# **Initiation of Coverage: Crowning 'The King'**

LIN.ASX | LINDIAN RESOURCES LTD | RARE EARTHS | DEVELOPMENT & EXPLORATION

PRICE **0.23/sh** 

TARGET PRICE **0.55/sh** 

RECOMMENDATION

SPECULATIVE BUY

ANALYST

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#### **Summary**

- The Kangankunde Rare Earths Project (KREP) has the potential to become the largest hard rock rare earth project ex-China; we see potential for a maiden resource of 250mt @ 2.40% TREO with an NdPr assemblage of 20%.
- The scale of the KREP dwarfs that of LIN's listed peers, including the only producing western rare earth mines in Mt Weld (LYC-ASX) and Mountain Pass (MP-NYSE).
- The KREP is now in play having been sterilised by title disputes for more than a decade, and given the Tier-1 potential of the project, the stock is materially undervalued at a market capitalisation of A\$230m, in our view.

The most compelling opportunity in the rare earths sector... The KREP is rapidly emerging as a Tier 1 project. On our estimates, the central zone of the Kangankunde carbonatite intrusion alone has the potential to host a resource of 250mt @ 2.40% TREO with an NdPr assemblage of ~20%, which would comfortably position Kangankunde as the largest hard rock rare earth project ex-China (Fig. 1). All holes drilled at the KREP subsequent to LIN's acquisition of the KREP in Aug'22 have been mineralised from surface to end of hole, returning significant intercepts (i.e. 26m @ 6.15% TREO from 58m, 250m @ 2.90% TREO from surface). An initial inferred resource for the central zone is guided for release in JunQ'23, which we anticipate as a material catalyst for a re-rating.

...no longer sterilised by title disputes. The KREP has been highly sought after by multiple parties over the last two decades, with Lynas Rare Earths (LYC-ASX) previously claiming ownership of the KREP from 2007-2012, which we believe in itself provides significant validation of the project. In Aug'22, LIN entered into an agreement to progressively acquire a 100% interest in the entity that holds title to the KREP for US\$30m, of which US\$20m remains payable. While we acknowledge the KREP's location in Malawi as a key deterrent for investors, we believe the discount for jurisdiction reflected in LIN's market capitalisation is overdone, particularly given the advanced and fully permitted status of the KREP. On a contained NdPr oxide basis, our indicative resource estimate alludes to a deposit ~1.8x the scale of Mt Weld (LYC-ASX, market cap: A\$6.1bn) and ~5.5x that of Mountain Pass (MP-NYS, market cap A\$7.0bn) based on defined resources.

Capex-light upstream focus. LIN is pursuing a simple concentrate to market strategy, in contrast to the capital-intensive downstream ambitions of listed peers. Peer concentrate pricing, a favourable NdPr assemblage, low levels of radioactive elements and a low-cost gravity separation concentration process capable of producing a 60% TREO concentrate suggest that significant margins are achievable on the production of a mixed rare earth concentrate at the KREP. Concentrate offtake from the KREP presents as i) potential replacement feedstock for Chinese refineries on the approaching displacement of bastnaesite concentrate offtake from the Mountain Pass mine (equivalent to ~15% of global rare earth concentrate supply), or alternatively ii) potential third-party feedstock for western refining capacity, in our view.

Initiating coverage with a Speculative Buy rating and PT of \$0.55/sh (1.0x NAV). Our risk-weighted and fully diluted DCF valuation (NPV<sub>12%</sub>) reflects a base case open pit development scenario commencing at a notional plant design rate of 350ktpa in MarQ'25, expanding to 1.5mtpa (5.4kt NdPr) in FY28e and 3.0mtpa (10.8kt NdPr) from FY31e. Our SOTP valuation is A\$0.69/sh on an unrisked basis, and increases by A\$0.10/sh for each incremental US\$10/kg uplift in modelled NdPr oxide price (EHe LT: US\$95/kg excl. VAT). We view LIN as a high risk, but under-recognised rare earths exposure; key risks to our PT include dilution, commodity price, execution, ownership and sovereign risk.

Market Statistics		
Share Price	0.23	A\$/sh
Price Target (1.0x NAV)	0.55	A\$/sh
Valuation (risk-weighted)	0.55	A\$/sh
Valuation (unrisked)	0.69	A\$/sh
Capital Structure		
Shares on Issue	1,014	m
Options	108	m
Performance Rights	33	m
Dil. Fully Paid Ordinary	1,156	m
Market Capitalisation	233	A\$m
Enterprise Value	224	A\$m
Cash (Mar'23e)	9.2	A\$m
Debt (Mar'23e)	Nil	A\$m
ITM options	3.6	A\$m
Substantial Shareholders		
Asimwe Kabunga		12%
Ven Capital		10%
Rohan Patnaik		7%

Production Forecasts	FY24	FY25	FY26
TREO in concentrate (kt)	0.0	3.7	8.6
NdPr in concentrate (kt)	0.0	0.7	1.7
C1 cost (US\$/kg REO)	0.0	3.7	2.3
AISC (US\$/kg REO)	0.0	5.2	3.6

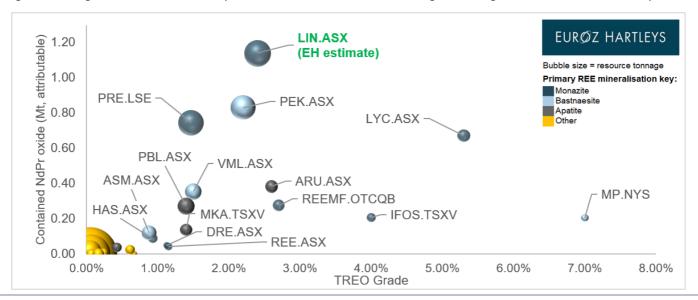
FY24	FY25	FY26
-	63	146
(8)	31	104
(8)	19	63
(9)	17	55
	(8)	- 63 (8) 31 (8) 19

#### Performance



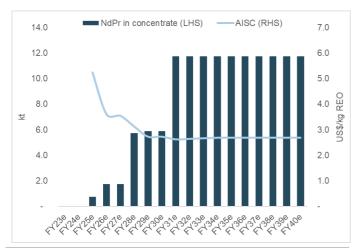
Source: IRESS

Figure 1: The largest hard-rock rare earth deposit ex-China on our estimates, excluding the lower-grade brecciated zone of the deposit



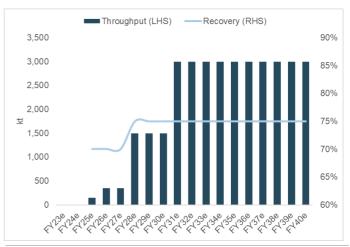
Source: Company reports, Euroz Hartleys estimates

Figure 2: Commencing 'demonstration' scale operations in FY25e



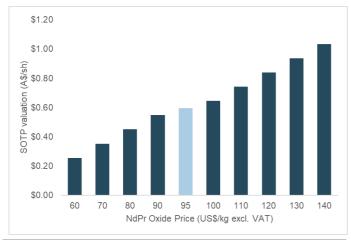
Source: Euroz Hartleys estimates

Figure 3: Ramping up to 3mtpa from FY31e (11kt NdPr/54kt TREO)



Source: Euroz Hartleys estimates

Figure 4: Leveraged to the NdPr oxide price



Source: Euroz Hartleys estimates

Figure 5: NdPr prices remain elevated despite recent weakness



Source: Bloomberg

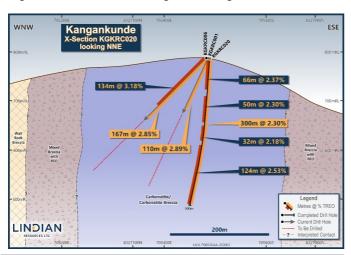
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#### **Valuation**

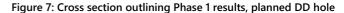
We see potential for a maiden inferred mineral resource of 250mt grading at 2.40% TREO for the central high grade zone of the Kangankunde carbonatite, which carries a strike length of ~650m and width of ~450m. All holes drilled under Phase 1 of LIN's maiden 12,500m drill program have intercepted consistent rare earth mineralisation from surface and have ended in mineralisation, with the depth of the resource solely constrained by the extent of drilling. Noting consistently mineralised intercepts and maximum drilling depth to date (KGKRC006 returned 300m at 2.30% TREO from surface at an NdPr:TREO ratio of ~20%), our resource estimate reflects an assumed maximum depth of 300m.

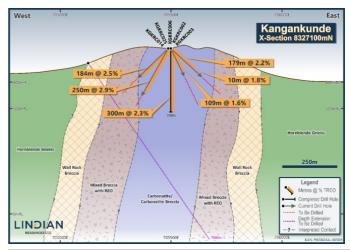
Deeper diamond holes (~1,000m in length) are planned under Phase 2 of LIN's maiden drill program, and are designed to test the N-S and E-W axes of the carbonatite between 300m and 800m below the Kangankunde hilltop, which rises ~200m above surrounding plains. Results from the Phase 2 drill program have the potential to significantly extend our modelled depth assumption and in turn resource estimate for the central zone of the intrusion.

Figure 6: Cross section outlining consistent grade distribution



Source: Company reports





Source: Company reports

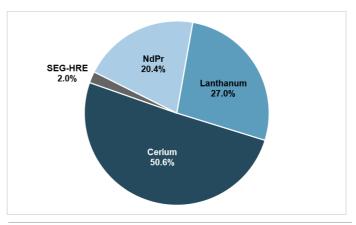
Our TREO grade and NdPr assemblage assumptions reflect the average grade of all holes drilled into the central zone from surface to end of hole. Limited drilling into the mixed breccia zone has been undertaken to date. Despite carrying a broadly lower TREO grade relative to the central zone (avg. TREO grade of ~1.50% TREO vs. ~2.40% TREO), we also see potential for the enveloping lower grade halo to add significantly to the scale of our indicative resource estimate, particularly given the low grade halo ranges from 50-250m in width.

Figure 8: Back-of-the-envelope Kangankunde resource estimate

Conceptual resource estimate					
Depth	300 m				
Width	450 m				
Strike Length	650 m				
Volume	87,750,000 m <sup>3</sup>				
Density (SG)	2.9 t/m <sup>3</sup>				
Mass	254,475,000 mt				
Avg. TREO grade	2.40% TREO				
Contained TREO	6,107,400 mt				
NdPr composition	20% NdPr:TREO				
Contained NdPr	1,221,480 mt				

Source: Euroz Hartleys estimates

Figure 9: Assumed Kangankunde rare earth assemblage



Source: Company reports, Euroz Hartleys estimates

We adopt a risk-weighted DCF valuation methodology (NPV<sub>12%</sub>, base-year: FY24e) for the KREP. Our resource estimate comfortably underpins a modelled 25-year mine life (conservatively reflecting the initial lease term of the Kangankunde Mining License) at a LT throughput rate of 3.0mtpa. In the absence of published feasibility studies for the development of the KREP, our NPV<sub>12%</sub> valuation adopts speculative assumptions with respect to a staged open pit development scenario and underlying operating and capital costs.

Figure 10: Modelled KREP operating parameters

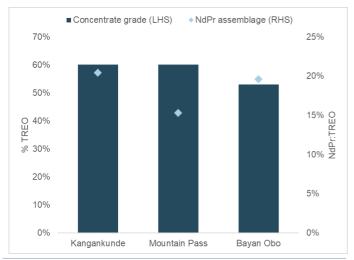
		Stage 1	Stage 2	Stage 3
Commencement		MarQ'25	MarQ'28	MarQ'31
Throughput	ktpa	350	1,500	3,000
Strip ratio	W:O	2:1	1.5:1	1.5:1
Head grade	% TREO	3.50%	2.40%	2.40%
NdPr assemblage	NdPr:TREO	20%	20%	20%
Recoveries	%	70%	75%	75%
Concentrate grade	% TREO	60%	60%	60%
Monazite concentrate	ktpa	14.3	45.0	90.0
Concentrate TREO grade	% TREO	60%	60%	60%
TREO in concentrate	ktpa	8.6	27.0	54.0
NdPr in concentrate	ktpa	1.7	5.4	10.8
Net concentrate payability factor	%	65%	65%	65%
Average basket price	US\$/kg REO	12.6	12.6	12.6
AISC	US\$/kg REO	4.1	2.9	2.8
Upfront capex	US\$m	30	200	200

Source: Euroz Hartleys estimates

In alignment with company guidance, we model a simple monazite concentrate processing operation. Our valuation assumes the commencement of operations at 'demonstration scale' processing capacity of 350ktpa in MarQ'25, with our higher head grade assumption reflecting the initial extraction of the historical high grade JORC 2004 Resource of 2.5mt at 4.24% TREO for 107kt TREO (3.5% TREO cut-off), which commences at surface.

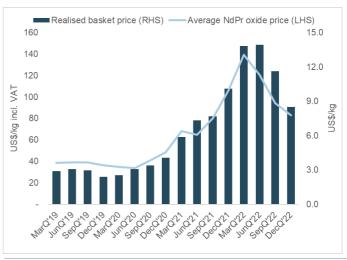
MP Materials' (MP-NYSE) California-based Mountain Pass mine is the only RoW producer of a mixed rare earth concentrate product at scale (+43ktpa in CY22, Fig. 14), and is currently transitioning downstream to the production of separated rare earth oxide products via the commissioning of its Stage II facility. All material from MP Materials' separation unit is guided to be sold to Sumitomo for subsequent distribution to Japanese customers in contrast to current offtake arrangements, under which bastnaesite concentrate is currently sold to Shenghe Resources, which typically on-sells that product to refineries based in China.

Figure 11: Concentrate TREO grade and NdPr assemblage



Source: Company reports, Euroz Hartleys estimates

Figure 12: Mountain Pass concentrate pricing

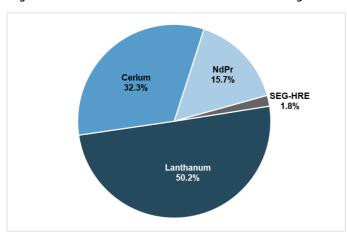


Source: MP Materials

Pricing received by MP Materials for a bastnaesite concentrate grading at ~60% TREO has averaged ~US\$9.90/kg over the last reported 8 reported quarters, with the prevailing NdPr oxide price averaging US\$95/kg excluding VAT over the corresponding period. For modelling purposes, we apply a payability factor of 65% to our prevailing basket price estimate reflecting our current LT NdPr oxide price forecast of US\$95/kg excluding VAT for a LOM average concentrate price of US\$12.6/kg. This concentrate price assumption is broadly comparable with that implied by a pro-rated uplift to the price received by MP Materials for a higher assumed NdPr assemblage at the KREP (20.4% vs. MP's ~15.7% NdPr assemblage, see Fig. 9 vs. Fig. 13).

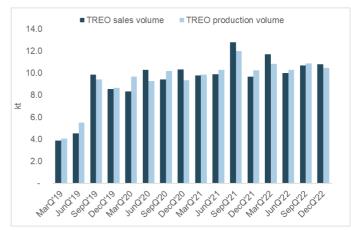
This approach does not account for any potential premium receivable for the low levels of radioactive elements at the KREP, however at this point in time there is no visibility on such a premium being achievable given concentrate pricing terms are negotiated in confidence.

Figure 13: Mountain Pass rare earth concentrate assemblage



Source: MP Materials

Figure 14: Mountain Pass TREO production and sales volumes



Source: MP Materials

Our SOTP valuation is discounted for i) remaining Tranche 3 and 4 acquisition payments totalling US\$20m, and ii) the present value of corporate overheads over our modelled KREP mine life. The Malawian government holds the right (but not the obligation) to acquire a free equity ownership interest of up to 10% in any mining project that is subject to a large-scale mining license (>1.5mtpa open pit or >0.75mtpa underground operations). Our DCF valuation reflects LIN's equity interest in the KREP reducing to 90% from FY31e on the assumption of the Malawian government exercising this option over the KREP upon transitioning to a large-scale mining license from FY31e onwards for a 3.0mtpa operation.

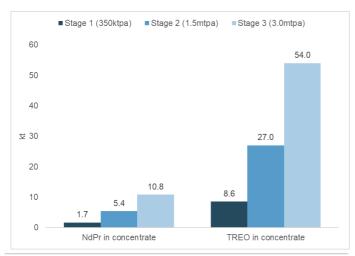
Figure 15: DCF-backed SOTP valuation, base year: FY24e

	Risking %	Equity %	Unrisked A\$m	Risked A\$m
Kangankunde Rare Earths Project (NPV <sub>12%</sub> )	80%	90%	1,286.0	1,028.8
Guinea Bauxite Projects	100%	100%	35.0	35.0
Corporate Overheads	100%	100%	(50.8)	(50.8)
Tranche 3 & 4 Acquisition Payments			(27.0)	(27.0)
Cash (Mar'23e)			9.2	9.2
Debt (Mar'23e)			-	-
ITM options			3.6	3.6
Total			1,256.0	998.8
A\$/sh valuation			0.69	0.55
Issued capital assumptions				
Fuly diluted share capial (m)		1,155.7		
Additional shares to be issued (m)		670.8		
Shares on issue (fully diluted)		1,826.5		
Price Target (1.0x risk-weighted NAV, fully	diluted)			0.55

Source: Euroz Hartleys estimates

Feasibility work on the expansion to 'full-scale' operations is guided to be undertaken in tandem with the Stage 1 demonstration scale operation ahead of our assumed commencement of production under the 1.5mtpa expansion from FY28e onwards. Our model risk weighting factor of 80% is reflective of sovereign, commodity price, dilution and execution risk, while also recognising that the KREP currently does not host a JORC 2012 resource. Prior to the publication of feasibility studies for the KREP, our valuation currently does not recognise any revenue from the potential sale of strontianite or barium concentrates from the KREP, which could provide an uplift to revenue forecasts. Barite and strontianite concentrate finishing circuits are currently included in the conceptual Kangankunde process flowsheet (Fig. 19).

Figure 16: NdPr and TREO in concentrate production by stage



Source: Euroz Hartleys estimates

Source: Euroz Hartleys estimates

Whilst acknowledging the non-core status of LIN's Guinea-domiciled bauxite projects, we ascribe a notional value of A\$35m to these assets with reference to LIN's historical market capitalisation prior to the announcement of the progressive acquisition of the Kangankunde Project in Aug'22.

Additional equity is required by Aug'23 despite the recent private placement of A\$9.0m; we model a MarQ'23e exit cash position of A\$9.2m following the placement. Although the potential exists for non-traditional and non-dilutive project financing avenues (i.e. offtake financing arrangements), for now, our valuation assumes the placement of additional equity to meet working capital requirements, exploration and development costs, and the Tranche 3 acquisition payment of US\$10m falling due in Aug'23. A summary of all tranches under the progressive US\$30m acquisition of the entity that holds title to the KREP is summarised in Figure 21.

Our dilution assumptions also reflect the placement of new equity to fund upfront capex for both Stage 1 (100% equity) and Stage 2 (50:50 debt to equity split), development/feasibility study costs and the Tranche 4 acquisition payment of US\$10m (payable on the commencement of commercial production at the KREP). All capital is assumed to be raised at the current share price under our model assumptions, which we acknowledge as overly conservative with respect to potential dilution, in our view, particularly if i) the company secures non-traditional sources of project finance and ii) the company delivers on its stated strategy. We will look to revisit our funding assumptions as the development of the KREP progresses. Figure 15 outlines our fully diluted share count calculation.

## **Concentrate Offtake**

We do not anticipate a shortage of demand for a mixed rare earth concentrate grading at 60% TREO with low radioactive elements from the KREP. Shenghe Resources' current rare earth concentrate offtake from MP Materials' California-based Mountain Pass mine will shortly be displaced by MP's advancement downstream to separated rare earth oxide production, with all separated rare earth oxide products from Phase II capacity at Mountain Pass to be exclusively distributed to Japanese customers by Sumitomo Corporation.



Shenghe Resources currently on-sells mixed rare earth concentrate to refiners located in China, and given this, we would naturally expect strong demand from Shenghe for a rare earth concentrate from the KREP (regardless of scale) as an attractive replacement, particularly given the meaningful portion of global mine supply accounted for by Mountain Pass (Fig. 35, ~15% of global rare earth concentrate supply).

Beyond Mountain Pass, Shenghe has previously collaborated with multiple ASX-listed RoW rare earth projects, including the likes of Cummins Range (REE-ASX, Australia), Ngualla (PEK-ASX, Tanzania) and Kvanefjeld (ETM-ASX, prev. GGG-ASX, Greenland), we suspect as a means of shoring up access to western rare earth feedstock supply for subsequent distribution to Chinese refineries. Externally to any potential concentrate offtake agreements with Shenghe Resources, we note multiple potential western offtake avenues for a mixed rare earth concentrate from the KREP, which subject to offtake terms, may present as more attractive offtake options considering a heightened focus on decoupling rare earth supply chains from China.

Iluka Resources (ILU-ASX) has reached FID on its Eneabba Rare Earths refinery, which has significant latent capacity (Fig. 18). Lynas Rare Earths (LYC-ASX) has also previously flagged the potential for its midstream cracking and leaching capacity at Kalgoorlie to receive third-party feedstocks, although we consider a low likelihood of third party offtake and/or tolling arrangements considering the upscaling of throughput capacity at Mt Weld from ~350ktpa to 1.3mtpa and potential additional expansions beyond this. Pensana Plc (PRE-LSE) is pursuing the establishment of UK-based rare earth separation capacity (~12.5ktpa REO), with initial production targeted in CY24.

This is purely speculation on our part at this point in time; there is yet formal confirmation of the technical suitability of the aforementioned facilities and respective flowsheets to process third party monazite feedstocks from the likes of the KREP.

Illustrative feed profile<sup>3</sup> Feed rate (ktpa) Capacity = 55ktpa 60 40 Spare capacity (Wimmera,5 other Iluka 20 and potential third party Eneabba stockpile concentrates) 0 2022 2024 2026 2028 2030 2032 2036 2038 2040 Illustrative production profile3 NdPr (ktpa) Capacity = 5.5ktpa 6 Spare capacity (Wimmera,5 other Iluka and potential third party concentrates) Eneabba stockpile 0 2022

Figure 18: Indicative Iluka Resources Eneabba Rare Earths Refinery feedstock profile

Source: Iluka Resources

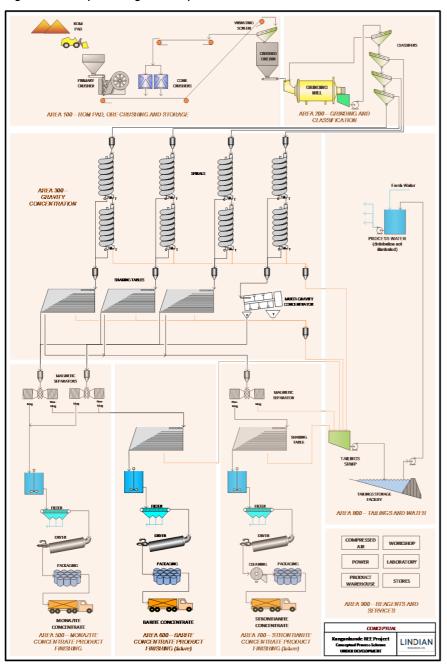
#### **Flowsheet**

Metallurgical testwork on the use of gravity separation at the KREP has previously been undertaken by Lonmin and the French Government's Bureau de Recherches Géologiques et Minière (BRGM). A concentrate grading at 60% TREO was achieved with a 60% recovery from the BGRM pilot plant study, with further testwork subsequently undertaken by Mintek and Multotec in South Africa producing similar results to BGRM.

The BGRM pilot plant flowsheet consisted of crushing and grinding with gravity separation using spirals and shaking tables to produce a high grade monazite concentrate. LIN has flagged the potential production of barite and strontianite concentrate products, which is yet to be incorporated into our valuation.

LIN is targeting a material uplift in recoveries from historical recovery rates of 60% to  $\sim$ 80-90% via the addition of multi-gravity separation (Fig. 19). For now, we model higher than historically achieved recoveries at 70% (Stage 1) and 75% (Stage 2 & 3), which is subject to review pending results from metallurgical testwork currently being undertaken.

Figure 19: Conceptual Kangankunde process flowsheet



Source: Company reports

## Kangankunde Rare Earth Project (KREP)

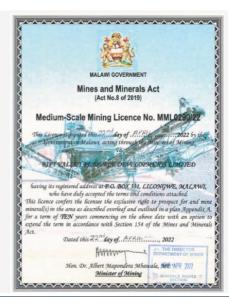
The Kangankunde Carbonatite Complex is located in Southern Malawi, approximately ~100km north of the city of Blantyre, being the main economic and commercial center in Malawi. The KREP lies within the Machinga district of Southern Malawi, 14km south of the town of Balaka (population: 36,000) and 25km west of the river town of Liwonde (population: 40,000).

LIN is progressively acquiring 100% of Malawian-registered Rift Valley Resource Developments Limited and its 100%-owned title to Exploration License EPL0514/18R and Mining Licence MML0920/22 issued under the Malawi Mines and Minerals Act 2018. MML0290 covers the entire known carbonatite and surrounding Exploration Licence EL0514/18R. The issued Exploration and Mining Licenses have an Environmental and Social Impact Assessment License (No. 2:10:16) issued under the Malawi Environmental Management Act No. 19 of 2017.

Figure 20: Granted Mining, Exploration and Environmental Licenses held by Rift Valley Resource Developments Ltd







Source: Company reports

A summary of progressive acquisition payments and the current status thereof is summarised below. LIN has the right, but not the obligation, to make the Tranche 3 and 4 payments sooner than as set out below in order to accelerate the acquisition of a 100% interest in Rift Valley Resource Developments and accordingly the KREP.

We assume the Tranche 4 payment of US\$10m is paid in MarQ'25 in line with our assumed commencement of commercial production under the 350ktpa demonstration scale operation, being the earlier date of the commencement of commercial production and 48 months after the Tranche 1 payment (Aug'26).

Figure 21: Rift Valley Resource Developments Limited acquisition payments

Tranche	Amount (US\$m)	Status	Date Paid	LIN RVRD Stake	Terms
1	2.5	Paid	15-Aug-22	0%	Non-refundable deposit paid to vendors following completion of all legal and regulatory requirements in Malawi
2	7.5	Paid	20-Jan-23	33%	Paid within 180 days of the signature date
3	10.0	Pending	n/a	66%	Payable 365 days after Tranche 1 payment (due Aug'23)
4	10.0	Pending	n/a	100%	Payable on the earlier of commencement of commercial production or 48 months after the Tranche 1 payment

Source: Company reports, Euroz Hartleys edits

We view the KREP as a brownfield rare earth project given the extent of historical exploration and testwork, with the deposit hosting a modest high grade Inferred Resource (JORC 2004) of **2.53mt at 4.24% TREO for 107kt TREO** (cut-off grade: 3.5% TREO). A significantly lower cut-off grade is justified by the demonstrated amenability of the ore to low-cost gravity separation to produce a high grade concentrate, in addition to current rare earth oxide prices. With reference to initial assay results released by LIN, we believe the historical resource at the Kangankunde deposit is not representative of the potential scale and grade of mineable reserves at the KREP.

The KREP is proximal to existing infrastructure, situated within 3km of the sealed M1 highway, 4km from the high voltage Trans-Malawian power grid, 9km from the Nacala corridor railway line to the port of Nacala and 25km from the Shire River (Fig. 22). Our modelled operating cost base reflects the transport of a monazite concentrate from the KREP to the Port of Beira (Mozambique), with CIF shipping costs to China on the base assumption of an offtake relationship being established with a Chinese partner.

Tanzania

Tanzan

Figure 22: KREP location and surrounding infrastructure

Source: Company reports

The company has been informed that it may be possible to establish a water pipe pumping fresh river water from the Shire River. The Shire River is Malawi's largest river and the only outlet from the freshwater Lake Malawi, extending for 400km before joining the Zambezi river. The Shire River typically flows at a rate between 50m³ per second to 1,000m³ per second, for an average rate of 43 billion litres per day. Malawi has 8 hydroelectric power generation stations generating a total of 360Mw of power, 3 planned hydroelectric power generation projects (totalling 720Mw), one thermal 300Mw power station and 150Mw of planned solar power generation.

## History

No significant work has been undertaken on the KREP prior to LIN since 1990. The Kangankunde Carbonatite Complex has been subjected to extensive geological and process testwork completed between 1987-1990 by the French geological survey (Bureau de Recherches Geologiques et Minieres, 'BRGM'). The deposit was not developed at that time due to political unrest in neighbouring countries through which concentrate had to be transported. BRGM data comprised >2,000m of diamond core drilling and 550 trench samples, although the majority of the historic data has either been lost or is limited to hardcopy form.

The BRGM completed ore concentration testwork at pilot plant scale in France during 1989. After collection of a 30-tonne sample of ore from surface and at depth, the pilot plant consisted of crushing and grinding with gravity separation using spirals and shaking tables. A concentrate grading at 60% TREO was produced with a recovery of 60% REO from the BRGM pilot plant study. Further testwork was subsequently undertaken in Johannesburg by Mintek and Multotec, and produced similar results to those of BRGM.

Due diligence completed on the deposit by LYC-ASX prior to LYC's announced acquisition of the project in September 2007 suggested the potential for a financially robust operation producing a minimum of ~5kt TREO per annum. At the time of LYC's acquisition of the KREP, it was anticipated by LYC that the concentrate may have been further processed to separated rare earth oxides at the Lynas Advance Material Plant in Malaysia (construction had not commenced at the time), with concentrate from the KREP to complement the already significant resource at Mt Weld. Process testwork was planned to confirm the 60% REO concentrate would behave as expected during downstream processing.

A brief summary of the history of the KREP (published by LIN) is included below. Noting a chequered history of title disputes subsequent to the initial award of the original EPL covering the KREP, we have provided further detail on the history of the asset from 2000 onwards in the following section.

Figure 23: Summary of the history of the KREP



Source: Company reports

## **Title Disputes**

The original Exclusive Prospecting License (EPL 086/2000) over the area of the KREP tenements was issued to South African Geologist Michael Saner (along with his wholly owned Malawian company, Rift Valley Resources, 'RVR') in 2000. The renewable EPL was issued on March 15 2000 for an initial period of 3 years.

On November 25 2002, Saner submitted an application to the Malawi Mines Department to renew the EPL 3 months prior to the expiry date of the EPL in compliance with the Mines and Minerals Act. The Malawi Ministry of Mines did not respond to Saner's renewal application and no grounds were given.

The Malawi Ministry of Mines subsequently purportedly issued a Mining License covering the KREP area to a private Malawian firm, 'Rare Earths Company', despite never holding a requisite EPL. Rare Earths Company then on-sold the 'rights' to LYC-ASX for US\$4m as announced by LYC in September 2007, subject to various Malawi Government regulatory approvals. The local firm was believed to have links with the then Bakili Muluzi administration.

The LYC Purchase Agreement had a number of condition precedents, including approval by the Malawi Department of Mines for the transfer of the KREP tenement to LYC, and approval of Malawi Government regulatory authorities for the transfer of the environmental permit.

In 2006, Saner obtained a court order which required that the EPL be renewed, but without avail. Saner also claimed US\$100m from the Malawi Government for damages plus sunk costs, legal costs and interest. In December 2010, Saner obtained a High Court injunction preventing the Mines Minister or the Government from issuing any Mineral Right License over the KREP to any party except his wholly-owned Malawian company RVR, and prohibited the transfer of the Mining License which had been found to have been illegally issued. Earlier in August 2008, LYC offered to pay US\$500k to Michael Saner to relinquish his High Court claim over the KREP tenements, which was refused.

The Malawi Government formally approved and certified the transfer of a mining licence in relation to the KREP tenements to a subsidiary of LYC in December 2010 and subsequently completed the acquisition of the KREP in March 2011. In November 2011, LYC released an announcement stating that it had recently received correspondence on behalf of a party claiming that, in 2003, the Government of Malawi acted incorrectly in not renewing that party's exploration licence over the area of the KREP tenements.

At the time, LYC also announced that it would seek to intervene in Malawi High Court proceedings as an 'affected party', and was successful in obtaining a ruling from the Malawi High Court in May 2012 that it be added to the proceedings. In a later decision of the Malawi High Court, another judge (in dealing with a related interim matter) 'went beyond the issues before the court to make remarks that appear to contradict the May 2012 ruling'. In light of the abovementioned decision, LYC stated that it was 'reassessing the project's risks in the context of Malawi's present governance and institutional frameworks'. Since that point in time, no further investment has been made by LYC in Malawi, effectively walking away from the KREP.

In August 2018, LIN signed an exclusive option agreement with Rift Valley Resources to acquire up to a 75% interest in the KREP. In September 2018, a consent order between the Malawi Ministry of Natural Resources and Environmental Affairs and Michael Saner was reached, settling all matters between the parties, and providing for the issue of a new EPL (25km²) over the entire KREP. The consent order also provided for the conversion of the EPL into a Mining Licence. Legal proceedings ensued between LIN and Michael Saner/RVR following a subsequent attempt of RVR to unilaterally cancel the agreement on the basis of what were said to be subsequently changed circumstances in Malawi, with the intention of entering into a separate sale agreement. Under the new agreement, the sale of a 100% interest in the project for US\$70m and a 5% revenue royalty payable to RVR shareholders was proposed.

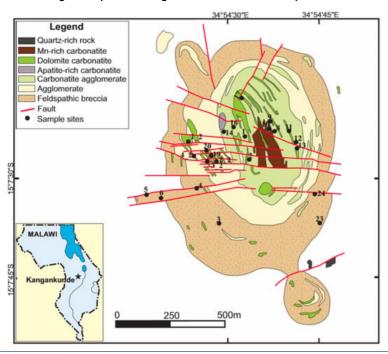
In August 2022, LIN agreed on terms to progressively acquire 100% of the shares in Rift Valley from its existing shareholders for US\$30m. Progressive acquisition payments are detailed in Figure 21.

## Geology

The Kangankunde carbonatite occurs as discrete tabular bodies and carbonatite layers. Individual bodies are continuous over several hundred meters and have continuity between cross-sections. The deposits contains a central zone of carbonatite rocks passing outwards to a series of broadly concentric zones of altered agglomerate, altered host rock, and ultimately into unaltered gneiss host rock. The main REE-bearing mineral in the Kangankunde Carbonatite Complex is monazite, with minor amounts of bastnaesite (rare earth carbonate) and flourencite (typically a samarium phosphate). The monazite is usually associated with strontianite (strontium carbonate), barite (barium sulphate) and occasional quartz and minor apatite phases.

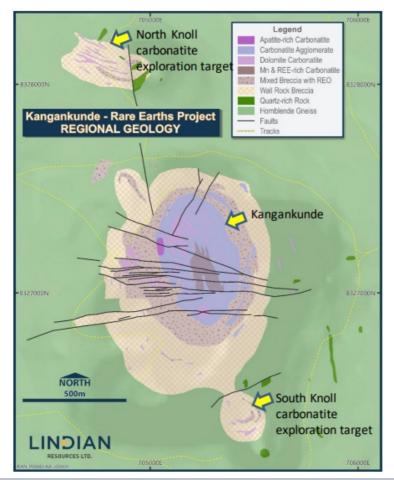
The Kangankunde Hill rises to a height of up to 200m above the surrounding plain and the carbonatite is generally fresh at surface, with weathering limited to preferential removal of some carbonates and on joint planes. The mineralisation is exposed at surface and the deposit remains open at depth. The company has also recently flagged untested north and south knoll carbonatite exploration targets.

Figure 24: Geological map of the Kangankunde carbonatite complex



Source: Company reports

Figure 25: Untested regional targets located north and south of the Kangankunde deposit



Source: Company reports

Initial results suggest that the Kangankunde mineralisation is potentially low in radioactive elements, making the KREP practical from an environmental perspective and allowing the transportation of mixed rare earth concentrate from the project. Assay results to date have averaged a uranium grade of ~27ppm and thorium grade of ~30ppm. Processed concentrate from the KREP is expected to be classified as a general goods material for transportation purposes, as opposed to Class Seven for radioactive material.

Per LIN, historical metallurgical testwork results and the application of a concentrate upgrade factor imply a predictive estimate of 790ppm combined uranium and thorium assay in mineral concentrate, which would position KREP concentrate as a general goods classification product.

Despite limited disclosure of uranium and thorium grades of peer deposits, we view the comparatively lower levels of radioactive elements at the KREP as a distinguishing factor through the lens of potential concentrate offtake partners.

#### Malawi

Malawi's mining sector accounts for ~1% of GDP. Only phosphate, coal, limestone, uranium, iron ore, rock aggregate and precious stones have previously been exploited. A summary of Malawi's resources by commodity and project is provided below:

Figure 26: Malawi resources by commodity and location

Mineral	Location	Delineated reserves (Million tonnes/grade)
Bauxite	Mulanje	28.8/43.9% Al <sub>2</sub> O <sub>3</sub>
Uranium	Kayelekera	12.5/0.2% U <sub>3</sub> O <sub>8</sub>
Gold; Copper; Gypsum; Diamond; Nickel; Niobium	Balaka, Kasungu, Lilongwe, Mangochi, Ntcheu; Mzimba	n/a
Monazite/Strontianite	Kangankunde	11/8% Strontianite
Rutile	Kasiya - Lilongwe	1.32% rutile
Corundum	Chimwadzulu-Ntcheu	n/a
Graphite	Katengeza-Dowa	8.0/75.6gm per m <sup>3</sup>
Limestone	Malowa Hill-Bwanje	15/48% CaO, 1.2% MgO
Limestone	Chenkumbi - Balaka; Chikoa-Kasungu	10/46.1% CaO, 3.5% MgO
Titanium and Heavy Mineral Sands	Nkhotakota-Salima	700/5.6% HMS
Titanium and Heavy Mineral Sands	Chipoka	n/a
Titanium and Heavy Mineral Sands	Mangochi	680/6.0% HMS
Titanium and Heavy Mineral Sands	Halala (Lake Chirwa)	15/6.0% HMS
Vermiculite	Feremu-Mwanza	2.5/4.9% (Med+Fine)
Coal	Mwabvi-Nsanje	4.7/30% ash
Coal	Ngana-Karonga	15/21.2% ash
Coal	Mchenga	5/17% ash, 0.5% Sulphur and calorific value of 6,800kcal/kg
Phosphate	Tundulu-Phalombe	2.017% P <sub>2</sub> O <sub>5</sub>
Pyrite	Chisepo-Dowa	34/8% S
Pyrite	Malingunde -Lilongwe	10/12% S
Glass Sands	Mchinji Dambos	1.6/97% SiO <sub>2</sub>
Dimension Stone	Chitipa, Mzimba, Mangochi, Mchinji	Blue, Black, Green, and Pink Granite
Gemstones	Mzimba, Nsanje, Chitipa, Chikwawa, Rumphi, Ntcheu	Numerous pegmatites and volcanic
Rare Earths	Phalombe; Ntcheu; Mulanje; Chisi Island	n/a
Rare Earths	Songwe Hill	M&I: 21.0mt @ 1.4% TREO

Source: International Trade Agency, last updated on 15th August 2022, Euroz Hartleys edits

Malawi has a standard taxation regime, with a 30% corporate tax rate and a 5% mineral royalty. The Malawian government has the right but not the obligation to acquire directly or through a Government nominee, without cost, a free equity ownership interest of up to 10% in any mining project that is subject to a large-scale mining licence (>1.5mtpa open pit, or >0.75mtpa underground operation), which is reflected in our SOTP valuation, on the assumption of a transfer of the current medium scale mining license to a large scale mining operation license from FY31e. Miners pay a Resources Rent Tax of 15% on after-tax profits. Further, a 0.45% community revenue royalty is also accounted for in our discounted cash flow model.

ASX-listed resource companies with Malawi-based operations include Lotus Resources Ltd, which holds an 85% stake in the idled Kayelekera Uranium Project (ASX: LOT, market cap ~A\$220m) and Sovereign Minerals Ltd, which is currently focused on developing the Kasiya Rutile Project (ASX: SVM, market cap: ~A\$180). Mkango Resources Ltd (MKA-TSXV, market cap ~A\$50m) is currently developing the carbonatite-hosted Songwe Hill rare earth deposit located in south-eastern Malawi, approximately 90km East of Blantyre.

## **Project Timelines**

The most recently issued project timeline for the KREP at the time of our initiation of coverage is included below for reference. The guided ramp-up of production from SepQ'24 subsequent to a 9-month plant build period commencing in SepQ'23 appears aggressive, in our view; we accordingly assume a ramp-up of production from MarQ'25.

Figure 27: Strategic Development Timeline



Source: Lindian Resources

## What defines a Tier 1 Rare Earth Project?

LIN has provided very specific guidance on what the company views to be the 'anatomy of a Tier-1 rare earths asset' in a recent company presentation, while flagging that subject to the success of planned work programs, 'it is likely that Kangankunde will satisfy each of the (below) factors'. The below 'hurdles' are aligned (and if not, more favourable) than our current model assumptions, which we plan to review as the development of the KREP progresses.

Figure 28: Extract from LIN ASX release dated 9<sup>th</sup> March 2023

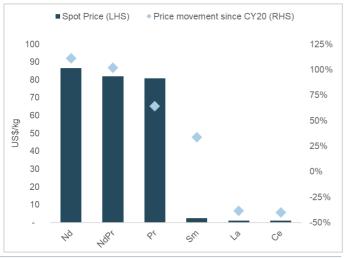
Factors	Hurdle
Resource	>500 million tonnes resource
TREO	Total TREO contained >10 million tonne
NdPr Ratio	NdPr ratio ≥20%
Concentrate Recovery	Concentrate Recovery ~80%
Concentrate Grade	Concentrate grade ~60% TREO
Radioactive content	Non-Radioactive
Carbon Footprint	Net-Zero Carbon footprint capable
Annual Production	Annual TREO Production >30,000tpa

Source: Lindian Resources

#### **Rare Earth Markets**

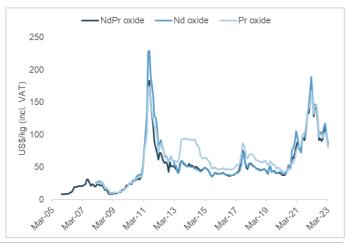
The rare earth thematic is heavily centered on widely forecast emerging deficits for both light and heavy rare earth elements applied in Neodymium Iron Boron (NdFeB) permanent rare earth magnets, in addition to China's current dominance of the underlying NdFeB supply chain (Fig. 19). Magnet metal prices (referring to Nd, Pr, Dy & Tb oxide price indexes) have materially re-rated subsequent to COVID-19 pandemic (Figures 29 & 30), largely on account of elevated demand for rare earth permanent magnets for application in electric vehicles and wind turbines.

Figure 29: 'Spot' LRE oxide prices and movements since CY20



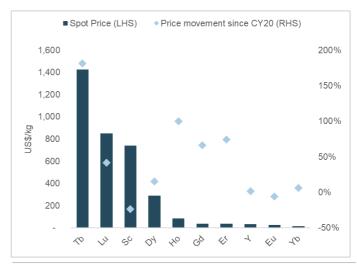
Source: Bloomberg

Figure 31: Nd, Pr and NdPr oxide historical prices



Source: Bloomberg

Figure 30: 'Spot' HRE oxide prices and movements since CY20



Source: Bloomberg

Figure 32: Dy and Tb oxide historical prices

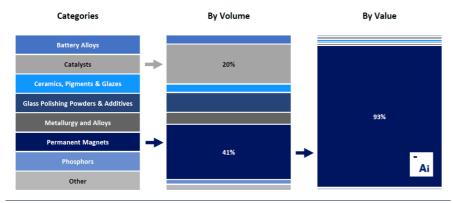


Source: Bloomberg

Light and heavy rare earth magnet metals carry a comparatively higher value relative to other rare earth oxide prices, with NdPr oxide accounting for >90% of sector value despite accounting for only ~41% of the rare earth sector by volume (Fig. 33), as reflected in the revenue profiles of operational mines (with the only exception being heavy rare earth-dominant deposits).

Rare earth supply modelling is a complicated task given Chinese dominance of rare earth mining and refining, in addition to the influence of bi-annual Chinese rare earth mining and separation quotas, which have steadily increased since H1 CY20 (Fig. 34). These quotas are released in March and September each year.

Figure 33: Global rare earth consumption categories by volume and value

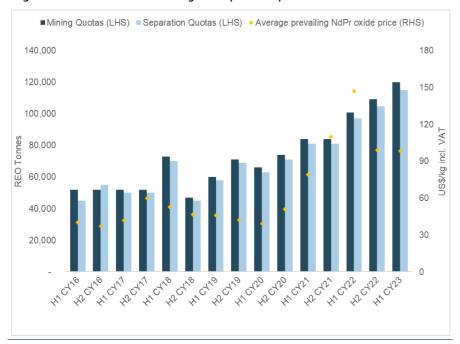


Source: Adamas Intelligence (based on CY20 data)

The recent release of H1 CY23 Chinese rare earth quotas saw a +19% and +18% uplift in mining and separation quotas on the pcp (H1 CY22) to 120kt and 115kt respectively, representing a slower uplift relative to prior quotas issued for H2 CY22 (+30% and +29% respectively on the pcp).

The continued uplift in Chinese quotas has consistently led to concerns of oversupply in the market over recent years, however, with the exception of recent price weakness driven largely by macro factors, steady uplifts in quotas since CY20 have coincided with NdPr oxide price appreciation over the corresponding period.

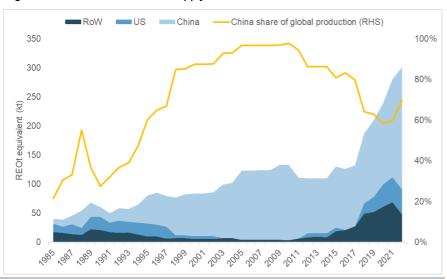
Figure 34: Chinese rare earth mining and separation quotas



Source: China MIIT, Ministry of Natural Resources, Bloomberg, Euroz Hartleys edits

China's rare earth industry has recently undertaken significant consolidation into two large conglomerates. US rare earth mine supply is solely accounted for by the Mountain Pass mine, while RoW supply is primarily accounted for by Lynas Rare Earths, which currently produces separated rare earth oxide products via its Malaysian facility (fed by Mt Weld in Western Australia). China imports 30-40% of its heavy rare earth feedstock supplies each year from mines in Myanmar.

Figure 35: Global rare earth mine supply



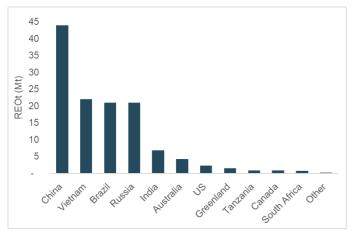
Source: US Geological Survey, Euroz Hartleys edits

Sector sentiment has been severely impacted by Tesla's disclosure that its next generation PMSM traction motors will not use permanent rare earth magnets at its recent 2023 Investor Day held on March 1<sup>st</sup>, 2023. The negative impact to sentiment (as reflected in both the immediate performance and returns of listed rare earth exposures across Mar'23) has been compounded by an adjacent fall in the NdPr oxide price (currently ~US\$69/kg excl. VAT) and broader equity market weakness.

We highlight that no clarity was provided on the transition away from NdFeB magnets by Tesla outside of referencing the environmental and health risks associated with rare earth mining, despite the comparatively lower environmental impact of RoW operations relative to that of Chinese mines. It is widely speculated that ferrite magnets are likely to replace NdFeB magnets in Tesla's next generation motor design, at the expense of efficiency and at a weight penalty relative to a PMSM motor containing NdFeB magnets.

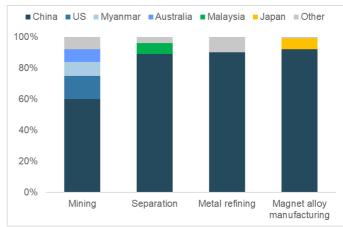
This is not the first instance of bold assertions made by Tesla with respect to critical minerals required as key inputs for its vehicles and the processing thereof; for example, Tesla CEO Elon Musk has previously stated that 'using table salt to basically extract lithium from ore' is a potentially viable lithium extraction process. Tesla Senior VP, Drew Baglino, recently guided to commissioning Tesla's lithium refinery in Corpus Christi, Texas within 10 months of breaking ground and achieving first production within 12 months, which would also appear aggressive based on the track record of commissioning lithium refining operations (i.e. IGO-ASX's Kwinana lithium hydroxide refinery).

Figure 36: Global rare earth mine reserves by country



Source: US DOE, mining data is based on CY21, balance CY20

Figure 37: Geographical concentration of rare earth supply chain



Source: US DOE

## **Bauxite Projects**

LIN's portfolio of bauxite projects includes the Lelouma, Gaoual and Woula Projects located in the northern bauxite corridor in Guinea, in addition to the Lushoto and Pare projects located in Eastern Tanzania's Mozambique Belt. Cumulatively, LIN's portfolio hosts over 1 billion tonnes of JORC-compliant bauxite resources, which is largely accounted for by the Lelouma Project (Fig. 34).

More than US\$10m of expenditure has previously been incurred on the Lelouma Project by previous owner Mitsubishi Corporation. The plateaux hosting the Lelouma bauxite mineralisation are located around 100km northeast of Sangarédi, being the site of the Compagnie des Bauxites de Guinée (CBG) railway line loading area. The rail line is in turn around ~100km north-east of the port in Kamsar, which exports up to 25mtpa of bauxite.

The Lelouma project is located ~40km from LIN's Gaoual conglomerate bauxite project, and like the Lelouma Project, the Gaoual project is also within haul distance of existing rail infrastructure, presenting the opportunity to fast-track development with moderate capital investment. Gaoual has very similar geological and geochemical characteristics to the Sangaredi Conglomerate Bauxite deposit, which was regarded as vastly superior to all other bauxite products.

Figure 38: Lelouma Project Mineral Resource Estimate (JORC 2012)

Cut-off Criteria	Mineral Resource Category	Tonnes (Mt)	Al <sub>2</sub> O <sub>3</sub> (%)	SiO₂ (%)
	Measured	155	47.9	1.8
>40% Al <sub>2</sub> O <sub>3</sub> <10% SiO <sub>2</sub>	Indicated	743	44.4	2.1
>1m Thick	Measured+Indicated	898	45.0	2.1
<1 Strip Ratio (waste:ore thickness)	Inferred	2	42.9	2.8
	Grand Total M+I+I	900	45.0	2.1

Source: Company reports

Figure 39: Gaoual Project Indicated Mineral Resource Estimate (JORC 2012)

	Resources (Mt)	Cut-off (Al <sub>2</sub> O <sub>3</sub> %)	Grade (Al₂O₃%)	Grade (SiO₂%)	Category
High Grade Resources	83.8	45	51.2	11.0%	Indicated
Total Resources	101.5	40	49.8	11.5%	Indicated

Source: Company reports

The Tanzanian bauxite projects are less advanced (pre-resource) relative to the Guinea bauxite assets, and include 8 prospective tenements covering 310km². LIN has completed 51% of the Stage 1 acquisition of East African Bauxite Ltd, being the owner of 100% of the Tanzanian bauxite interests. The projects are located ~189km from the deep water port of Tanga.

With reference to LIN's historical market capitalisation prior to the announcement of the progressive acquisition of the KREP, we ascribe a nominal valuation of A\$35m to the bauxite asset portfolio while recognising the non-core focus on these assets in light of the emergence of the KREP as a Tier 1 deposit.

## **Board & Management**

## Asimwe Kabunga - Executive Chairman

Mr Kabunga is a Tanzanian born Australian entrepreneur who holds a Bachelor of Science, Mathematics and Physics and has extensive technical and commercial experience in Tanzania, Australia, and the United States. Mr Kabunga has extensive experience in the mining industry, logistics, land access, tenure negotiation and acquisition, as well as a developer of technology businesses.

Mr Kabunga has been instrumental in establishing the Tanzanian Community of Western Australia Inc., and served as its first President. He was also a founding member of Rafiki Surgical Missions and Safina Foundation, both NGO's dedicated to helping children in Tanzania. Mr Kabunga also serves as a Non-Executive Chairman of Volt Resources Limited (ASX: VRC) and Executive Chairman of Resource Mining Corporation (ASX: RMI).

## **Alistair Stephens - Chief Executive Officer**

Mr Stephens is a specialist in the critical and strategic commodities sector, with emphasis on rare earths and rare metals, having worked in this area for 20 years. He has 35 years' operational experience in the mining industry with roles in mine geology, mine planning, metallurgy, advanced processing, marketing and logistics. He has extensive hands-on experience in feasibility studies and, as Managing Director of Arafura Resources (to 2010), played an instrumental role in the development of the Nolan's Bore Rare Earth Project that took the company from an early-stage exploration group with a market capitalisation of \$4m to \$400M. Mr Stephens recently delivered the outcomes of a feasibility study for the Kanyika Niobium Project in Malawi where he managed the project for 9 years.

Mr Stephens has been engaged in board roles for over 18 years and has a solid understanding of corporate governance. He brings to the Company a comprehensive and extensive understanding that is unique in the specialty commodity sector, and an advanced strategic tactical perspective to project development and operational implementation.

#### Giacomo Fazio - Non-Executive Director

Mr Fazio is a highly experienced project, construction and contract/commercial management professional having held senior project management roles with Primero Group Limited, Laing O'Rourke and Forge Group Ltd and is currently a Non-Executive Director of ASX-listed Volt Resources Ltd. His experience ranges from feasibility studies through to engineering, procurement, construction, and commissioning of diverse mining resources, infrastructure, oil & gas and energy projects.

#### Yves Occello - Non-Executive Director

Mr Occello is a 45-year veteran of the bauxite and alumina industry having been COO of Pechiney's Bauxite and Alumina Division and Director of Technical Projects at Alcan and Rio Tinto Alcan. He has held board positions at a number of significant companies, including Compagnie de Bauxite de Guinee, ("CBG"), a conglomerate bauxite project and Guinea's largest bauxite producer for the past 30 years, Alufer Mining, the first junior miner to construct and commence bauxite operations in Guinea, and Aluminium of Greece, one of Europe's largest alumina refinery and aluminium smelting complexes.

Further, Mr. Occello's knowledge and expertise is well recognised within China's bauxite and alumina industry and he is an Honorary Director of the Chinese Academy of Sciences in Beijing. Mr. Occello has many years of practical, hands-on experience across the aluminium value chain from understanding bauxite resources and their specific chemical and mineralogical composition, through to the intricate technical requirements of alumina refining.

## Michael Fry - Company Secretary

Mr Fry has over 30 years' experience in the corporate finance industry and extensive experience in Company Secretarial, Chief Financial Officer and Director roles with ASX-listed companies. Michael holds a Bachelor of Commerce and is currently Company Secretary of a number of ASX-listed companies.

#### **Risks**

**Sovereign and Regulatory Risk:** The Kangankunde Carbonatite Complex is located in Southern Malawi, approximately ~100km north of the city of Blantyre. Operations in the Republic of Malawi are exposed to various levels of political, economic and other risks and uncertainties. The Republic of Malawi is a developing country and there can be no assurances that the risks of operating in Malawi will not directly LIN's planned operations at the KREP. The asset itself has a chequered history of litigation involving title and ownership of the project, which presents as a key risk going forward.

Market Risk: Global financial conditions may adversely affect LIN's growth and profitability. Many industries, including the resources sector, are impacted by these market conditions. Some of the key impacts include a contraction in credit markets resulting in a widening of credit risk, devaluations and high volatility in global equity, commodity and foreign exchange markets, and a lack of market liquidity. A slowdown in financial markets or other economic conditions may adversely affect LIN's growth and ability to finance its activities.

Commodity Price Risk: LIN is currently focused on resource exploration and development. LIN may be adversely affected by fluctuations in rare earth prices and/or foreign exchange. Rare earth prices fluctuate widely and are affected by numerous factors beyond the control of LIN. Future production, if any, will be dependent upon pricing achievable on a mixed rare earth concentrate being adequate to make the KREP economic. Market valuation is inextricably linked to the prevailing resource sector macro and to the underlying commodity price, which is not exchange traded.

Financing Risk: The planned exploration and development of the KREP and remaining acquisition payments will require substantial additional financing. Failure to obtain sufficient financing may result in delaying or indefinite postponement of exploration and any development of the KREP or even a loss of property interest. There can be no assurance that additional capital or other types of financing will be available if needed or that, if available, the terms of such financing will be favourable to LIN. LIN does not currently have sufficient capital available to meet our modelled quantum. We have made appropriate assumptions regarding amount, costs and sources of funding in our analysis, however, these assumptions are subject to market risk and credit availability.

**Foreign Exchange Risk:** The consolidated entity undertakes certain transactions denominated in foreign currency and is exposed to foreign currency risk through foreign exchange rate fluctuations. Foreign exchange risk arises from future commercial transactions and recognised financial assets and financial liabilities denominated in a currency that is not the entity's functional currency.

Our Speculative Buy rating is primarily reflective of the early stage of the development of the KREP (pre-JORC 2012 Resource), and accordingly uncertainties with respect to operating parameters, funding and the timeline for execution of the current strategy. We are also cognisant of jurisdiction/sovereign risk given the history of the underlying asset, which has largely revolved around title disputes as discussed in detail above.

# **Issued Capital**

Figure 40: Issued capital as at 24<sup>th</sup> March 2023

Security	Name	Issued Capital	Holders
LIN	ORDINARY FULLY PAID SHARES	979,761,818	1,717
Security	Name	Units	Holders
LINOPT11	UNL OPTIONS @ \$0.30 EXP 09/12/2025	39,726,207	114
LINOPT7	UNL OPTIONS @ \$0.032 EXP 28/09/2023	13,803,681	2
LINOPT8	UNL OPTIONS @ \$0.12 EXP 6/06/2025	10,000,000	1
LINOPT9	UNL OPTIONS @ \$0.25 EXP 03/08/2025	7,500,000	1
LINOPT10	UNL OPTIONS @ \$0.10 EXP 29/08/2025	20,000,000	3
		91,029,888	121
LINPR1	PERFORMANCE RIGHTS - TRANCHE 1	2,000,000	1
LINPR2	PERFORMANCE RIGHTS - TRANCHE 2	3,000,000	1
LINPR3	PERFORMANCE RIGHTS - TRANCHE 3	5,000,000	1
LINPR4	PERFORMANCE RIGHTS - TRANCHE 4	5,000,000	1
LINPR5	PERFORMANCE RIGHTS 5 YRS FROM ISSUE	18,000,000	3
		33,000,000	7

Source: Lindian Resources

# **Top 20 Holders**

Figure 41: Top 20 holders as at 24<sup>th</sup> March 2023

Rank	Holder Name	Shares Held	% Held
1	Kabunga Holdings Pty Ltd	118,865,407	12.16%
2	VEN CAPITAL PTY LTD	97,639,845	9.99%
3	MR ROHAN PATNAIK	70,000,000	7.16%
4	TOPWEI TWO PTY LTD	46,446,031	4.75%
5	MR VICTOR LORUSSO	41,000,000	4.19%
6	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED-GSCO ECA	30,446,905	3.11%
7	HSBC CUSTODY NOMINEES (AUSTRALIA) LIMITED	28,087,220	2.87%
8	BONACARE PTY LTD	27,340,059	2.80%
9	MR YULONG GU	23,992,997	2.45%
10	MR ZULIANG PARK WEI &MS BAO HONG ZHANG	20,510,000	2.10%
11	MS LETICIA KOKUTENGENEZA KABUNGA	17,298,660	1.77%
12	BNP PARIBAS NOMINEES PTY LTD	16,126,980	1.65%
13	COVE STREET PTY LTD	16,000,000	1.64%
14	GLENEAGLE SECURITIES NOMINEES PTY LIMITED	15,476,868	1.58%
15	CITICORP NOMINEES PTY LIMITED	14,161,347	1.45%
16	LETICIA KABUNGA	13,500,000	1.38%
17	CLAYMORE VENTURES LIMITED	12,997,304	1.33%
18	MR WALEED KH S A A ESBAITAH	12,000,000	1.23%
19	ASENA HOLDINGS PTE LTD	11,569,939	1.18%
20	MS KATIE-LEE LORUSSO	10,000,000	1.02%
20	HONG KONG JAYSON HOLDING CO LIMITED	10,000,000	1.02%
	Total	653,459,562	66.83%
	Total issued capital	977,761,818	100.00%

Source: Lindian Resources

#### Interests of Directors and KMP

Figure 42: Interests of Directors & KMP as at 24<sup>th</sup> March 2023

		Options over
Ordinary Shares	Performance Rights	Ordinary Shares
118,865,407	15,000,000	-
-	15,000,000	-
-	1,500,000	-
-	1,500,000	-
	118,865,407 - -	- 15,000,000 - 1,500,000

Source: Company reports

Figure 43: Vesting conditions of performance rights

Class	Vesting condition	Kabunga number	Occello number	Fazio number	Stephens number	Total number			
A	Company achieves a market capitalisation of over \$250M <sup>1</sup>	2,000,000	200,000	200,000	2,000,000	4,400,000			
В	Company achieves a market capitalisation of over \$500M <sup>1</sup>	3,000,000	300,000	300,000	3,000,000	6,600,000			
С	Company achieves a market capitalisation of over \$1.0Bn 1	5,000,000	500,000	500,000	5,000,000	11,000,000			
D	Company achieves a market capitalisation of over \$1.25Bn $^{\rm 1}$	5,000,000	500,000	500,000	5,000,000	11,000,000			
Total number - at end of period 15,000,000 1,500,000 15,000,000 33,000,000									
1: calc	calculated as 30day VWAP multiplied by the number of Shares on Issue at the relevant time								

Source: Company reports

# Private Placement - 27<sup>th</sup> March 2023

LIN secured commitments for a private placement of A\$9.0m at \$0.26/sh on the 27<sup>th</sup> of March 2023. Participants included two new investors (one investing A\$7.5m and the other A\$1m), with Chairman Asimwe Kabunga also committing to A\$500k on the same terms and conditions, subject to shareholder approval.

In connection with the placement, a total of 16.3m unlisted options exercisable at \$0.35/sh and expiring 3 years from the date of issue (1 option for every 2 new shares subscribed for) were issued to participants. Attributing value to the issued options using the Black-Scholes model implies a placement price of ~\$0.24/sh.

Funds are guided to be deployed to commence acquisition of key equipment and long lead time items for the Stage 1 concentrate processing plant at the KREP, in addition to working capital requirements. Adjacently, LIN has reported that it has received significant interest from rare earth sector participants interested in participating in project funding and offtake.

Figure 44: Financial Summary

MARKET STATISTICS	
Share Price	0.23 A\$/sh
Issued Capital	
Fully Paid Ordinary	1,014 m
Options	108 m
Performance Rights	33 m
Total Dil. FPOrd	1,156 m
Market Cap (FD)	266 A\$m
Enterprise Value	257 A\$m
Cash (Mar'23e)	9.2 A\$m
Debt (Mar'23)	Nil A\$m

VALUATION (A\$m)				
	Risking	Equity	Unrisked	Risked
KREP (NPV <sub>12%</sub> )	80%	90%	1,286.0	1,028.8
Guinea Bauxite Projects	100%	100%	35.0	35.0
Corporate Overheads	100%	100%	(50.8)	(50.8)
Tranche 3 & 4 Acquisition Payments			(27.0)	(27.0)
Cash (Mar'23e)			9.2	9.2
Debt (Mar'23e)			-	-
ITM options			3.6	3.6
Total			1,256.0	998.8
A\$/sh valuation			0.69	0.55
Price Target (1.0x NAV)				0.55

MODEL ASSUMPTIONS				
Commodity Price & FX	2023F	2024F	2025F	2026F
NdPr Oxide (excl. VAT)	90.0	95.0	95.0	95.0
Concentrate Price (US\$/kg REO)	11.9	12.6	12.6	12.6
AUD/USD (x)	0.66	0.71	0.73	0.74
Production				
Throughput (kt)	0	0	150	350
Head grade (% TREO)	na	na	3.50%	3.50%
NdPr:TREO ratio (%)	na	na	20%	20%
Recovery (%)	na	na	70%	75%
Monazite concentrate (kt)	0.0	0.0	6.1	14.3
Concentrate grade (% TREO)	na	na	60%	60%
TREO in concentrate (kt)	0.0	0.0	3.7	8.6
NdPr in concentrate (kt)	0.0	0.0	0.7	1.7
Costs				
C1 costs (US\$/kg REO)	0.0	0.0	3.7	2.3
AISC (US\$/kg REO)	0.0	0.0	5.2	3.6

RATIO ANALYSIS				
	2023F	2024F	2025F	2026F
OpCF per share (A\$/sh)	(0.01)	(0.01)	0.02	0.05
EPS (A\$/sh)	(0.01)	(0.01)	0.01	0.05
P/E Ratio (x)	-23.7x	-30.7x	15.8x	4.8x
Enterprise Value (A\$m)	257	257	257	257
EV/EBITDA (x)	-42.8x	-30.4x	8.3x	2.5x
EV/EBIT (x)	-22.9x	-29.7x	9.0x	2.8x
Net Debt/(Net Debt + Equity) (%)	-95%	-11%	-133%	-2%
EBIT Margin (%)	na	na	45%	66%
ROE (%)	-60%	-15%	11%	27%
ROA (%)	-19%	-9%	9%	16%

PROFIT & LOSS				
Yr End 30 June (A\$m)	2023F	2024F	2025F	2026F
(+) Revenue	-	-	63.4	146.0
(+) Interest income	-	-	-	-
(+) Other Income	-	-	-	-
Total Revenue	-	-	63.4	146.0
(-) Costs of production	-	-	(22.3)	(35.1)
(-) Corporate overheads	(6.0)	(8.5)	(10.3)	(6.8)
(-) D&A	(0.2)	(0.2)	(2.4)	(7.9)
(-) Other	(5.0)	-	-	-
EBITDA	(6.0)	(8.5)	30.9	104.2
EBIT	(11.2)	(8.7)	28.5	96.2
(-) Interest Expense	-	-	-	(10.0)
NPBT	(11.2)	(8.7)	28.5	86.2
(-) Minority Interest	-	-	-	-
NPBT (ex-min.)	(11.2)	(8.7)	28.5	86.2
(-) Tax	-	-	(11.6)	(30.9)
NPAT	(11.2)	(8.7)	16.9	55.3

CASH FLOW				
Yr End 30 June (A\$m)	2023F	2024F	2025F	2026F
Net Profit	(11.2)	(8.7)	16.9	55.3
(+) Working Capital Adj.	-	-	-	-
(+) D&A	0.2	0.2	2.4	7.9
(+) Tax Expense	-	-	11.6	30.9
(-) Tax Paid	-	-	(11.6)	(30.9)
(+/-) Other	(1.0)	-	-	-
Operating Cashflow	(12.0)	(8.5)	19.2	63.3
(-) Capex & Development	-	(42.3)	(17.8)	(141.9)
(-) Exploration	(5.0)	(7.5)	(5.0)	(5.0)
(+/-) Other	(3.8)	(15.2)	(14.1)	-
Investing Cashflow	(8.8)	(64.9)	(36.9)	(146.9)
(+) Equity Issues	27.6	70.0	100.0	-
(+) Loan Drawdown	-	-	-	100.0
(-) Loan Repayment	-	-	-	-
(+) Other	-	-	-	-
Financing Cashflow	27.6	70.0	100.0	100.0
Net Cashflows	6.9	(3.4)	82.3	16.4
(+/-) FX Adj.	-	-	-	-
BoP Cash Balance	2.2	9.0	5.6	88.0
(+/-) Net Cashflows	6.9	(3.4)	82.3	16.4
(+/-) FX Adj.	-	-	-	-
EoP Cash Balance	9.0	5.6	88.0	104.3

BALANCE SHEET				
Yr End 30 June (A\$m)	2023F	2024F	2025F	2026F
Assets				
Cash	9.0	5.6	88.0	104.3
Current Receivables	0.2	0.2	0.2	0.2
Other Current Assets	0.1	0.1	0.1	0.1
Non-Current Assets	50.5	92.8	107.1	240.3
Total Assets	59.9	98.7	195.3	344.9
Liabilities				
Borrowings	-	-	-	100.0
Current Accounts payable	0.8	8.0	0.8	8.0
Other Liabilities	40.5	40.5	40.5	40.5
Total Liabilities	41.3	41.3	41.3	141.3
Net Assets	18.6	57.4	154.1	203.6

Source: Euroz Hartleys Research

Figure 45: Listed rare earth peer set, sorted by market capitalisation and including EHe conceptual KREP resource estimate

Ticker	Company	Exchange	Status	Project	Location	FD Market Cap	Resource	TREO Grade	Contained REO	RE Type	NdPr Grade
						A\$m	Mt	%	kt	LREE/HRE	%
Listed											
MP.NYS	MP Materials	NYSE	Producer	Mountain Pass	California, USA	8,021	18.4	7.0%	1,288	LREE	16%
LYC.ASX	Lynas Rare Earths	ASX	Producer	Mount Weld / LAMP	Australia / Malaysia	5,936	55.2	5.3%	2,926	LREE	23%
ILU.ASX	Iluka Resources	ASX	Developer	Eneabba	Australia	4,408	1.0	n/a	n/a	L/HREE	22%
ARU.ASX	Arafura Resources	ASX	Developer	Nolans Bore	Australia	1,089	56.0	2.6%	1,456	LREE	26%
HAS.ASX	Hastings Resources	ASX	Developer	Yangibana	Australia	672	29.9	0.9%	277	LREE	32%
NEO.TSX	Neo Performance Materials	TSX	Separation	Sillamae	Estonia	480	n/a	n/a	n/a	n/a	n/a
IFOS.TSXV	Itafos	TSX-V	Developer	Araxa (Diversified)	Brazil	440	28.2	4.0%	1,130	LREE	18%
PRE.LSE	Pensana Plc	LSE	Developer	Longonjo	Angola	271	226	1.5%	3,322	LREE	22%
LIN.ASX	Lindian Resources	ASX	Developer	Kangankunde	Malawi	233	250	2.4%	6,107	LREE	20%
NTU.ASX	Northern Minerals	ASX	Developer	Browns Range	Australia	214	9.2	0.7%	62	HREE	5%
ASM.ASX	Aust. Strategic Materials	ASX	Developer	Dubbo	Australia	211	75.2	0.9%	662	LREE	18%
DRE.ASX	Dreadnought Resources	ASX	Exploration	Mangaroon	Australia	207	14.4	1.1%	162	LREE	30%
TMRC.OTC	Texas Mineral Resources Corp.	OTCQB	Developer	Round Top	Texas, USA	135	1,050	0.1%	525	HREE	n/a
IXR.ASX	Ionic Rare Earths	ASX	Developer	Makuutu	Uganda	115	532	0.1%	259	HREE	n/a
ARR.ASX	American Rare Earths	ASX	Developer	La Paz	Arizona, USA	105	170	0.0%	80	HREE	21%
PEK.ASX	Peak Rare Earths	ASX	Developer	Ngualla	Tanzania	104	214	2.2%	4,610	LREE	21%
REEMF.OTC	Rare Element Resources	OTCQB	Developer	Bear Lodge	Wyoming, USA	99	45.0	2.7%	1,215	LREE	23%
VML.ASX	Vital Metals	ASX	Producer	Nechalacho	Canada	93	94.7	1.5%	1,345	LREE	25%
RBW.LSE	Rainbow Rare Earths	LSE	Developer	Phalaborwa	South Africa	87	30.7	0.4%	132	LREE	29%
ARA.TSX	Aclara Resources	TSX	Developer	Penco Module	Chile	85	22.8	0.2%	55	HREE	15%
MKA.TSXV	Mkango Resources	TSX-V	Developer	Songwe Hill	Malawi	55	48.6	1.4%	680	LREE	20%
LEM.TSXV	Leading Edge Materials	TSX-V	Developer	Norra Karr	Sweden	40	31.6	0.6%	190	HREE	14%
AR3.ASX	Australian Rare Earths	ASX	Developer	Koopamurra	Australia	39	39.9	0.1%	29	HREE	n/a
REE.ASX	RareX	ASX	Developer	Cummins Range	Australia	31	18.8	1.2%	216	LREE	20%
PBL.ASX	Parabellum Resources	ASX	Developer	Khotgor	Mongolia	30	97.2	1.4%	1,458	LREE	20%
NMI.TSXV	Namibia Critical Minerals	TSX-V	Developer	Lofdal	Namibia	29	42.6	0.2%	72	HREE	n/a
							Avg.	1.6%		Avg.	21%

Source: Company reports, IRESS, Euroz Hartleys edits, LIN-ASX reflects indicative EH resource estimate

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