainbow Rare Earths; Reported at a 0.2% TREO cut-off grade

### Why we like Rainbow Rare Earths

1. Tailings project located on existing industrial facility results in low capex and opex
2. High per tonne value due to NdPr, Dy, Tb assemblage and ability to produce beneficiated product
3. Proven management team that has built numerous mines and tailings projects

### Catalysts

- 2023: DFS and pilot plant (H1), construction decision in H2
- 2H24: SCPe build start
- 2026: First production



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Summary of Recommendations as of March 2023	
BUY:	52
HOLD:	1
SELL:	0
UNDER REVIEW:	1
TENDER:	1
NOT RATED:	0
TOTAL	55

<sup>1</sup> As at the end of the month immediately preceding the date of issuance of the research report or the end of the second most recent month if the issue date is less than 10 calendar days after the end of the most recent month