

31 July 2024

## Shenghe Gets on Board at Ngualla

### NEED TO KNOW

- Shenghe to invest A\$96m into Ngualla
- No further equity requirements from PEK to develop Ngualla
- Development agreement to incentivise Shenghe to deliver material capital cost savings

**Shenghe to invest A\$96m into Ngualla:** Shenghe and Peak Rare Earths (PEK) have extended their existing relationship, with Shenghe to take a 50% interest in Ngualla Group UK Limited (NGUK), which holds an 84% interest in the Ngualla Project, for ~A\$96m. The investment shows a read-through value of A\$0.36 per PEK share (100% premium to pre-announcement share price).

**No further equity requirements from PEK to develop Ngualla:** A key component to the deal with Shenghe is that the balance of project capital costs are met by a Shenghe-arranged debt facility, with no requirement for PEK to contribute equity.

**Shenghe development agreement to include incentive to deliver material capital cost savings:** Upon Shenghe winning a tendering process to develop Ngualla (a pre condition of contributing the A\$96m), there will be significant incentives to materially reduce the capital cost of Ngualla (currently budgeted at US\$287m).

### Investment Case

**Shenghe agreement a significant de-risking event:** The agreement for Shenghe to invest in, arrange funding for and construct the Ngualla project has significantly de-risked the project, providing a clear path to production and cash generation, irrespective of the soft rare earths pricing environment.

**Agreement shows strategic importance of Ngualla to Shenghe:** Shenghe is China's largest rare earth concentrate importer, PEK's major shareholder (19.9%) and has a binding offtake agreement. The addition of project investment, funding and construction demonstrates the strategic importance of Ngualla to Shenghe.

**Decreased capital costs potential:** Further value enhancement is visible with the potential for Shenghe to significantly reduce capex for the project.

**Further near-term catalysts for PEK:** The sale of PEK's non-core UK land holding will enhance the cash position, and delivery of a development plan for the phosphate project at Ngualla will show a pathway to potential shorter-term cash generation.

### Valuation: Base-Case Valuation A\$2.29 (Prior: A\$1.28)

Our base-case valuation has increased substantially as it now includes the announced Shenghe transaction proceeds. PEK's lower stake of 42% (from 84%) is more than offset by the injection of capital, decreased expected capital costs and no large dilutive equity raising required to fund the project.

### Risks

Key risks are the Shenghe transaction not proceeding, delays, increased capital costs and NdPr (neodymium and praseodymium) prices.

### Equity Research Australia

#### Materials

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Peak Rare Earths, a leading mineral exploration and development company, is driving low-carbon technology advancements with its Ngualla Rare Earth Project. Since its discovery in 2010, Ngualla has grown to be a global leader in high-grade NdPr deposits, essential for manufacturing electric vehicles and wind turbines. The company's strategic focus on this project embodies its commitment to sustainable development and green transformation. [www.peakrareearths.com](http://www.peakrareearths.com)

Valuation	<b>A\$2.29</b> (from A\$1.28)
Current price	<b>A\$0.22</b>
Market cap	<b>A\$59m</b>
Cash on hand	<b>A\$7.6m</b> (30 June 2024)

### Upcoming Catalysts / Next News

Period	
September 2024	Completion of Shenghe transaction
October 2024	Shareholder approvals
October 2024	Chinese Government approval
2HCY24	Teesside sale advancement
2HCY24	Phosphate advancement
2HCY24	Capital savings – Ngualla
December 2024	FID

### Share Price (A\$)



Source: FactSet, MST Access

Figure 1: Financial summary – June year-end

PEK Limited						PEK.AX
Year end 30 June						
<b>MARKET DATA</b>						
Share Price	A\$/sh	0.22				
52 Week Low	A\$/sh	0.18				
52 Week High	A\$/sh	0.54				
Market Cap (A\$m)	A\$m	59				
Net Debt / (Cash) (A\$m)	A\$m	(10)				
Enterprise Value (A\$m)	A\$m	49				
Shares on Issue	m	266				
Performance rights	m	13				
Shares Issued during Capital Raise	m	566				
Potential Shares on Issue (Diluted)	m	845				
<b>INVESTMENT FUNDAMENTALS</b>						
Reported NPAT	A\$m	(23)	(11)	(17)	(11)	(14)
Underlying NPAT	A\$m	(23)	(11)	(17)	(11)	(14)
EPS Reported (undiluted)	¢ps	(11.7)	(5.5)	(8.3)	(5.2)	(6.9)
EPS Underlying (undiluted)	¢ps	(11.7)	(5.5)	(8.3)	(5.2)	(6.9)
P/E Reported (undiluted)	x	N/A	N/A	N/A	N/A	N/A
P/E Underlying (undiluted)	x	N/A	N/A	N/A	N/A	N/A
Operating Cash Flow / Share	A\$	(0.06)	(0.05)	(0.08)	(0.05)	(0.07)
Price / Operating Cash Flow	x	n/m	n/m	n/m	n/m	n/m
Free Cash Flow / Share	A\$	(0.06)	(0.05)	(0.08)	(0.37)	(0.24)
Price / Free Cash Flow	x	(3.7)	(4.0)	(2.6)	(0.6)	(0.9)
Free Cash Flow Yield	%	-27.1%	-24.9%	-37.9%	-167.8%	-111.2%
Book Value / Share	A\$	0.34	0.42	0.34	0.29	0.22
Price / Book	x	0.64	0.52	0.64	0.76	1.00
NTA / Share	A\$	0.34	0.42	0.34	0.29	0.22
Price / NTA	x	0.64	0.52	0.64	0.76	1.00
Year End Shares	m	207	208	208	208	208
Market Cap (spot)	A\$m	46	46	46	46	46
Net Cash / (Debt)	A\$m	9	25	8	(69)	(120)
Enterprise Value	A\$m	36	20	38	115	166
EV / EBITDA	x	n/m	n/m	n/m	n/m	n/m
Net Debt / Enterprise Value		(0.2)	(0.5)	(0.2)	1.4	2.5
Dividend per share	¢ps	0	0	0	0	0
<b>PRODUCTION AND PRICING</b>						
Ore Mined (Kt)		-	-	186	1,800	1,521
Total Mill Feed (Kt)		-	-	804.0	801.0	801.0
Concentrate production at 45% TREO (Kt)		-	-	37.08	39.07	39.93
NdPr Price (US\$/kg)		-	150.0	155.3	160.7	166.3
Realised Basket Price (US\$/kg)		-	20.4	20.7	21.1	21.6
<b>12-Month Relative Performance vs S&amp;P/ASX Metals &amp; Mining</b>						
<b>Profit &amp; Loss (A\$m)</b>						
Revenue		-	-	-	-	-
Expenses		(15)	(11)	(17)	(12)	(15)
<b>EBITDA</b>		<b>(15)</b>	<b>(11)</b>	<b>(17)</b>	<b>(12)</b>	<b>(15)</b>
D&A		(0)	(0)	(0)	(0)	(0)
<b>EBIT</b>		<b>(15)</b>	<b>(12)</b>	<b>(18)</b>	<b>(12)</b>	<b>(15)</b>
Interest		(8)	0	0	1	1
Tax		-	-	-	-	-
<b>Underlying NPAT</b>		<b>(23)</b>	<b>(11)</b>	<b>(17)</b>	<b>(11)</b>	<b>(14)</b>
Exceptionals		-	-	-	-	-
<b>Reported Profit</b>		<b>(23)</b>	<b>(11)</b>	<b>(17)</b>	<b>(11)</b>	<b>(14)</b>
Profit Before Tax		(23)	(11)	(17)	(11)	(14)
<b>Balance Sheet (A\$m)</b>						
Cash		9	25	8	62	11
Receivables		1	0	0	0	-
Inventory		-	-	-	-	-
PP&E		0	0	0	66	102
Exploration		59	60	60	60	60
Other		4	4	4	4	4
<b>Assets</b>		<b>74</b>	<b>90</b>	<b>72</b>	<b>192</b>	<b>177</b>
Creditors		2	1	1	1	-
Debt		-	-	-	131	131
Other		0	0	0	0	0
<b>Liabilities</b>		<b>3</b>	<b>1</b>	<b>1</b>	<b>132</b>	<b>131</b>
<b>Shareholder's Equity</b>		<b>71</b>	<b>88</b>	<b>71</b>	<b>60</b>	<b>46</b>
<b>Cashflow (A\$m)</b>						
Receipts from Customers		-	-	-	-	0
Payments to suppliers and employees		(12)	(11)	(18)	(12)	(16)
Interest Received		0	0	0	1	1
Other		-	-	-	-	-
<b>Net Cash From Operations</b>		<b>(12)</b>	<b>(11)</b>	<b>(17)</b>	<b>(11)</b>	<b>(15)</b>
Capex		(0)	(0)	-	(125)	(36)
Exploration		-	-	-	-	-
Land Sale and Project Sale		0	-	-	59	-
<b>Net Investing Cashflow</b>		<b>(0)</b>	<b>(0)</b>	<b>-</b>	<b>(66)</b>	<b>(36)</b>
Equity		33	28	-	-	-
Borrowings		-	-	-	131	-
Other		(14)	(0)	(0)	(0)	(0)
<b>Net Financing Cashflow</b>		<b>19</b>	<b>27</b>	<b>(0)</b>	<b>130</b>	<b>(0)</b>
<b>Effects of FX</b>		<b>(0)</b>	<b>(0)</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net Increase / (Decrease) in Cash</b>		<b>7</b>	<b>16</b>	<b>(17)</b>	<b>54</b>	<b>(51)</b>

Source: PEK, MST Access.

## Shenghe Goes All in With Ngualla

PEK and Shenghe have signed a non-binding Term Sheet supporting the development and funding of the Ngualla Project in Tanzania. The key highlights of the agreement are as follows:

- Shenghe will subscribe for a 50% interest in Ngualla Group UK Limited (NGUK), which holds an 84% interest in the Ngualla Project. It will acquire this interest through a subscription of new shares for ~A\$96m.
- The balance of Ngualla Project capital costs will be met by a Shenghe-arranged debt facility with no requirement for PEK to contribute development equity funding.
- Leveraging the expertise of Shenghe – the Shenghe construction and development agreement (EPC, EPCM or EPS - see definitions below) will include mechanisms to strongly incentivise Shenghe to deliver material capital cost savings.
- Shenghe entitlement to 55% of NGUK net earnings / losses after tax for first 5 years of production – incentivises Shenghe to reduce operating cost and maximise near term cash flow
- The companies aim to finalise binding transaction documentation by the end of September 2024.
- Final investment decision (FID) is targeted by 31 December 2024.

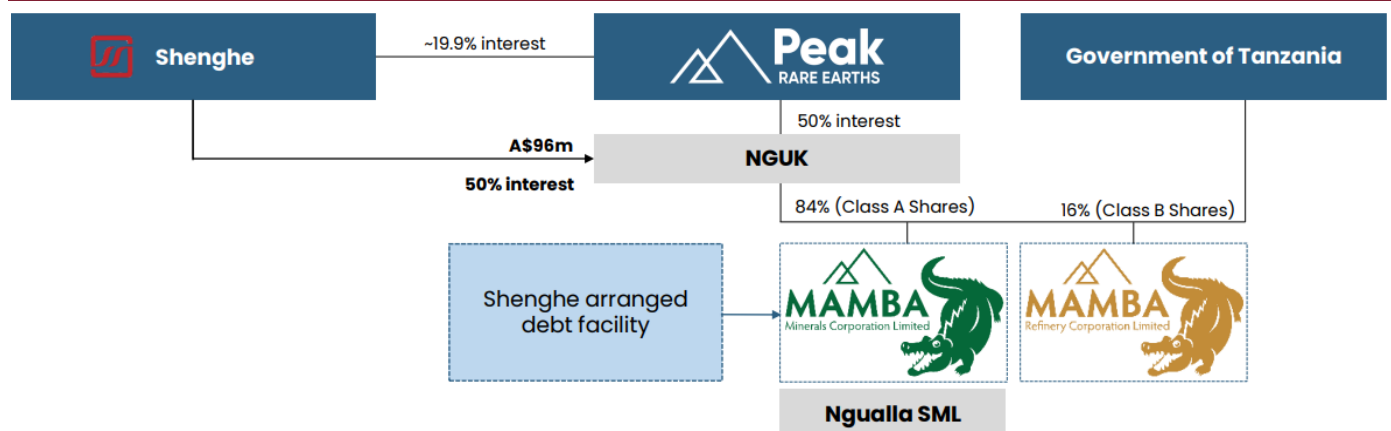
### Definitions

*EPC – Engineering, Procurement and Construction: The contractor manages the entire project, from start to completion.*

*EPCM – Engineering, Procurement and Construction Management: The contractor acts as a construction manager and consultant for the project.*

*EPS – Engineering, Procurement and Supervision: The contractor is responsible for engineering and procurement, but only supervises the construction work, which is carried out by others.*

**Figure 2: The details of the transaction: Shenghe paying A\$96m for 50% of NGUK, which owns 84% of Ngualla**



Source: PEK.

## Shenghe 50% subscription in NGUK – see-through value of A\$0.36/share (100% premium)

### Transaction has a see-through value of A\$192m

The net impact of the transaction for PEK is as follows:

- its interest in NGUK falls from 100% to 50%
- it benefits from an effective 50% interest in NGUK's cash balance of ~A\$96m (i.e. ~A\$48m)
- the implied valuation for 100% of NGUK is ~A\$192m
- the implied valuation on a PEK per-share basis is ~A\$96m / ~266.4m outstanding shares, which is ~A\$0.36 / share vs the pre-transaction price of A\$0.18/share. This value is determined on a predevelopment basis, showing that Shenghe considers the project to be worth considerably more than the equity market is allocating for the project prior to any development.

## **Balance of Ngualla capital costs to be met by Shenghe-arranged debt facility – no need for PEK to contribute development equity funding**

The difference between the Ngualla Project's total development costs and Shenghe's NGUK investment of ~A\$96m will be funded via a Shenghe-arranged debt facility. PEK has indicated that it expects this to be on terms that are more favourable than a typical international project financing facility.

The key outcome of this agreement is that **PEK will not be required to contribute any additional equity funding towards the development of the Ngualla Project. This addresses market concerns around the prospect of a major dilutionary capital raising.**

## **Leveraging Shenghe's expertise – potential for material capex savings**

A key condition for Shenghe to invest A\$96m into Ngualla via NGUK is that Shenghe is granted the development and construction of the project via an EPC, EPCM or EPS arrangement. See definitions on previous page.

This agreement will ensure that PEK is leveraging Shenghe's rare earths market experience, specifically its:

- deep technical expertise across entire rare earth value chain
- status as a major offtaker of rare earths concentrates and intermediate products
- expertise in designing, commissioning and operating bastnaesite rare earth mines
- strong relationships with engineering and equipment vendors
- strong balance sheet which is well capitalised
- access to attractive funding.

## **Focus to deliver material reductions in capital cost, operating cost and development schedule - Shenghe incentivised**

Any EPC, EPCM or EPS arrangement delivered by Shenghe will include incentivisation and cost recovery payments to further incentivise material reductions in upfront capital cost and schedule:

- Incentivisation payments to Shenghe where total capital costs are below US\$220m and/or construction is completed within 18 months of a Final Investment Decision;
- Cost recovery payments from Shenghe where total capital costs exceed the FEED estimate of US\$287m and/or construction is completed after 18 months from a FID
- Shenghe is also incentivised to reduce operating costs and maximise near-term earnings via an entitlement to 55% of NGUK's net earnings / losses after tax for the first 5 years of production

## **Key conditions to be met for agreement to become binding**

Completion of the A\$96m investment by Shenghe is conditional upon:

- following a successful tendering process, Shenghe being awarded an EPC, EPCM or EPS contract to develop the Ngualla Project
- Shenghe arranging an actionable project funding solution
- approvals from Chinese regulators as well as PEK and Shenghe shareholders.

## Timing: binding agreements by September 2024, FID by December 2024

The following target timeline has been agreed:

- finalise transaction documentation and execution – September 2024
- shareholder meetings to approve the transaction – October 2024
- FID – 31 December 2024.

**Figure 3: Timetable to completion of agreement and FID**

	2024						2025
	Jul	Aug	Sept	Oct	Nov	Dec	Jan
Signing of non-binding Term Sheet	✓						
Transaction documentation and execution			✓				
Shareholder meetings to approve transaction				✓			
Cost and layout optimisation				✓			
EPCM tender							
Award of EPCM contract						✓	
Early and Enabling Works							
Final Investment Decision						✓	
Commencement of construction							✓

Source: PEK.

## A Recap of Key Additional Near-Term Catalysts for PEK

PEK has several additional near-term catalysts with the potential to drive share price appreciation.

### Catalyst 1: UK freehold land purchase to boost cash

PEK has acquired the freehold title over its 19-hectare Teesside site in the UK. The land holding is located within the Wilton International Site, which is near the town of Middlesbrough in the Tees Valley.

#### Teesside land no longer key to strategy

Originally the site was to be home to a rare earth refinery and separation plant. However, as Ngualla has progressed, the Tanzanian Government has been supportive of further processing being performed in-country in Tanzania, so the Teesside land is no longer core to PEK's strategy. Given that it has received a number of unsolicited approaches in relation to the land, PEK has decided to exit the asset and pursue a sale.

#### PEK moving towards monetisation

PEK has received a number of unsolicited approaches regarding the land. PEK is assessing potential near-term exit and monetisation options, aiming to generate a significant cash boost for the company in the near term.

#### Possible value of the transaction: around A\$11m (low estimate) to A\$18m (average) based on regional sales

We have reviewed a number of industrial sites in the immediate area, recent and ongoing sales (see Figure 4). While we note that the PEK site is a premium site with its proximity to the port and power, our review is high level and does not consider all of the positives and negatives of PEK's site compared to the other sales in the area.

As shown, the transactions/potential sales imply a price of A\$11.3m (lower end) to ~A\$18m (average) for PEK's land. The high price is ~A\$28m. Our expectations for the sale price would be somewhere between our low estimate and the average.

The sale would significantly boost PEK's cash position, which was A\$7.6m at 30 June 2024. We have assumed that there is no tax payable on the sale due to PEK's accumulated tax losses.

Figure 4: Industrial land sales, Teesside area

Date	Name	Location	Value (£)	Value Type	Area (sq.ft)	Value/Sq.ft (£)	Area (Acres)	Value/Acre (£)	Implied price - Teesside (£)	Implied price - Teesside (A\$)	
2024	Land at Telford Rd	Middlesbrough	550,000	Listing price - unsold	77,101	7.13	1.8	310,734	14.6	28.2	
2024	Land at Haverton Hill road	Middlesbrough	500,000	Listing price - unsold	174,240	2.87	4.0	125,000	5.9	11.3	
2024	Land at Haverton Hill Road	Billingham	500,000	Guide Price - Unsold	174,240	2.87	4.0	125,000	5.9	11.3	
2024	Site 6 Urlay Nook	Eaglescliffe	775,000	Listing price - unsold	165,528	4.68	3.8	203,947	9.6	18.5	
2024	Plot 5 Urlay Nook	Eaglescliffe	1,950,000	Listing price - unsold	339,768	5.74	7.8	250,000	11.7	22.7	
2024	Plot 4 Urlay Nook	Eaglescliffe	1,425,000	Listing price - unsold	248,292	5.74	5.7	250,000	11.7	22.7	
2024	Urlay Nook (whole plot)	Eaglescliffe	7,160,000	Listing price - unsold	1,386,950	5.16	31.8	224,874	10.6	20.4	
2024	Land at Skelton Industrial Estate	Redcar	550,000	Listing price - unsold	148,540	3.70	3.4	161,290	7.6	14.6	
2024	Mannion Park Development Opportunity	Redcar	6,000,000	Listing price - unsold	1,231,441	4.87	28.3	212,239	10.0	19.3	
2023	Land at South Bank	Middlesbrough	15,000,000	Sale Price	3,920,400	3.83	90.0	166,667	7.8	15.1	
2022	Cooling Towers & Land, Haverton Hill Road	Billingham	600,000	Guide Price	163,786	3.66	3.8	159,574	7.5	14.5	
Average									199,030	9.3	18.1
Median									203,947	9.6	18.5
Min									125,000	5.9	11.3
Max									310,734	14.6	28.2

Source: Comparable regional real estate sales and properties for sale.

## Catalyst 2: Resource definition and development of phosphate project

### The background to the phosphate discovery

In March 2024, PEK announced the completion of an extensive drilling campaign in the Northern Zone and the Breccia Zone of the Ngualla Project. These zones are located ~2km north and north-east, respectively, from the Bastnaesite Zone that forms the basis of the Ngualla Rare Earth Project's Ore Reserves and Mineral Resources.

Both zones sit outside the current resource for the project. The campaign revealed significant high-grade mineralisation of the critical minerals phosphate and fluor spar as well as niobium and other rare earths.

### Key phosphate interceptions – potential for early cash flow

The Northern Zone proved to have mineralisation of phosphate, niobium and rare earths. The key finding from the 44 RC holes drilled in the Northern Zone was significant amounts of phosphate that have strong potential for rapid development and early cash flow.

Key results included:

- 60m at 20.5% P<sub>2</sub>O<sub>5</sub> from 10m
- 41m at 22.9% P<sub>2</sub>O<sub>5</sub> from 39m to end of hole
- 40m at 20.3% P<sub>2</sub>O<sub>5</sub> from 6m
- 32m at 22.0% P<sub>2</sub>O<sub>5</sub> from surface.

Bioavailability analysis undertaken on composite samples from the Northern Zone has confirmed the suitability of Ngualla phosphate as a direct application fertiliser.

### The phosphate market for PEK – a critical mineral

Phosphate is the natural source of phosphorous, an element that provides a quarter of all the nutrients that plants need for their growth and development. Phosphate rock is an increasingly important commodity with critical mineral status in the EU and China as well as strategic materials status in Australia.

Phosphate rock is processed to produce phosphorous, which is used in many products, notably as one of the three essential ingredients in fertiliser (the other two are nitrogen and potassium). Phosphate products can be used to deliver customised fertilisers for the specific needs of local soil, climate and crops and lead to higher crop yields, meaning higher crop production from less acreage.

Phosphate can be turned into phosphoric acid, which is used in everything from food and cosmetics to animal feed and electronics. Phosphate is also an important precursor to lithium-ion phosphate (LFP) battery technology, which has recently become the dominant EV battery technology in China.

Phosphate rock prices have increased at a CAGR of 65% over the last three years due to rising global demand to support agricultural yields and food security as well as the rapid emergence of LFP EV technology.

Rock from the Northern Zone could potentially be used as a direct application fertiliser, which would minimise beneficiation requirements and significantly simplify future development pathways.

Importantly, Ngualla phosphate is associated with low levels of deleterious elements, such as lead and mercury, by virtue of it being an igneous deposit.



## **MOU with Minjingu Mines and Fertiliser: potential co-operation around sales, offtake and co-investment**

PEK has signed a non-binding Memorandum of Understanding (MOU) with Tanzanian phosphate and fertiliser group Minjingu Mines and Fertiliser (Minjingu).

### **About Minjingu**

Minjingu is a private Tanzanian company with a significant presence in the Eastern and Southern African fertiliser market, with a key asset being the Minjingu Phosphate Mine in Tanzania. Minjingu is 60% owned by MAC Group, a large private Tanzanian conglomerate with interests across financial services, property, manufacturing and agriculture.

The core business of Minjingu revolves around the mining and processing of phosphate rock. The company's phosphate products serve as essential inputs for agricultural fertilisers.

Minjingu has a comprehensive sales and distribution network and sells phosphate products both domestically and internationally. The company serves the local Tanzanian market by distributing its phosphate products to agricultural retailers, cooperatives, and directly to farmers. Tanzania's agricultural sector represents a significant portion of Minjingu's sales, with the country's growing demand for high-quality fertilisers to support agricultural productivity.

Minjingu's distribution network covers Tanzania, South Africa, Zambia, Kenya, Uganda and Rwanda.

### **What the MOU covers**

The MOU will evaluate potential co-operation around the future development of phosphate from the Ngualla Deposit, including:

- mining and beneficiation
- offtake and sales arrangements
- transport and logistics
- potential joint venture, co-investment, partnering and funding structures.

### **Next steps regarding phosphate and key catalysts**

The path to development of a phosphate project will require PEK to:

- update the conceptual model of the Northern Zone to identify future drill targets and preferential areas of mineralisation for future development. A joint study group will be formed imminently to fast track the development of a low-cost phosphate beneficiation flowsheet within six months
- establish a Maiden Resource for the project
- sign a definitive agreement with Minjingu Mines over development, funding, co-investment and sales of phosphate.



## Catalyst 3: Cost and Optimisation Study

Ahead of the signing of the term sheet with Shenghe, PEK initiated a Cost and Optimisation study which will deliver revised 'bankable' cost and production estimates for the Ngualla Project ahead of the targeted FID in December. Wood Plc has been appointed to support the delivery of the study.

At the time of completing a Front-End Engineering and Design ("FEED") Study for the Ngualla Project, further optimisation and cost reduction opportunities were identified.

Following the enlargement of the Special Mining Licence ("SML") in April 2024 from ~18km<sup>2</sup> to 51km<sup>2</sup>, PEK identified to reconfigure the layout of the project and to relocate buildings, plant and storage facilities from Ngualla Hill to flatter areas within the enlarged SML.

### Shenghe will Participate in Process

With the signing of the Term Sheet, it is expected that Shenghe will also actively participate in the Cost and Optimisation Study going forward. Under the term sheet Shenghe is incentivised to take capital costs below US\$220m. The current capital cost estimate is US\$287m. MST's revised costs estimate (see further details in valuation section), is US\$250m.

### Key focus areas

The study will focus on the following optimisation opportunities:

**Building relocation and layout optimisation** – relocating buildings, plant and storage facilities from Ngualla Hill to flatter areas, reducing bulk-earthworks and required capex on the Plant Access Road;

**Optimisation of contract packages** - including reducing unit rates via combining earth works, civils, quarry, tailings storage facility construction and mining;

**Deferral of new airstrip** – by remediating the existing airstrip;

**Increased plant availability** - revising plant availability from 80% to 88% based on a peer benchmarking exercise;

**Re-scope buildings and storage facility** - utilising lower cost local construction solutions, removing unnecessary coverings and reducing storage capacity; and

**Adopting more competitive tendering solutions** – including reductions in logistics and power costs.

### Targeting revised cost estimate in November 2024 - ahead of FID

It is anticipated that the study will deliver a material reduction in upfront capital cost corresponding to a lower debt requirement and enhanced project economics for the Ngualla Project. PEK is aiming for revised "bankable" cost and production estimates by November ahead of the targeted FID in December.

## Further Catalysts Driving the Investment Case

### Rare earths outlook: fuelling future energy transformation

We project the price of rare earths, especially NdPr, to rise, driven predominantly by the surging demand in energy-transition applications such as EV motors and wind turbines. In 2022, these applications consumed magnet rare earth oxides, including NdPr, valued at \$3.8 bn. Adamas Intelligence predicts this figure will experience a 19.1% CAGR, surging to \$36.2 bn by 2035. This escalating demand is primarily driven by passenger EV traction motors and increased by wind power generators.

NdPr oxide is expected to witness the most significant value increase, rising 11-fold by 2035 as per Adamas Intelligence. This anticipated surge is attributed to comprehensive demand growth, escalating prices, and a trend towards employing more NdPr in high-grade rare earth magnets (NdFeB). However, supply analyses from Adamas Intelligence suggest that by 2035, NdPr oxide supply will struggle to meet this booming demand, leading to pronounced shortages of these essential magnet materials.

### Exploration adds options; potential early cashflow

The outstanding exploration results identifying substantial fluorspar in the Breccia Zone and phosphate in the Northern Zone has added significant optionality to the project. PEK continues to evaluate low-capital development pathways for these commodities which complement the delivery of the Ngualla Rare Earth Project. In addition to phosphate and fluorspar, PEK has also encountered elevated levels of niobium and heavy rare earths in the Northern Zone which it will continue to evaluate in the coming months.

### Tanzania: attractive business jurisdiction

Tanzania offers political stability, economic growth, and expanding industry, marking it as a notable investment destination in East Africa. The nation has achieved a growth rate of 7.6% pa pre-pandemic, coupled with declining inflation and poverty.

### Mining sector growth

Under the leadership of President Samia Suluhu Hassan, Tanzania is leveraging its mineral wealth, targeting a 10% GDP contribution from mining by 2025. The sector's rapid growth, marked by 8 significant mining agreements, positions Tanzania as a prime mining investment hub.

### Enhanced international relations and business climate

Following a visit by the US Vice President to Tanzania in 2023, an MOU was announced between Tanzania and the Export-Import Bank of the United States, paving the way for US\$500m in export financing. Furthermore, a B2 Positive credit rating from Moody's in 2023, prompted by political stability and reforms, signals an investor-friendly climate.

## Valuation: Shenghe Agreement Lifts Base-Case Valuation; NPV-based Valuation of A\$2.29/Share (Previously A\$1.28)

Our base-case risked NPV-based valuation for PEK is A\$2.29/share (previously A\$1.28) on a fully diluted basis. Our valuation has increased significantly due to the inclusion of the A\$96m investment into NGUK by Shenghe, and taking into consideration the new ownership structure of the project (PEK 42% [previous 84%], Shenghe 42% [previous 0%], Tanzanian Government 16% [no change]). We have also considered the fact that PEK is not required to make any further equity contribution into the project, removing our prior expectation for a large dilutive equity raising.

### How we valued PEK prior to the Shenghe transaction

We previously had a base-case valuation for PEK of A\$1.28 per share with an upside valuation of A\$3.53 per share.

#### Previous base case: A\$1.28 per share

Our previous valuation of PEK was A\$1.28 per share, fully diluted, attributing a net asset value (NAV) of A\$1,083m. This assumed PEK maintained 84% ownership and assumed a 50/50 debt equity funding of the project with an equity raising of A\$236m, significantly increasing the share count. Our valuation included the Teesside land sale, while excluding the potential of the development of phosphate, fluorspar or niobium at Ngualla due to the early stage of the projects. The valuation did not consider any potential sell-down of the project to Shenghe.

#### Previous upside case: A\$3.53 per share

We analysed a scenario where 40% of Ngualla UK was sold to Shenghe for a turnkey project funding and engineering, procurement, and construction (EPC) solution. This assumed PEK held an effective 50.4% stake in the project (60% of 84%), while Shenghe secured 33.6% (40% of 84%) in exchange for the EPC solution, encompassing the project's construction.

The additional valuation in this scenario analysis compared to our base case was attributed to:

- no initial cash outlay by PEK at the project's inception
- no equity dilution (as there would be no issuance of shares)
- no requirement to contribute to capital costs (as compensation for sale of the 40% stake).

### New valuation: A\$2.29 per share – lands in between previous base case and upside valuation

We noted previously, with respect to our prior valuation, that 'PEK continues to assess a number of potential funding, strategic partnering and construction options that may lead to a different combination of debt, equity and construction to our assessed base case and upside valuations. We consider that any combination that was different to our assessed cases would see a revised valuation that is in between our base case and upside valuations'.

Our new valuation takes into consideration the structure of the term sheet agreement with Shenghe as well as the potential for capital costs to decrease. Our key assumptions are as follows:

- A\$96m investment by Shenghe into NGUK utilised towards funding the development of Ngualla
- ownership of project: PEK 42%, Shenghe 42% and Tanzanian Government 16%
- capital cost of US\$250m for the project (our previous assumption was US\$330m. We have assumed a decrease from PEK's current estimate of US\$287m). We consider this to have further downside potential given the incentive structure for Shenghe to get capital costs below US\$250m
- no equity raising by PEK to fund the project.

Our financial analysis of the flagship Ngualla Project (42% ownership) values PEK at A\$2.29 per share, fully diluted, while the un-risked valuation is A\$3.00/share. We summarise our base-case valuation in Figure 5. Our analysis uses a discount rate of 10% and a probability risk weighting of 80%, while we await the final agreement for the Shenghe transaction to be completed.

Furthermore, we have attributed a net asset value (NAV) of US\$653m compared with the current market value of ~A\$59m. Our valuation also includes the Teesside land sale, which has the potential to generate a significant cash boost for PEK and alleviate the need for further capital raisings leading into the development of the Ngualla Project.

The valuation excludes the potential of the development of phosphate, fluorspar or niobium at Ngualla due to the early stage of the projects, but we do see the potential for early cash generation from these commodities and the potential for a low-capex, rapid development project. We believe NdPr is under-appreciated with strong structural tailwinds, and we see the potential for tight medium-term fundamentals in the NdPr market.

Figure 5: Base-case valuation summary

PEK (MSTe Sale of Asset)				Jun-25	
	Discount rate	US\$m	Risk weighting	AUD\$m	AUD\$/sh
Ngualla (42%)	10.0%	653	80.0%	746	2.82
<b>Total operating assets</b>				<b>746</b>	<b>2.82</b>
Corporate/SG&A				(71)	(0.27)
Net cash/(debt) inc NGUK (\$AUD)				(69)	(0.26)
<b>Net Asset Value</b>				<b>606</b>	<b>2.29</b>
Current Share Price					0.210
<b>Upside</b>					<b>992%</b>

Source: MST estimates.

Figure 6: Base-case valuation assumptions (MST vs. PEK)

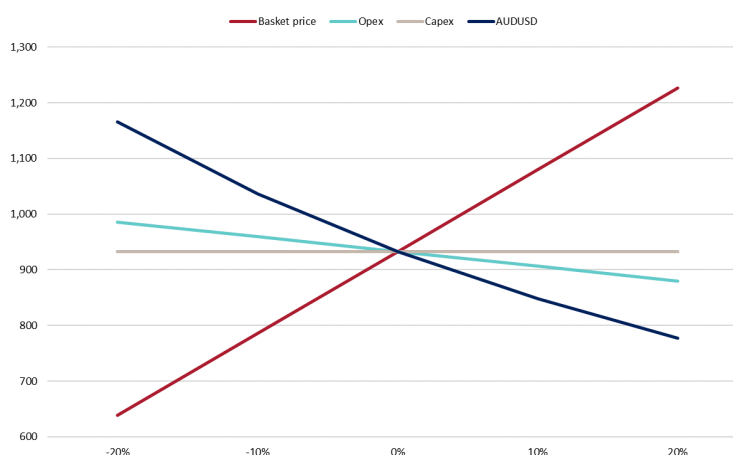
Financial Performance Summary	Unit	PEK	MSTe
Construction commencement year	Year	2025	2025
Construction period	Years	2	3
Avg. NdPr price (first 5 years)	US\$/kg	153	172
Avg. NdPr price (LOM)	US\$/kg	201	197
Upfront development capex	US\$m	287	250
AISC at US\$60/kg NdPr (inc. conc transport)	US\$/kg	21.0	23.9
Avg. annual operating cost	US\$m	77	80
Average annual EBITDA	US\$m	281	314
NPV10 (Post-tax, ungeared, and after 16% free carry)	US\$m	747	653
IRR (Post-tax, ungeared, and after 16% free carry)	%	34%	52%

Source: PEK, MST estimates.

## Key sensitivities

As shown in Figure 7, our valuation is most sensitive to assumptions on the NdPr oxide price and, to a lesser extent, the AUD/USD exchange rate, opex and capex.

**Figure 7: Key sensitivities (A\$m Ngualla valuation unrisks; % change from valuation)**



Source: MST estimates.

## Positive catalysts for share price and valuation

### Completion of Shenghe agreement

The key catalyst for share price appreciation is the completion of the Shenghe agreement to buy into the project and complete the debt facility. This is due to occur in September. Shareholder and Chinese Government approval is expected in October.

### Final investment decision

FID is the key to project commencement and represents a major milestone. This is now extended to December 2024.

### Decrease in capital costs

A key component of the Shenghe agreement is to decrease the capital costs of the project. This is a key catalyst to both increasing our valuation and to share price appreciation.

### Sale of Teesside land

The sale of the Teesside (UK) industrial land would provide an immediate boost to cash and allow PEK to be funded through to FID/development of Ngualla.

### Other critical minerals development

The discovery of critical minerals phosphate, fluorspar and niobium has greatly enhanced the chance to generate early cash flow for the project by developing these minerals, which would enhance the valuation.

### Other potential share price catalysts

**Resource growth:** Drilling at Ngualla is being undertaken. An increase in the resource would be positive.

**NdPr price increase:** The valuation is highly sensitive to NdPr prices. Increases in the price of NdPr oxide would positively affect the valuation.

**USD depreciation:** The valuation is highly sensitive to the USD/AUD. USD depreciation would have a positive effect on the valuation.

## Risks to share price and valuation

We outline the key risks to the share price and valuation below, noting that early-stage mining projects have various critical risks.

### Company- and project-specific risks

**Shenghe transaction does not progress:** The transaction with Shenghe has become the key catalyst for the stock. The transaction not proceeding is the key risk.

**Shenghe access to funding:** The availability of funding for the project is not guaranteed. A lack of sufficient funding could have a negative impact on the stock.

**Delays to development:** Any delays in moving into construction, post-funding, would be a negative for the stock and would gradually make the information from the BFS less current and thus less reliable.

**Key person dependence:** Individuals, including the CEO, may have relationships and experience critical to advancing the project. The loss of such personnel may significantly compromise PEK's ability to advance the project.

**Cost inflation:** This is a global theme and is particularly concerning in the mining industry. If operational or capital costs increase without a corresponding increase in the commodity price, the project's margins would be reduced, which could impact the economics and viability.

**Supplying to China:** Tensions between China and other countries could lead to trade embargoes or other restrictions, potentially impacting PEK's ability to sell its refined products internationally.

### Macro risks

- **Rare earth oxide price** – this is the key valuation sensitivity
- **Foreign exchange rates**
- **Increasing interest rates and the potential impact on the cost of debt finance**

### Country-specific risks

The Ngualla Project, operating in Tanzania, may face several country-specific risks.

- **Political instability:** Any changes to government policies or leadership could impact the project, as they could adversely change laws, taxes or other regulations, increasing costs or decreasing revenues.
- **Regulatory environment:** Regulatory or legal changes could adversely impact the project's success.

# Personal disclosures

Michael Bentley received assistance from the subject company or companies in preparing this research report. The company provided them with communication with senior management and information on the company and industry. As part of due diligence, they have independently and critically reviewed the assistance and information provided by the company to form the opinions expressed in this report. They have taken care to maintain honest and fair objectivity in writing this report and making the recommendation. Where MST Financial Services or its affiliates has been commissioned to prepare content and receives fees for its preparation, please note that NO part of the fee, compensation or employee remuneration paid has, or will, directly or indirectly impact the content provided in this report.

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The companies and securities mentioned in this report, include:

Peak Rare Earths (PEK.AX) | Price A\$0.22 | Valuation A\$2.29;

*Price and valuation as at 31 July 2024 (\* not covered)*

# Additional disclosures

This report has been prepared and issued by the named analyst of MST Access in consideration of a fee payable by: Peak Rare Earths (PEK.AX)

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