

ASX Release 22 August 2023

Enhanced Scoping Study for Cummins Range as a DSO start-up, 3-stage phosphate-enabled rare earth critical minerals project

Scoping Study outlines a fundable, low-CAPEX, Stage 1 DSO phosphate project as the springboard for a longer-term, high-value, low-risk, staged rare earths operation, delivering a critical mineral project to the Kimberley, near Halls Creek and Billiluna on Jaru Native Title, and exporting through Wyndham Port.

Highlights

- **Low front-end CAPEX and staged capital deployment schedule** presents significant project advantages:
 - **Stage 1 is Simple, Fundable, and deliverable - significantly lower risk** than other development pathways and **establishes an operating platform** before expanding into Stage 2;
 - **Stage 2 development**, operations, and offtake are **materially de-risked** following Stage 1; and
 - **Stage 3 builds on the Stage 2** process plant with minimal anticipated modification.
- **Attractive and robust economics** across a range of pricing scenarios with **Stage 1 being a significant de-risking step** for the first 3 years **before Stage 2 and 3 lead to a 18-year mine life**; a nationally significant critical minerals rare earth and phosphate project.
- **High value-in-use products**:
 - beginning with simple **high-bioavailability, organic, WA-made rock phosphate** with potential as direct application fertiliser (Stage 1).
 - followed by **phosphate-rare earth mineral concentrate** with potential in the **rapidly growing, SE Asian, phosphoric acid industry (fertiliser and battery markets)**, and demonstrated clean phosphate leach and favourable rare-earth separation (Stage 2 and 3).
- Project **well positioned geographically and by commodity** type to work with **critical mineral, agricultural, and regional development funding initiatives** including grants, preferential debt, and government budgetary allocations, following precedent.
- **Historical magnetic and geochemical surveys**, on the Cummins Range tenement, have **identified numerous anomalies** which RareX intends to explore starting with planned magnetic and gravity surveys in 2023.

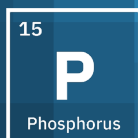
RareX Limited (RareX, the Company) (ASX: REE) is pleased to announce the completion of an enhanced Scoping Study (**Scoping Study, the Study**) which has delivered positive outcomes from a 3-Stage, project development strategy for its 100% owned Cummins Range Phosphate-enabled Rare Earths Project (**the Project, Cummins Range**), located in the Kimberley region of Western Australia.

The enhanced Scoping Study builds upon learnings and recommendations from the September 2022 Scoping Study¹, metallurgical testwork and the 2023 updated Mineral Resource Estimate² which positioned Cummins Range as Australia's largest undeveloped rare earths project. The Study's main contributors were Primero, Mining Plus, Ausenco, Shawmac and MBS Environmental.

RareX CEO, James Durrant, said: *"The Scoping Study results have exceeded our expectations and validate the evolved project development pathway presented in April 2023. The results show a practical approach to allow*

¹ ASX Announcement 12 September 2022: Positive Scoping Study for Cummins Range Rare Earths Project

² ASX Announcement 1 May 2023: Cummins Range Resource Soars to 519Mt 0.32% TREO, 4.6% P₂O₅



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the economic extraction of rare earth elements in conjunction with valuable phosphate fertiliser or battery feedstock.

“The staged approach, enabled by clean rock phosphate for direct application, as Stage 1, positive flotation and leach performance of monazite-apatite from the regolith as Stage 2, and the upside of coarse monazite in the fresh rock for Stage 3, positively differentiates us from more conventional rare earth developments which typically have less favourable geology and more complex infrastructure requirements.

“The products have high value-in-use potential and we’re working to find the right buyers for Stage 1 and Stage 2, across Australia and SE Asia, having recently appointed two offtake consultants. This follows the recent board appointment of Danny Goeman, ex-FMG global head of marketing, sales and shipping, and ex-Danakali Limited CEO, where he and I worked on securing a binding take-or-pay fertiliser offtake deal during the study phase.

“The low upfront capital and simple Stage 1 makes this fundable and deliverable by RareX, and we’ve materially progressed the pre-requisites for regulatory approval for Stage 1, giving us the best chance of becoming an operator in the next couple of years. Excitingly, our geologists are also extending target generation on site to a similar anomaly to Cummins Range so we look forward to seeing how that might integrate with our development plans.

“With all these positive attributes and the ability to deliver this project with our team, we are excited for the future of the Company. Our priorities for the next 6-9 months are to identify strategic offtake partners, advance Stage 1 to DFS and Stage 2 to PFS, and complete submissions for mining approvals.”

The Scoping Study referred to in this release is based on low-level technical and economic assessments and is insufficient to support an estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised. Further evaluation work and appropriate studies are required before RareX will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

Click here for the Scoping Study announcement and video on the RareX investor hub:

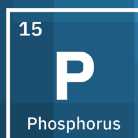
<https://investors.rarex.com.au/link/drLjyO>

Webinar

CEO James Durrant will be hosting a 10-15 minute webinar about the exciting outcomes of the Scoping Study on the RareX investor hub and addressing any feedback from investors. Please submit questions on the “Ask a Question” section of this announcement on the RareX investor hub prior to Tuesday 29 August 2023.

Date and Time: Friday 1 September 2023 at 9:00am AWST / 11:00am AEST

Register: Sign-up to the RareX Investor Hub: <https://investors.rarex.com.au/auth/signup>



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Cautionary Statement

The Scoping Study referred to in this release was completed to determine the viability of a combined mine, DSO operation and regolith beneficiation processing plant, under a staged development approach, in the East Kimberly region of Western Australia, using phosphate and rare earth deposits at Cummins Range to produce phosphate and rare earth concentrate products.

It is a preliminary technical and economic study of the potential viability of the Project.

This Scoping Study is an order of magnitude technical and economical assessment and is supported by Indicated and Inferred Mineral Resources³.

The Study is based on the material assumptions outlined below. These include assumptions about the availability of funding. While RareX considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the Study will be achieved.

To achieve the range of outcomes indicated in the Study, initial funding of approximately A\$45M will likely be required for Stage 1 followed by A\$304M for Stage 2 and A\$63M for Stage 3. Investors should note that there is no certainty that RareX will be able to raise that amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive or otherwise affect the value of RareX's existing shares.

It is also possible that RareX could pursue other value realisation strategies such as a sale, partial sale or joint venture of the Project. If it does, this could materially reduce RareX's proportionate ownership of the Project.

The Study includes appropriate assessment of realistically assumed modifying factors together with other relevant operational factors.

The production target disclosed in the study is underpinned by ore feed classifications of 73% Indicated Resources and 27% Inferred. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

The Study demonstrates a potentially viable project and has given the Board of RareX the confidence to approve the commencement of a Definitive Feasibility Study (DFS) for Stage 1 and Pre-Feasibility Study (PFS) for Stage 2 which will commence in Q3 2023. Additionally, the Board supports the on-going environmental baseline studies and the finalisation of Native Title Agreement negotiations.

³ ASX Announcement 1 May 2023: Cummins Range Resource Soars to 519Mt 0.32% TREO, 4.6% P₂O₅. The Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed.



Project Concept

The Project outlined in the Scoping Study is based on the Mineral Resource Estimate published to the ASX on 1 May 2023.

Stage 1: Low CAPEX (A\$45M), direct shipping ore (**DSO**), direct application (**DA**), high-bioavailability, organic rock phosphate fertiliser for agricultural purposes. A production rate of up to 300 ktpa of 23% P₂O₅ is forecast for a period of 3 years.

Stage 2: Installation of a mid-sized beneficiation plant of A\$304M to produce 550 ktpa phosphate-rare earth mineral concentrate from the weathered resource for the phosphoric acid and rare-earth concentrate market.

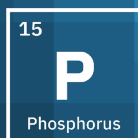
Stage 3: A\$63M upgrade of the Stage 2 plant in year 13 to produce a concentrate from the un-weathered, fresh, rock below c.130 m RL. Stage 3 should see further improvement and optionality in post beneficiation upgrades due to mineralogy factors. A mine closure cost of A\$41M has been allocated at the end of Stage 3.



Figure 0-1: Breakdown of the staged approach and high-level capital, operating expense and unit cost metric. Outcomes are derived from the Mid-Case pricing assumptions (refer to section 5.5 for further discussion of the Low-Case, Mid-Case and High-Case pricing assumptions). The above timetable is indicative only and is subject to change. All currency in A\$.

The project concept outlined in the Scoping Study comprises a Stage 1 direct shipping ore (**DSO**) open pit mine and basic site infrastructure, including a crushing-screening plant and a road linking the mine site to the Tanami Road, 40km north of Billiluna. This will be followed by Stage 2, which comprises the installation of a flotation beneficiation facility at site to produce a rare earth and phosphate mineral concentrate, and the expansion of non-process infrastructure (**NPI**).

This staged development approach has the benefits of initiating early cashflows, building confidence with the regulators on environmental management, furthering community relationships and social performance, providing greater mineral resource definition, allowing bulk samples for metallurgy and piloting, and



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establishing a functioning supply chain; all of which substantially de-risk Stage 2 which transitions the project into a rare-earth critical mineral mine.

All project stage products are proposed to be trucked along mostly sealed roads to Wyndham Port, with the Tanami Road currently undergoing sealing. At Wyndham Port, which is powered by hydro electricity from the Ord River hydro power station, the Company proposes to install a simple covered stockpile storage area⁴ and to collaborate on using existing infrastructure and incumbent operators, including the current KMG iron ore loading jetty⁵ (or the Agrimin loading facility⁶ which is yet to be built), and transshipping operators familiar with the port⁷.

The DSO rock phosphate has high value-in-use in the fertiliser sector due to its organic and high bioavailability nature. An average grade of 23% P_2O_5 with up to 5 times the bioavailability of traditional rock phosphate denotes that more phosphorous is available to the plants for a given P_2O_5 head grade. Additionally, there is an opportunity for RareX to support the local communities by providing meaningful employment and also support the local agricultural sector by placing product to customers for use in the Ord River Irrigated Area (ORIA) and the broader cropping region largely supplied through OrdCo⁸.

Stage 1 has not been assessed as a standalone project. Pit optimisation has been completed on the staged approach. Stage 1 (stand-alone) pit optimisation will be completed at the next study stage. More importantly, Stage 1 is a very useful, low-cost, de-risking step - allowing RareX to fund and establish an operational footprint whilst Stage 2 is refined for optimal delivery.

The Stage 2 mineral concentrate is proposed to be pre-treated at an offshore phosphoric acid plant facility, likely in Southeast (SE) Asia, to leach the clean apatite (phosphate) mineral and liberate the monazite (rare earth) mineral, maximising value-in-use to both the acid producers and the downstream monazite rare earth refineries.

Rare earths will then be refined by a third party used in the technology and clean energy sector where the product's dominant rare earth oxide, NdPr, is used in magnets in electric vehicles and wind turbines.

Phosphate product component price ranges have been estimated and benchmarked based on their grades, bioavailability and market intelligence and forecasts, including from independent consultants and market reports from Argus. Additionally, a discount has been applied for the mineral concentrate entering the phosphoric acid market. Current Argus reporting has 32% P_2O_5 Moroccan free-on-board (FOB) at US\$258 per tonne⁹, which is equivalent to A\$361 per tonne at a foreign exchange (FX) of 1.4.

Rare earth product component pricing considers a discounted Cummins Range total rare earth oxides (TREO) basket price (to take into consideration further processing requirements). The basket price is dominated by NdPr value. Adamas Intelligence¹⁰ forecasts that due to demand from the electric vehicle and wind power

⁴ Land tender process underway.

⁵ Term sheet under negotiation for KMG to provide stockpile reclaim and barge loading services to RareX.

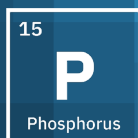
⁶ ASX Announcement 13 April 2013: Cummins Range Rare Earths-Phosphate Project - Development and Strategy Update.

⁷ Term sheet under negotiation with incumbent transshipping service provider.

⁸ ASX Announcement 7 November 2022: RareX signs MOU for Supply of Phosphate Products Locally.

⁹ Argus monthly phosphorous outlook, July 2023 Average.

¹⁰ <https://www.miningreview.com/energy/pensana-looks-to-achieve-first-production-at-longonjo-in-2025/>.



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sectors, the value of NdPr oxide consumed will increase eleven-fold by 2035. Prices are forecast to rise from current levels of US\$67,000 per tonne to US\$100,000 per tonne by 2025, increasing steadily to over US\$200,000 per tonne by 2035.

Given the low up-front capital, the low-risk development approach, and the strategic nature of Cummins Range as a critical minerals rare earth project, a Kimberley-located operation, and a potential future employer of Aboriginal people from the disadvantaged communities of Halls Creek and Billiluna, funding is proposed through a combination of grant, debt, and equity.

The 50km road linking the Project to the Tanami Road has been costed in the project economics, but has the potential to be funded by way of a government sourced grant in a manner similar to the Seafarms road (A\$18M¹¹), and the Northern Minerals road (A\$50M¹²) - funded from state and federal budgets respectively. Northern Australia infrastructure Facility (NAIF) is anticipated to provide a substantial portion of project debt.

Relevant funding initiatives, including in the agricultural sector, include the following:

- Regional Grants Programme (up to A\$15M)
- CMDP grant (A\$50M over 3 years, typical grant sizes are c. A\$5M)
- Kimberley Development Commission Grants
- NAIF Loan (A\$500M earmarked from Critical Minerals Strategy)
- Export Finance Australia – Critical Minerals Facility Loan (A\$2B facility)
- State and federal budget inclusion
- A\$15B National Reconstruction Fund, where the resources sector is a priority area for companies conducting value-add in resources, supporting renewables and low emission technologies and enabling regional capabilities
- Ord River Improvement Scheme in support of agricultural initiatives

At present, the Company has no pending applications in respect of the above funding initiatives. In the event that the above funding initiatives are not successful, the Company has a reasonable basis for expecting that it can secure funding solely through a combination of debt and equity.

This Scoping Study has been developed from a Mineral Resource Estimate which covers approximately 40% of the Cummins Range carbonatite pipe. The remaining 60% of the carbonatite pipe has had less than 600m of drilling, all with phosphate and rare earths mineralisation (see announcement dated 1 May 2023)¹³.

Historical magnetic and geochemical surveys have identified numerous anomalies that are yet to be adequately tested within the RareX tenure surrounding the pipe, which RareX intends to explore with planned magnetic and gravity surveys in 2023.

Any additional discoveries may have synergies due to the proximity to Cummins Range deposit. Further target generation on site is planned in 2023 on an adjacent anomaly to Cummins Range with the intention of

¹¹ <https://seafarms.com.au/wp-content/uploads/2021/08/2236045.pdf>.

¹² <https://investorinsight.com.au/browns-range-access-upgrade-to-follow-commitment-from-wa-govt-in-state-budget-northern-minerals/>.

¹³ ASX Announcement 1 May 2023: Cummins Range Resource soars to 519Mt 0.32% TREO, 4.6% P₂O₅.



identifying and proving up ground that could potentially be added to the mineral resources underpinning this Study.

Key Project Metrics

The nominal case presented in the table below, with low initial capital and a simple development plan using 3rd party operators along the supply chain, before transitioning to Stage 2, and ultimately Stage 3, is the preferred approach to developing this Project, balancing economic returns with risk and funding potential.

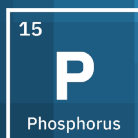
Key project metrics			
Physicals	Stage 1	Stage 2	Stage 3
Product type	DSO	Phos-RE Con	Phos-RE Con
Av. prod. rate (dry) (ktpa)	270	503	480
Average grade (%)	23% P ₂ O ₅	33% P ₂ O ₅ ; 2.3% TREO	32% P ₂ O ₅ ; 1.6% TREO
Duration (yr)	3	10	5
Costs			
CAPEX (A\$M)	45	304	63
OPEX (A\$M/a)	35	139	171
OPEX (A\$/t product)	122	259	328
Total SUSCAP (A\$M/a)	1	7	8
Closure (A\$M)	-	-	41
Products			
Average TREO production (ktpa)	-	12	7
Average P ₂ O ₅ production (ktpa)	63	169	156
Product price (A\$/t)	254	553	468
Financial outcomes			
Payback (pre-tax) (yr)	1.65	1.41	1.69
Average EBITDA LOM (A\$M/a)	81		
Total EBITDA (A\$M)	1,450		
Government tax (30%) (A\$M)	406		
Government royalty (A\$M)	205		
Native title contributions (A\$M)	84		
NPV8 (pre-tax / post-tax) (A\$M)	549 / 333		
IRR (pre-tax / post-tax) (%)	39% / 27%		

Notes:

- Government royalties: 7.5% DSO, 5% Con
- Native title (NT) contributions per currently negotiated outcomes - note the agreement has not been executed

The production target disclosed in the Study is underpinned by ore feed classifications of 73% Indicated Resources and 27% Inferred. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

The estimated Mineral Resources underpinning the production target have been prepared by a competent person or persons in accordance with the requirements in Appendix 5A (JORC Code) as presented to the ASX



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release on 1 May 2023 “Cummins Range Resource soars to 519 Mt 0.32% TREO, 4.6% P₂O₅”. The Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed.

The material assumptions underpinning these project metrics are:

- The Mineral Resource Estimate released to the ASX on 1 May 2023¹⁴.
- A Scoping Study compiled by RareX with supporting consultants including Primero, Mining Plus, Ausenco and MBS Environmental with a typical confidence level of +/-40%.
- Mining costs and basic schedule based on typical mining methods and assumed geotechnical parameters.
- Metallurgical performance based on laboratory test work released to the ASX on 12 September 2022¹⁵, 4 October 2022¹⁶, 11 October 2022¹⁷, 23 March 2023¹⁸, 8 June 2023¹⁹ and 11 July 2023²⁰. The Company confirms that it is not aware of any new information or data that materially affects the announcement.
- Environmental factors determined from desktop studies and field surveys.
- Materially advanced mining heritage agreement with Jaru traditional owners.
- Market confidence derived from memorandum of understanding (MOU) with Ordco, (see ASX announcement dated 7 November 2022) and market knowledge and intelligence from Argus and independent consultants (as referenced throughout this study).

Excluded material assumptions are:

- No site visit by mining consultant

Note: No Ore Reserves have been estimated.

¹⁴ ASX Announcement 1 May 2023: Cummins Range Resource soars to 519Mt 0.32% TREO, 4.6% P₂O₅

¹⁵ ASX Announcement 12 September 2022: Positive Scoping Study for Cummins Range Rare Earths Project

¹⁶ ASX Announcement 4 October 2022: Met Testwork Delivers Premium Phosphate Concentrate

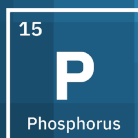
¹⁷ ASX Announcement 11 October 2022: Positive Ore Sorting Testwork Results for Cummins Range

¹⁸ ASX Announcement 23 March 2023: Phosphate Testwork Confirms Potential to Produce Fertiliser

¹⁹ ASX Announcement 8 June 2023: Bioavailability Tests Confirm Potential of Cummins Range

²⁰ ASX Announcement 11 July 2023: Phosphoric Acid Leach Test Supports RareX Stage-3 Operations





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This announcement has been approved for release by the Board of Rare X Limited.

For more information,
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About RareX Limited – ASX: REE

RareX Limited (ASX: REE), a Perth based project development and exploration Company, was founded on the fundamental belief of the electronics revolution and the electric vehicle mega-trend. Our focus is rare earths and associated battery and electronic metals.

Cummins Range, in the East Kimberley region of Western Australia, is our flagship project which aims to produce a sustainable, ethical, transparent and secure low carbon rare earth and phosphate supply chain solution for its products which satisfy the two global mega-trends of population growth and electrification.

RareX maintains exploration upside programs in the immediate vicinity of the Cummins Range Project and also more broadly to identify targets and progress projects complementary to the founding beliefs and expertise of the core team.

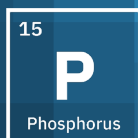
Rare earths and in particular, NdPr, are core enablers of decarbonisation and electrification of our society. NdPr supports high strength magnets which enables low carbon technologies, especially in the electric mobility sector, robotics solutions and renewable energy, particularly the wind energy sector.

Phosphates are one of the three macro nutrients required in fertilisers. Fertilisers are in ever more demand due to population growth, depleting soils and reduced arable land requiring ever more intensive farming.

RareX maintains material investments in Kincora Copper (ASX:KCC), Cosmos Exploration (ASX:C1X) and Canada Rare Earth Corporation (LL.V).

For further information on the Company and its projects visit www.rarex.com.au





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2023 Cummins Range Scoping Study

1 Introduction

The Cummins Range Project (**Cummins Range**, the **Project**) is a nationally significant rare earths and phosphate project located in the Kimberley region of Western Australia, 135km southeast of the township of Halls Creek. Halls Creek is well provisioned for infrastructure with power, water and sealed airstrip and there is surplus industrially allocated land. It is serviced by the Great Northern Highway which connects to the Port of Wyndham. Currently, Cummins Range is accessible from the Great Northern Highway via the Tanami Road and the site access track, both currently unsealed. The Tanami Road section is anticipated to be sealed by the time the Project becomes operational, supported by government initiatives, and the Company intends to install a straight access road along the Carranya Station boundary for an improved link to the Tanami Road.

Cummins Range was acquired in mid-2019 and, following drilling programs in 2020, 2021, and 2022 presented the most recent JORC Code (2012) compliant Mineral Resource Estimate in May 2023²¹. Cummins Range now counts itself as Australia's largest, undeveloped rare earths project, and a significant source of phosphate. The primary rare earth mineral is monazite, one of the most well understood and processed rare earth minerals in the world. Phosphate is primarily reported in apatite and monazite minerals. RareX is undergoing a resource definition and metallurgical drilling program which will contribute to an updated mineral resource estimate later in 2023.

The Resource covers 40% of the carbonatite-ultramafic pipe and is centred around two carbonatite dykes. The larger of the two dykes to the south is a dolomitic intrusion and hosts most of the higher-grade rare earths and the northern thinner dyke is more phosphate dominated. The fresh rock rare earths mineralisation consists of monazite dominated veins or dykes, and the phosphate mineralisation occurs in pervasive coarse apatite.

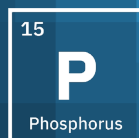
In the weathered portion of the system, a combination of residual, or eluvial, chemical weathering and primary mineralisation has contributed to the strong enrichment of rare earths and phosphate at surface (Siegfried, 2022), with the orebody outcropping in multiple locations. The major host minerals in the weathered portion are monazite and apatite. Significant amounts of niobium and scandium are also present.

The 2023 Scoping Study assesses a staged approach to project development, whereby the initial stage (Stage 1) focusses on a very simple mining and crushing operation feed with high grade phosphate rock to produce a direct shipping ore that can be used as direct application fertiliser. The intent is to offset some, or all, of the initial capital requirements with Stage 1 in order to establish a lower cost and lower risk beneficiation operation (Stage 2). Approvals are focussed on Stage 1 initially to allow critical approvals to be progressed quickly due to the less complex starter project, Stage 2 approvals will begin in parallel but are expected to have a longer completion time.

Stage 2 focusses on the economics of an open pit mining operation within the weathered zone, where a concentrator is the principal upgrade to the operation. A concentrator requires substantially more capital,

²¹ ASX Announcement 01 May 2023: Cummins Range Resource Soars to 519Mt 0.32% TREO, 4.6% P₂O₅





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water and power, and fundamentally increases project complexity both from an approvals and operational perspective. The installation of Stage 1, initially, is planned as a strategic de-risking step for Stage 2. The concentrator, delivering a mixed rare earth and phosphate concentrate (apatite and monazite), lifts the Project's economic metrics and provides a platform for Stage 3 where the ore feed transitions into fresh rock.

Stage 3 is anticipated to utilise a modified processing plant from Stage 2 to beneficiate the different mineral aspects of the underlying carbonatite intrusion, where monazite presents in coarse grained crystals. Mineralogy confirms this hypothesis but additional metallurgical testing is required to confirm performance outcomes. Stage 2 buys the Project significant time to optimise the Stage 3 transition.

Products, initially rock phosphate and subsequently phosphate-rare earth concentrate are proposed to be shipped from the Port of Wyndham where there is the potential for final product preparation utilising hydroelectric power already reticulated to the port.

The markets for the DSO product from Stage 1 are expected to be the direct application market for use on high-value crops where the unique properties of the DSO rock, lack of chemical treatment and its Western Australian source from the Kimberley are anticipated to contribute to a high value-in-use in the local sector, and potentially offshore.

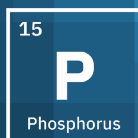
Stage 2 product is targeted at the phosphoric acid industry where the installation of a simple acid leaching step, alongside an existing acid facility, is proposed to leach a clean phosphate by a low concentrate phosphoric acid bleed²². The remaining residue, containing the rare earths, can then be cleaned for sale into a monazite refinery.

Stage 3 product is assumed to follow suit.

A portion of the phosphate fertiliser products are targeted for local use in the agricultural sector, where placement could offset energy-intensive synthetic fertilisers being imported from overseas and transported over 2,000kms from Perth, Brisbane or Geraldton, with much lower transport related greenhouse gas emissions, and significantly lower costs. An MOU with OrdCo²³ is in place to progress product development and placement options and is being actively worked through with an independent consultant. Crop trials are being planned for later in 2023.

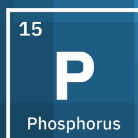
²² ASX Announcement 11 July 2023: Phosphoric Acid Leach Test Supports RareX Stage-3 Operations

²³ ASX Announcement 7 November 2022: RareX Signs MOU for Supply of Phosphate Products Locally

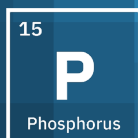


Contents

1	Introduction	10
2	Material Assumptions	16
2.1	Modifying Factors	16
2.2	Timeframe for Development and Production	16
2.3	Availability of Funding	16
2.4	Sequencing of Resource Categories	16
3	Competent Persons' Statements	16
3.1	Geology	16
3.2	Mineral Resources	16
3.3	Metallurgy	16
4	Location and Site Access	17
5	Products and Markets	18
5.1	Rock Phosphate	19
5.1.1	LFP Battery Market	20
5.2	Cummins Range DSO Rock Phosphate	22
5.3	Rare Earths	22
5.4	Cummins Range Phosphate-Rare Earth Concentrate	24
5.5	Product Pricing	25
5.5.1	Product Pricing Basis	25
5.5.2	CRDSO	26
5.5.3	CR Mincon	27
5.6	Product Market	27
5.6.1	India	27
5.6.2	Indonesia	29
5.6.3	Vietnam	29
5.6.4	Korea	30
5.6.5	Japan	31
5.6.6	China	32
6	Permits and Approvals	32

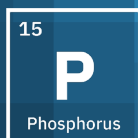


6.1	Primary Approvals.....	33
6.1.1	Environmental Approvals	33
6.1.2	Mining Lease	35
6.1.3	Road Miscellaneous License	35
6.1.4	Port Approvals	35
6.2	Secondary Approvals	38
6.3	Tertiary Approvals.....	38
7	Geology and Resource.....	38
7.1	Geology	38
7.2	Mineral Resource Estimate.....	39
7.3	Block Model	40
7.4	Rare Earth Basket Price.....	40
8	Metallurgy	43
8.1	Mineralogy	43
8.2	Ore Sorting	44
8.3	DSO Characterisation.....	44
8.4	Beneficiation	46
8.4.1	Rare Earth Beneficiation – Rare Dyke.....	46
8.4.2	Phosphate Beneficiation – Phos Dyke	47
8.4.3	Phosphate Optimised Beneficiation – Combined Dykes	47
8.5	Hydrometallurgy	48
8.5.1	Gangue Leach.....	48
8.5.2	Acid Bake and Water Leach Tests.....	49
8.5.3	Caustic Cracking and HCl Leach Tests	49
8.6	Metallurgical Models and Conclusions.....	49
8.6.1	Concentrate Recovery Prediction	49
8.6.2	Concentrate Grade Prediction	50
9	Mining.....	50
9.1	Orebody Parameters.....	50
9.2	Mining Method	51
9.3	Ore Mining and Recovery	51



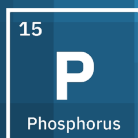
Phosphate
Enabled
Rare Earths

9.4	Mine Optimisation	52
9.5	Production Schedule	53
9.6	Mining Equipment	55
9.7	Waste Rock Disposal	55
10	Processing	55
10.1	Stage 1 DSO Crushing and Screening	56
10.1.1	Stage 1 Processing and Product Physicals	56
10.1.2	Stage 1 DSO Processing	56
10.2	Stage 2 and Phosphate Optimised Operation	57
10.2.1	Stage 2 Processing and Product Physicals	57
10.2.2	Stage 2 Beneficiation	58
10.3	Stage 3 Fresh Material Beneficiation	61
10.3.1	Stage 3 Processing and Product Physicals	61
10.3.2	Stage 3 Beneficiation	61
10.4	Radiation Management	63
11	Logistics and Port	64
11.1	Road	64
11.2	Haulage	66
11.3	Port	67
12	Financials	69
12.1	Capital Expenditure	69
12.1.1	Stage 1 – DSO	70
12.1.2	Stage 2 – Regolith Beneficiation	71
12.1.3	Stage 3 – Fresh Rock Conversion	73
12.2	Operating Expenditure	73
12.3	Economic Outcomes	74
12.3.1	Financial Metrics	74
12.3.2	Economic Modelling	75
12.3.3	Sensitivity Analysis	80
12.4	Funding	80
13	Environmental Setting	81



Phosphate
Enabled
Rare Earths

13.1	Biographic Region	81
13.2	Climate	82
13.3	Hydrology and Hydrogeology	82
13.4	Ecology	83
13.5	Areas of Conservation Significance	84
13.6	Environmental Studies	84
14	Social Setting	85
14.1	Native Title	85
14.2	Indigenous Protection Title	85
14.3	Aboriginal Heritage	85
14.4	Pastoral Land Use	86
14.5	Social Studies	86
15	Stakeholder Identification	87
16	Opportunities and Risks	87
17	Study Contributors	88
18	Timeline	89
19	References	90
19.1	Mineral Resource Comparison	90
19.2	Pricing Analysis	90
20	Summary of Modifying Factors Considered to Date	92



2 Material Assumptions

2.1 Modifying Factors

Refer to Sections 5, 7, 9, 10, 11, 12, 13, 14 and 15.

2.2 Timeframe for Development and Production

Refer to Section 18.

2.3 Availability of Funding

Refer to Section 12.4.

2.4 Sequencing of Resource Categories

Refer to Section 9.

3 Competent Persons' Statements

3.1 Geology

The information in this announcement that relates to the geological model is based on and fairly represents information compiled by Mr Guy Moulang, an experienced geologist who is an employee of RareX Limited. Mr Moulang is a Member of the Australian Institute of Geoscientists and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity to which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Moulang consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears. Prior exploration results were reported in accordance with Listing Rule 5.7 and the Company confirms there have been no material changes since the information was first reported. Mr Moulang holds securities in RareX.

3.2 Mineral Resources

The estimated mineral resources underpinning the production target presented in this announcement have been prepared by a competent person or persons in accordance with the requirements in Appendix 5A (JORC Code) as presented to the ASX release on 1 May 2023 "Cummins Range Resource soars to 519 Mt 0.32% TREO, 4.6% P₂O₅". The Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed.

3.3 Metallurgy

The information in this release that relates to metallurgical testwork is based on information compiled and / or reviewed by Mr Gavin Beer who is a Member of The Australasian Institute of Mining and Metallurgy and a Chartered Professional. Mr Beer is a consulting metallurgist with sufficient experience relevant to the activity which he is undertaking to be recognised as competent to compile and report such information. Mr Beer consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Mr Beer does not hold securities in RareX.

4 Location and Site Access

The Cummins Range Rare Earth Project is located in the Kimberley region for Western Australia south-west of the town of Halls Creek, as shown below. Access to the Project from Halls Creek is via the Great Northern Highway and then the Tanami Road to Ruby Plains station. From there, access is along station tracks. Halls Creek also has a sealed airstrip and connects to the ports of Wyndham and Darwin via the Great Northern Highway.

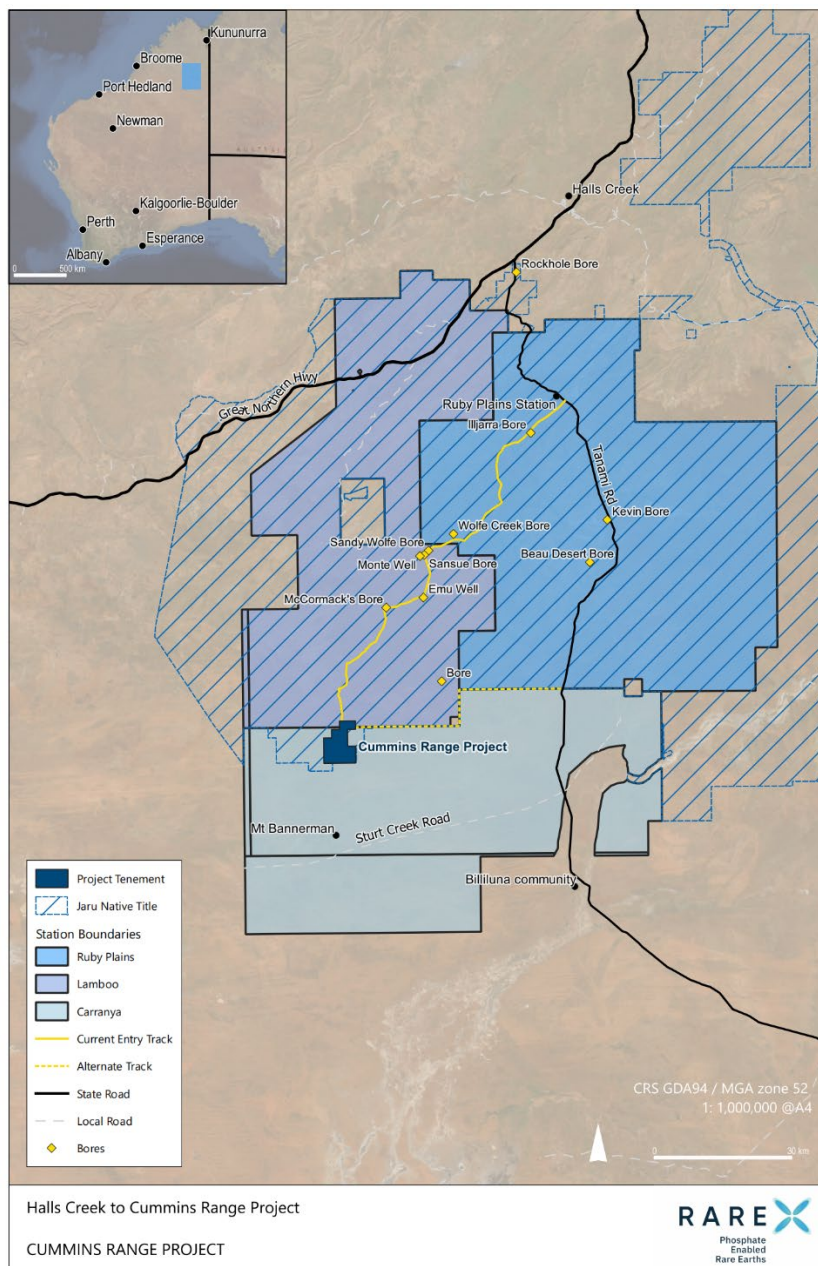


Figure 4-1: Project location map showing site access

On 12 May 2022, the Western Australian Government announced that it has decided to seal the Tanami Road. The Western Australian State Budget 2022/23 has allocated an additional A\$100 million, alongside the recently announced A\$400 million Federal allocation, to completely seal the Tanami Road in WA.

The newly sealed Tanami Road will improve safety, accessibility and flood resilience to better support communities and industries in the north-east of Western Australia. This will help RareX to assure a steady operation throughout the year in particular during the wet season. Main Roads Western Australia has commenced with works to seal the first 20km section near Halls Creek. Detailed designs and plans for a further 40km to be sealed are being progressed²⁴.

5 Products and Markets

Cummins Range provides exposure to two global megatrends through potential product containing phosphates and rare earths: food security and the clean energy revolution. Population growth and the electric revolution tie the two together, with an ever growing and more technology demanding population, and now with the emergence of lithium iron phosphate (LFP) batteries.

Rare earths and in particular, NdPr, are core enablers of decarbonisation and electrification of our society. NdPr supports high strength magnets which enables low carbon technologies, especially in the electric mobility sector, robotics solutions and renewable energy, particularly the wind energy sector.

Phosphates are one of the three macro nutrients required in plant fertilisers, alongside nitrogen and potassium. Fertilisers are in ever more demand due to population growth, depleting soils and reduced arable land requiring ever more intensive farming. Phosphate, along with the other nutrients, are irreplaceable and critical to the plant's growth. It is a constituent of plant cells, essential for cell division and development of the growing tip of the plant.

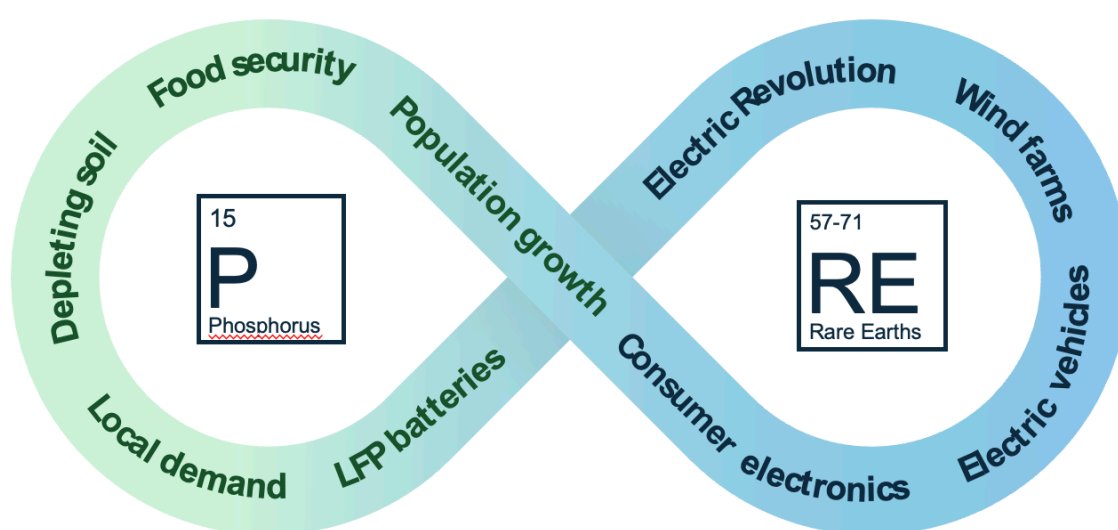
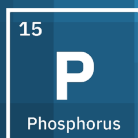


Figure 5-1: Critical drivers of Phosphorus and Rare Earth demand

²⁴ Main Roads WA – Tanami Road Upgrades; <https://www.mainroads.wa.gov.au/projects-initiatives/all-projects/regional/tanami-road-upgrade/>



This Scoping Study contemplates two fundamental products, produced in sequence from Stage 1 and Stage 2, respectively: a direct shipping ore (**DSO**) rock phosphate and a phosphate-rare earth mineral concentrate.

RareX has an MOU with OrdCo²⁵ for the advancement of product definition and potential offtake and distribution, and is being supported by independent consultants for the placement of products within Australia, New Zealand and off shore in South East Asia, India and Saudi Arabia. DSO product samples have been prepared²⁶ in support of Stage 1 marketing efforts and mineral concentrate product samples are being prepared in support of Stage 2 offtake negotiations.

5.1 Rock Phosphate

Rock phosphate is a global commodity typically sold as a feed stock for phosphoric acid production. Apatite is the usual mineral from hard rock deposits. Other deposits include sedimentary (typically with higher heavy metal contamination) and guano deposits. 100% apatite contains approximately 40% phosphate with calcium oxide making up the balance. Phosphate is phosphorus (**P**) pentoxide (**P₂O₅**). Phosphate contains 44% of elemental P which is crucial, and irreplaceable, for plant growth. Bone phosphate of lime (**BPL**) is often used as a grade measurement for rock phosphate. Moroccan grade 70% BPL is the equivalent of 32% P₂O₅ (2.1853 conversion factor), and 14% P.

Arable and livestock farmers use elemental P, applied in various forms, to support the nutritional requirements of crops and cattle. Critical is the uptake of elemental P into the biological organism. This is known as bioavailability. Bioavailability is essentially a measure of the solubility of the phosphate molecule, liberating elemental P, for uptake into the organic system.

The phosphoric acid market consumes rock phosphate through dissolution in sulphuric acid. This mobilises elemental P into phosphoric acid (**H₃PO₄**) and leaves a slurry of calcium sulphate (**gypsum**). Removing gangue minerals such as those containing silica (**Si**), iron (**Fe**) and aluminium (**Al**) (and, indeed, rare earths), prior to sulphuric acid treatment is important to the dynamics of the reaction and in minimising sulphuric acid consumption and phosphoric acid contamination. Phosphoric acid is a product in itself but also a pre-cursor to common P-based fertiliser products such as superphosphate and mono- or di-ammonium phosphate (**MAP/DAP**).

The typical benchmark for rock phosphate pricing is Morocco Free on Board (**FOB**), produced by phosphate giant, OCP. Rock phosphate has seen significant value appreciation recently although the trend is softening and likely to cool off somewhat. However, there is a belief that the Russia-Ukraine conflict has resulted in a new and sustained paradigm, augmented by the growing LFP battery market, and rock phosphate is unlikely to fall back to the lows of before, due to significant supply becoming essentially unavailable, at least to the 'west'.

²⁵ ASX Announcement 07 November 2022: RareX signs MOU for Supply of Phosphate Products Locally

²⁶ ASX announcement 07 June 2023: DSO Rock Phosphate Samples Prepared from Cummins Range

5.1.1 LFP Battery Market

Additionally, high purity phosphoric acid, which requires a high purity apatite feed stock, serves the burgeoning lithium iron phosphate battery market. In LFP car batteries, 61% of the battery is made of phosphate.

Compared to the global fertiliser markets, the LFP market is currently quite small at around 0.25 Mtpa of demand for phosphate rock. Given the cost advantages over the more common nickel manganese cobalt (**NMC**) battery chemistries used in the electric vehicle market and the projected growth of that market, phosphate rock demand for battery applications is expected to rise to 0.8 Mtpa by 2025 and 2.8 Mtpa by 2032. RareX's projected production capacities of phosphate rock concentrate fits well into this level of market growth and could be a particular target for marketing of the RareX's phosphate product.

Coupled with an assessment for vertical integration options to produce a purified phosphoric acid whilst retaining the rare earth product value in leach residues (see Section 8.5), this could be a viable pathway to capture a part of the automobile supply chain where a strong focus on sustainable supply chains exists.

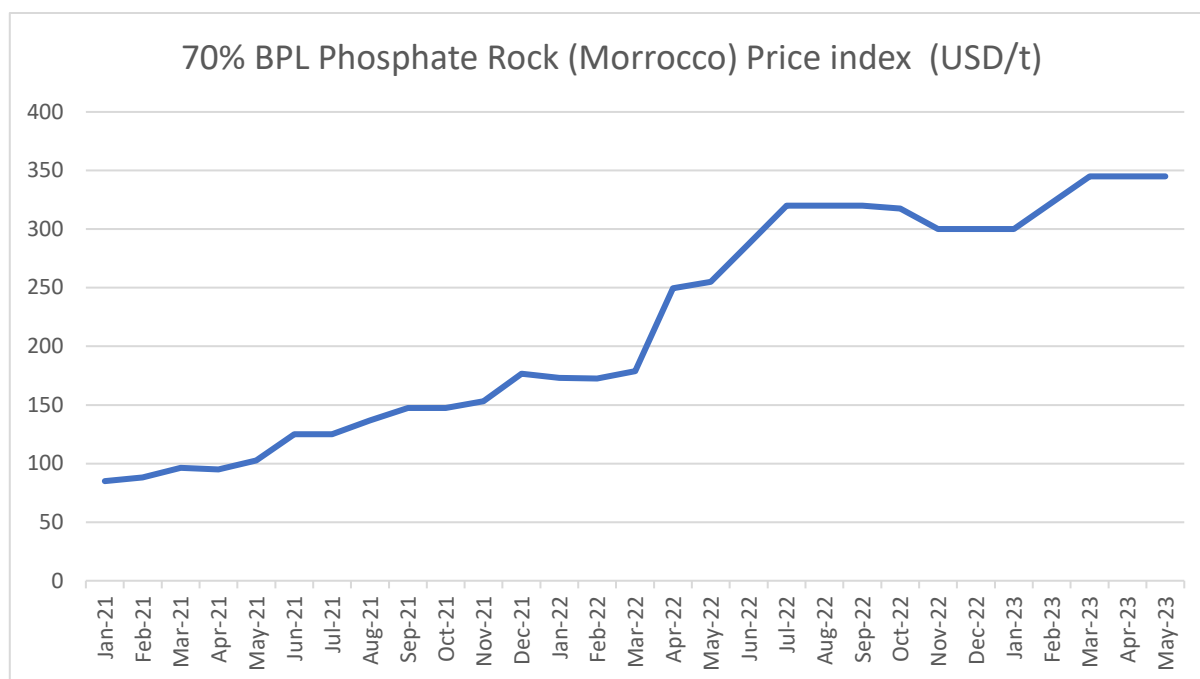


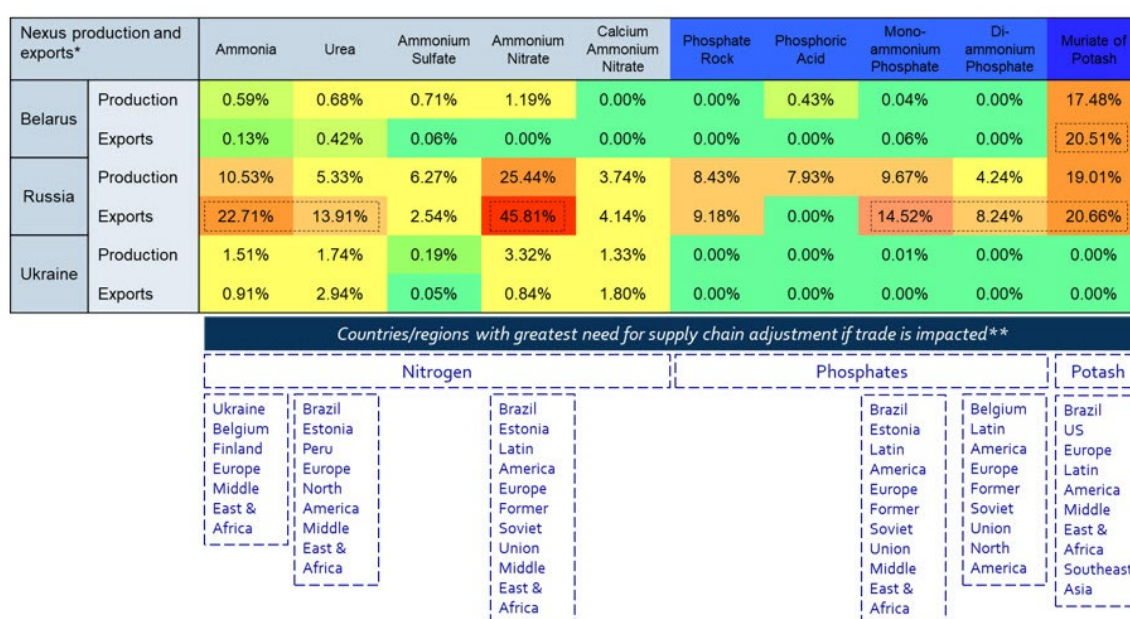
Figure 5-2: Rock phosphate price history over the last 5 years. Prior to the Ukraine war a consistent increase in phosphate rock prices can be noted²⁷

The global market for rock phosphate is 211 Mtpa growing to 260 Mtpa by the end of the decade and is expected to have a compound annual growth rate (**CAGR**) of 3.2% between 2022 and 2030, with the Asia-Pacific region holding the largest share at 45% of the global market²⁸.

²⁷ Source: www.indexmundi.com

²⁸ Global Phosphate Rock Market Size Report, 2022-2030, grandviewresearch.com

Since the beginning of the war in Ukraine, it became clear that the fertiliser markets and export sources need to be diversified. The scarcity of fertiliser is plunging countries into new crises because Russia and Ukraine can't supply as usual and China, which is the largest exporter, has decided to reduce its exports and to focus on its domestic demand. Rabobank has summarised the reliance on the exports from these markets as shown in Figure 5-3.



*Production and export data 2020

**Trade data 2021 indicative

Source: IFA, CRU, Rabobank 2022

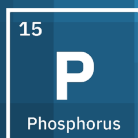
Figure 5-3: Russia, Belarus and Ukraine's share of global NPK production and exports

As of late, India has started to put focus on developing a domestic fertiliser production base and phosphate rock demand is projected to increase by 35% to 12.2 Mt in 2027, to support local phosphoric acid production and related downstream fertiliser products²⁹.

RareX believes the battle for fertiliser and, in particular, phosphates has only just begun, as gas is a major raw material for fertiliser production, and especially, for example, Europe which imports almost 40% of the latter from Russia. This is augmented with the desire for customers to have clean, transparent and reliable supply chains from aligned countries.

Therefore, in this context, RareX expects an extremely positive outlook for new supply sources of phosphates. COVID-19 and the recent geopolitical turmoil has changed the perspective on global supply chains and are encouraging onshoring and local supply chain solutions.

²⁹ Argus – Phosphate Rock Analytics – Quarterly Update (2023-06-02)



Prices for phosphate rock and fertilisers in general have remained elevated over 2023, with 70%BPL phosphate rock ex-Morocco continuously trading at above US\$300/t and up to over US\$350/t. In light of generally decreasing supply due to mine closures in the US and Israel, as well as the ongoing conflict in Ukraine, the near to medium-term outlook is positive.

5.2 Cummins Range DSO Rock Phosphate

Cummins Range DSO Rock Phosphate (**CRDSO**) product is being considered as a direct application fertiliser primarily, and secondarily as a feed material for phosphate rock derivatives which include synthetic fertilisers and the phosphoric acid industry. The phosphoric acid industry predominantly supplies the fertiliser and food industry.

The local market opportunity for direct application CRDSO is being actively investigated in conjunction with OrdCo who currently use foreign, synthetic, high nutrient content fertilisers to offset the freight disadvantage. Although a relatively small market, there is a great desire for locally sourced fertilisers and the community benefits of being able to mine and place products in a region requiring economic growth is highly favourable.

Synthetic fertilisers have nearly 100% bioavailability of its contained P. Regardless of laboratory tests, true availability in local soil conditions is only possible through field trials. Trials are being planned in glasshouse and in Kununurra on research stations with Northern Australia Crop Research Alliance (**NACRA**) and Department of Primary Industries and Regional Development (**DPIRD**). The outcomes of the field trials will be a key determinant of local placement.

The Kimberley will probably have in excess of 100,000 Ha under crop within the next few years: 21,400 Ha currently in the Ord Valley, 16,500 Ha in development, 67,500 Ha on the Keep Plains on the Northern Territory (**NT**) side of the border by AAM Investment, and potentially more to the West Kimberley. Application rates are approximately 40 kg of P per Ha per annum and usually applied over two applications.

Other significant opportunities exist in Australia for CRDSO offtake for direct application rock phosphate. Value-in-use is anticipated to be high because of bioavailability, non-chemical beneficiation process, natural rock and the associated micronutrients and the Western Australian-sourced nature of the product, coming from the Kimberley in an area which will have significant indigenous involvement.

5.3 Rare Earths

Rare earths are a group of 15 elements (17 if one counts scandium and yttrium) in the periodic table known as the lanthanide series. Rare earths are categorised into light elements (lanthanum to samarium) and heavy elements (europium to lutetium). The latter are less common and consequently more expensive.

Rare earths react with other metallic and non-metallic elements to form compounds, each of which has specific chemical behaviours. This makes them indispensable and non-replaceable in many electronic, optical, magnetic and catalytic applications.

Neodymium and praseodymium (**NdPr**) represent one of the most valuable elements among the light rare earth elements. NdPr is used in the alloys to make high-strength neodymium, iron and boron permanent magnets called NdFeB.

These magnets are the core enabler for the low carbon future, powering wind turbine electric generators and the electric motors in electric vehicles and other electric mobility applications due to their favourable high power-to-weight ratio.

More than 90% of the electric vehicle manufacturers have decided to select rare earth NdFeB permanent magnet motors as their default drive train solution independent of the OEM decision on the electric storage source - lithium battery or hydrogen fuel cell - to power the electric motor.

The global transition to lower-carbon technologies has boosted the interest in the rare earth projects, and the involved supply chain, worldwide. At the same time, prices have risen to a level where a sustainable non-Chinese rare earth supply chain development can be realised. This is also underpinned by the fact that the US, Canadian and Australian governments have increased their efforts and their support for the rare earth sector.

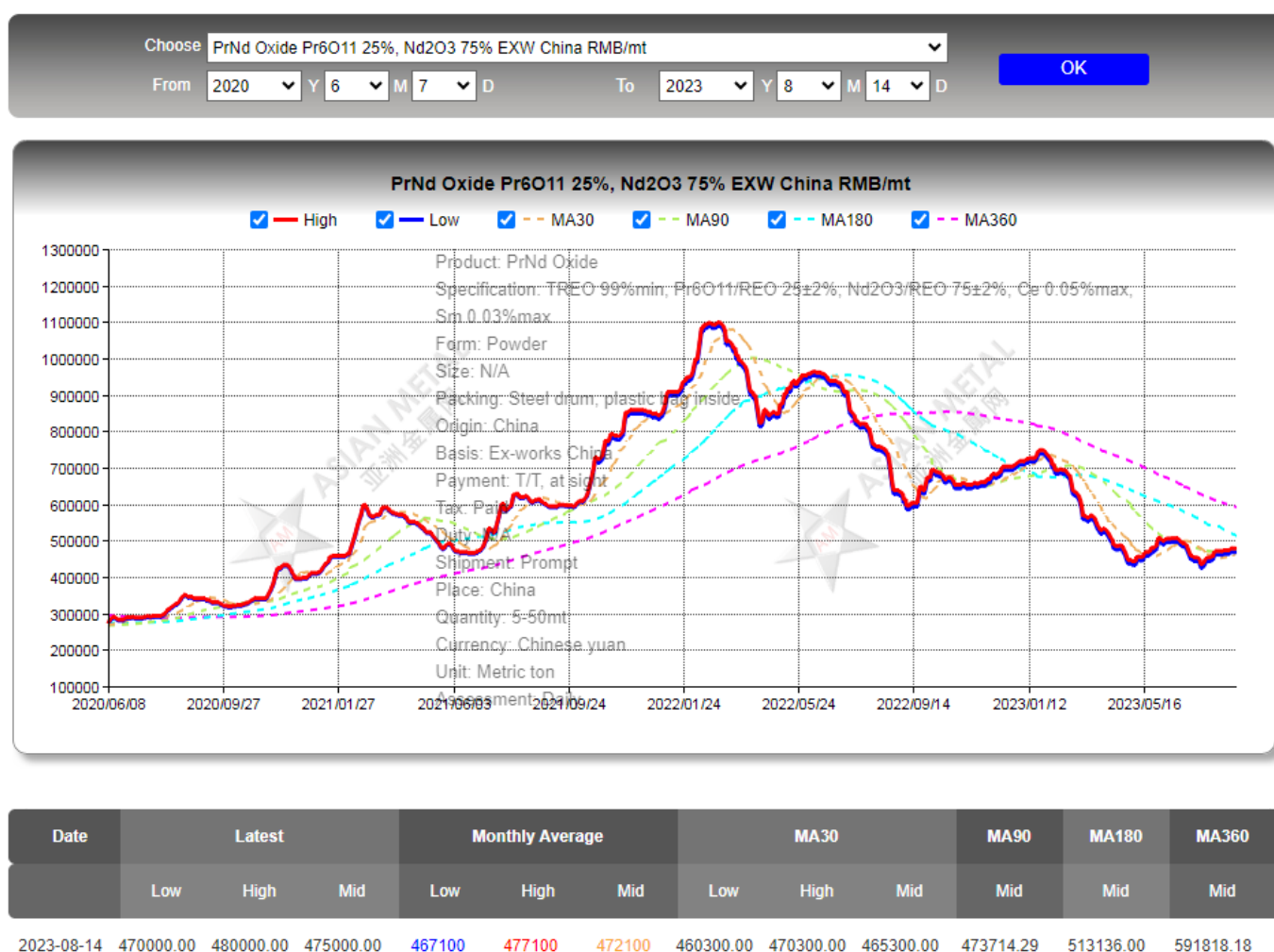
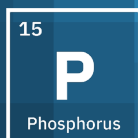


Figure 5-4: NdPr pricing trend³⁰

³⁰ China EXW (RMB/mt), Source Asian Metal, 14 August 2023



Phosphate
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Rare Earths

In the near-term, pricing trends have been downwards due to a globally more pessimistic economic outlook as well as substantial inventory reduction by Chinese producers³¹. Long term, RareX does not see this as sustainable.

Due to the changing dynamics in the market, RareX is positive that we will see a growing interest outside of China for a mixed rare earth carbonate (**MREC**) product. Already, several billions of US dollars have been committed by the likes of Lynas, Iluka and the Australian government as well as by MP Materials and Lynas in North America aiming to expand the rare-earth solvent extraction refinery footprint in the western world.

Current global production of rare earth oxides is 300,000t (2022)³² and is dominated by Chinese downstream processing and limited to only a few western mines.

Adamas Intelligence forecasts that due to demand from the electric vehicle and wind power sectors the value of NdPr oxide consumed will increase eleven-fold by 2035. Prices are forecast to rise from current levels of US\$67,000 per tonne to US\$100,000 per tonne by 2025, increasing steadily to over US\$200,000 per tonne by 2035.

It is commonly stated that 15 times the production of Lynas (output in FY2023: 6,142 t NdPr oxide³³) is required by 2040 to meet EV demand for NdPr magnets; and EV manufacturers have invested over US\$ 1 trillion into the electric vehicle supply chains.

5.4 Cummins Range Phosphate-Rare Earth Concentrate

The Cummins Range apatite-monazite mineral concentrate (**CR Mincon**) is produced via the beneficiation plant of Stage 2. CR Mincon contains high grade phosphate and appreciable grade rare earths.

CR Mincon product is intended for the phosphoric acid market exclusively where the high-grade phosphate content (~35% P₂O₅), low deleterious elements, as a result of the 'clean' source rock, and low uranium-thorium content is highly regarded. The product placement strategy is focussed on phosphoric acid producers where rare earth credits can be realised. This offtake strategy has been launched and is a primary focus of the next project phase.

Rare earth credits are anticipated to be achievable by the pre-extraction leaching of rare earth bearing monazite from the apatite phosphoric acid plant feed. Rare earths will present as a residue from the pre-treatment leaching step which is also demonstrated to remove iron, silica and alumina from the apatite, acid plant, feed³⁴. This residue material is anticipated to be suitable as subsequent feed for any monazite processing facility, from which the credits will be derived.

³¹[https://www.marketindex.com.au/news/rare-earth-prices-are-we-at-rock-bottom#:~:text=Neodymium%20and%20praseodymium%20\(NdPr\)%20prices,2022%20and%20a%20weak%20outlook](https://www.marketindex.com.au/news/rare-earth-prices-are-we-at-rock-bottom#:~:text=Neodymium%20and%20praseodymium%20(NdPr)%20prices,2022%20and%20a%20weak%20outlook)

³² Mine production of rare earth elements worldwide from 2010 to 2022, <https://www.statista.com>

³³ Lynas – Quarterly Report Q4FY23, <https://wcsecure.weblink.com.au/pdf/LYC/02691935.pdf>

³⁴ ASX Announcement 11 July 2023: Phosphoric Acid Leach Test Supports RareX Stage-3 Operations

5.5 Product Pricing

5.5.1 Product Pricing Basis

Pricing analysis of phosphate rock and NdPr oxide were undertaken to assist on developing the pricing mechanism for the DSO and concentrate products.

Figure 5-5 shows the comparison of phosphate rock price adopted by peers and market research providers (e.g., Index Mundi, Argus and CRU) current and forecasted prices. As indicated, the phosphate rock prices range between A\$120/t to A\$514/t, and the unit price per percent P₂O₅, calculated based on the product price and P₂O₅ grade, is ranging between A\$7.9/t to A\$15.1/t. Taking into account the broad price ranges, RareX has adapted three pricing inputs in this Study to investigate the economic performance of the Cummins Range products which are summarised in the table below:

Table 5-1: RareX phosphate pricing basis

Product Type	Low-Case (A\$/% P ₂ O ₅)	Mid-Case (A\$/% P ₂ O ₅)	High-Case (A\$/% P ₂ O ₅)
RareX 23% DSO	8.8	10.9	13.1
RareX Con ~35%	7.9	9.8	11.8

Notes:

- The high bioavailability potential of RareX 23% DSO over industry high standard was not valued in the form of a bonus at this point, but it also was not discounted. Further technical trials and engagement with customers will explore pricing mechanisms that could leverage this product advantage.
- A 10% discount has been applied when calculating the phosphate concentrate price to account for market incentivisation for entering the phosphoric acid market.



Figure 5-5: Phosphate pricing analysis³⁵

³⁵ Refer to Section 19 for detail references of the graph

The NdPr oxide pricing comparison of RareX price assumptions to selected peers and market research providers is shown in Figure 5-6 which showed NdPr oxide price ranging between US\$67/kg to US\$232. For the purpose of economic modelling, RareX has adapted two price bases:

1. NdPr oxide price of US\$110/kg as per 2023 MRE modelled price³⁶.
2. NdPr oxide price of US\$67/kg as per Asian Metal current price³⁷, which is also aligning to the Adamas June 2023 price.

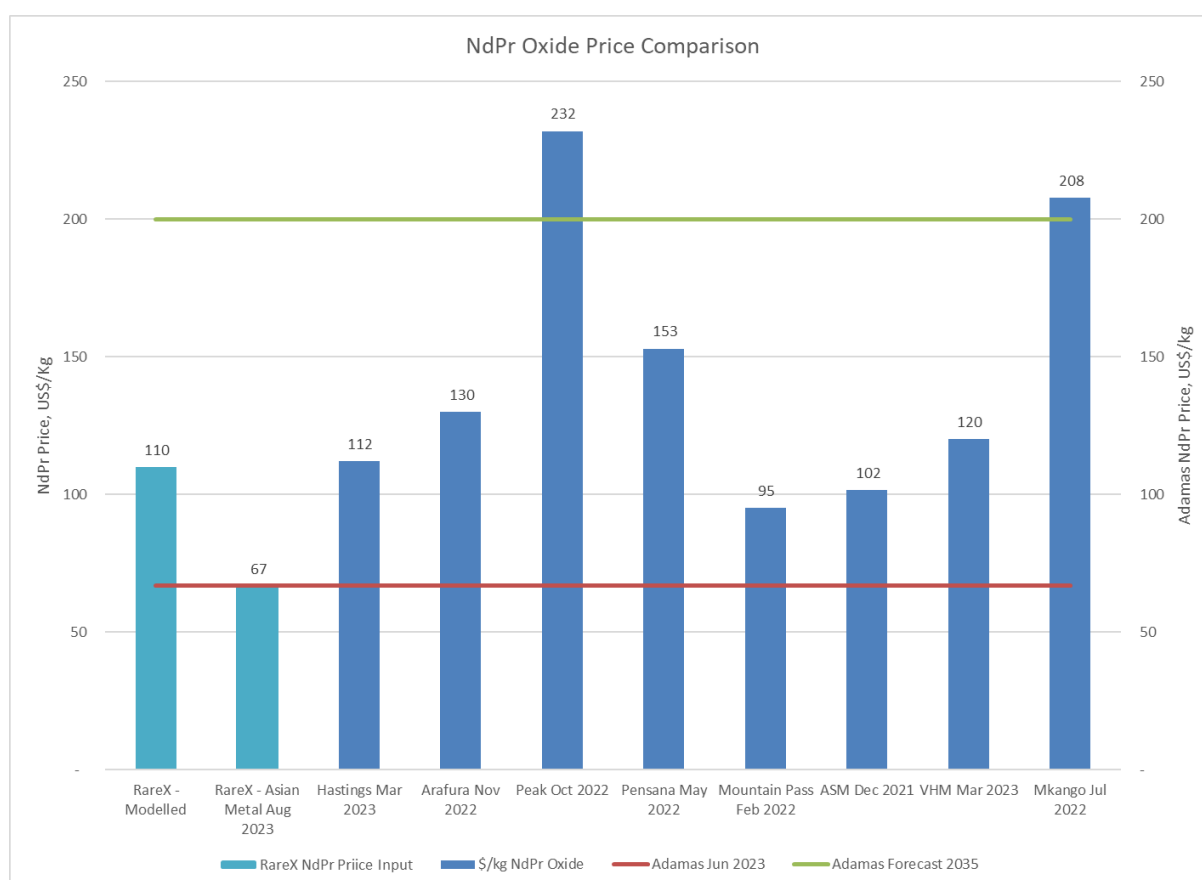


Figure 5-6: NdPr pricing analysis³⁸

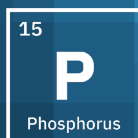
5.5.2 CRDSO

Pricing formula have been developed for CRDSO products, guided by market index points with appropriate adjustments. The pricing mechanisms underpinning pricing assumptions remain commercially sensitive however the outcomes are derivatives of a pricing point with adjustments for grade, transport, bioavailability, deleterious elements and, depending on the product of the pricing point used, the presence or lack of other nutrients.

³⁶ ASX Announcement 1 May 2023: Cummins Range Resource Soars to 519Mt 0.32% TREO, 4.6% P₂O₅

³⁷ China FOB (US\$/kg), Source Asian Metal, 14 August 2023

³⁸ Refer to Section 19 for detail references of the graph



Phosphate
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Rare Earths

The current rock phosphate grade derived from the mining schedule is considered a grade floor (23% P₂O₅). This is due to the relatively low resource block model resolution where statistical derivation of the resource blocks, driven by wide drill spacing, introduces excessive dilution. The impact of this is lower than anticipated grades. Current drilling on site is anticipated to improve the rock phosphate grade profile in future mining schedules by improving definition of the high-grade boundaries.

Table 5-2: CRDSO product price

Product	Low-Case (FOB)	Mid-Case (FOB)	High-Case (FOB)
CRDSO (A\$/t)	203	254	304

Notes:

- FOB refers to free-on-board at Wyndham Port. i.e. delivered over a ships rail onto an ocean-going vessel (OGV), nominally a 62,000 DWT.
- USD to AUD FX of 1.4 has been used.

5.5.3 CR Mincon

Pricing mechanisms, also confidential, calculate phosphate related pricing in the same manner as those derived from CRDSO but with a 10% discount to account for market incentivisation. Rare earth credits are calculated as an 80% discount to the following Cummins Range product basket prices:

1. US\$34.2/kg, derived from the MRE modelled price, as presented in the 2023 MRE³⁹.
2. US\$20.2/kg, derived from the Asian Metal current RE prices⁴⁰.

The discount is a relatively well used factor in industry to recognise the products position in the value chain (i.e. the less downstream processing required, the lower the discount).

Table 5-3: CR Mincon product price

Product	Low-Case	Mid-Case	High-Case	Mid-Case_RE Spot Price
Stage 2a - CR Mincon (A\$/t FOB)	515	584	652	485
Stage 2b - CR Mincon (A\$/t FOB)	480	545	611	456
Stage 3 - CR Mincon (A\$/t FOB)	404	468	532	407

Note:

- FOB refers to free-on-board at Wyndham Port. i.e. delivered over a ships rail onto an ocean-going vessel (OGV), nominally a 62,000 DWT.
- Note: USD to AUD foreign exchange (FX) of 1.4 has been used.

5.6 Product Market

Preliminary market segmentation has identified the following markets for Stage 2 products.

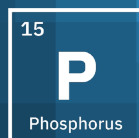
5.6.1 India

Australia's economic engagement with India is underpinned by the India Economic Strategy (IES), which was authored by Mr Peter Varghese, former Secretary of the Department of Foreign Affairs and Trade (2012-2016) and High Commissioner to India (2009-2012). The IES was presented as an independent report to the Australian Government in July 2018. In November 2018, the Australian Government released its response to

³⁹ ASX Announcement 1 May 2023: Cummins Range Resource soars to 519Mt 0.32% TREO, 4.6% P₂O₅

⁴⁰ China FOB (US\$/kg), Source Asian Metal, 14 August 2023





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the IES setting out an initial implementation plan⁴¹. Focus of the plan is on education of business practices and expectations as well as the promotion of bi-lateral investment and statistical data flows.

Phosphates:

India is a net importer of phosphate fertilisers at 9 Mt tonnes across the various products. Whilst domestic production ranges from 300,000 t/month to around 500,000 t/month during peak demand periods, the country remains heavily dependent on imports to support its agricultural sector. India heavily subsidises fertiliser imports but also has plans and incentives to onshore further production capacities around phosphoric acid and MAP/DAP, NPK fertilisers.

The Indian phosphoric acid market – a precursor to domestic fertiliser production - is set to grow 53% by 2027 reflecting an increase from 6.4 Mt to 9.8 Mt in phosphate rock demand. Several new MAP/DAP, NPK and phosphoric acid plants are planned to come online throughout 2023, with Greenstar's Tuticorin site already having been commissioned, lifting demand by 1,900 tpd of phosphate rock.

There is a general direction within India to move towards greater independence from fertiliser imports which underpins the various capacity projects related to phosphoric acid and fertiliser production.

Whilst this includes exploitation of local lower grade deposits to meet some of the phosphate rock demand, it also includes the development of joint ventures through the Department of Fertilisers in India. The overarching government action plan is referred to as 'Aatmanirbhar Bharat' and aims to accelerate India's steps in becoming self-reliant with regards to phosphatic fertilisers in years to come⁴².

Rare Earths:

Potentially able to leverage off the expanding phosphoric acid industry, India could be an excellent market for CR Mincon to be shipped. With a gangue leach step a rare earth residue could be recovered and be on-sold to the state-owned IREL (India) Ltd. Company, the sole rare earth producer vertically integrated between mining and processing. IREL's refineries are operating at 40% capacity due to lack of ore supply, which is why IREL is looking to expand mining capacity by 400%. Toyotsu Rare Earths India Pvt., a unit of Japan's Toyota Tsusho Corp., is the only private refiner, and takes concentrate supplied by IREL. Local production is challenged by the quality of available ore in India as China's ore grades are significantly higher than domestic ones⁴³.

Installed capacity for mineral processing by IREL is about 10,000t, whilst domestic monazite production is only 4,000t. Non-grant of mining licenses, environmental clearances and other restrictions seem to curtail domestic sourced utilisation of the installed plant capacity further⁴⁴.

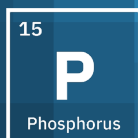
⁴¹ www.dfat.gov.au/sites/default/files/government-response-to-an-india-economic-strategy-to-2035.pdf

⁴² www.ibef.org/blogs/India-To-Become-Aatmanirbhar-In-Phosphatic-Fertilisers

⁴³ www.mining.com/web/India's-rare-earths-miner-eyes-400-expansion-for-clean-energy/

⁴⁴ <https://pib.gov.in/PressReleasePage.aspx?PRID=1883492>





5.6.2 Indonesia

Indonesia's phosphate import is set to reach around US\$255 million by 2026, up 2.3% each year on average. This follows a 2.9% year-on-year increase since 1994.

Since 1994, Indonesian supply has dropped by almost 50% on an annual basis and the country is expected to become the world's second-largest importer of phosphate by 2026⁴⁵.

The key organisations in the Indonesia fertiliser market are PT Pupuk Indonesia, PT Pupuk Kaltim, PT Petrokimia Gresik and PT Pusri Palembang. These companies are investing in new production capacity to meet the growing demand for fertilisers in Indonesia.

PT Pupuk Kaltim - an Indonesian state-owned enterprise - has been named as a potential front runner for the purchase of Incitec Pivot's Australian fertiliser business as reported by the AFR⁴⁶, clearly showcasing the interest to take control of fertiliser supply chains to secure food resources for the Indonesian people.

The Indonesian government is looking to increase agricultural production as to increase the share of self-sufficiency and current production facilities of fertilisers are slated to be upgraded as current plants are more than 20 years old and comparatively inefficient⁴⁷.

5.6.3 Vietnam

On 15 March 2018, Australia and Vietnam signed a Joint Statement on the Establishment of a Strategic Partnership between Australia and Vietnam in Canberra. In August 2019, Australia and Vietnam agreed that the Plan of Action for the Strategic Partnership for the period of 2020-2023 would focus on three priority areas:

- enhancing economic engagement
- deepening strategic, defence and security cooperation
- building knowledge and innovation partnerships

Average economic growth between 2011-2020 was 6.2% per year and ranked 19 globally as a destination for foreign direct investment (FDI) in 2020, jumping five places from 2019 according to the United Nations Conference on Trade and Development. Australian investment is concentrated mainly in manufacturing and processing industries; food services; agriculture, forestry and fisheries. Prominent Australian investors in Vietnam include Austal, Blackstone Minerals, BlueScope Steel, CBH Group, LOGOS, Linfox, Mavin Group, RMIT University and SunRice⁴⁸.

Rare Earths:

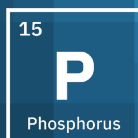
Whilst Vietnam has substantial resources of rare earths, active mining is currently limited to small operations such as Lau Chau Rare Earth JSC. In collaboration with Japan, Vietnam is seeking to develop modern

⁴⁵ <https://www.reportlinker.com/clp/country/87626/726404#block-data-catalogue> (Indonesia Rock Phosphate Industry Outlook 2022 – 2026)

⁴⁶ <https://www.afr.com/companies/agriculture/incitec-pivot-picks-indonesian-soe-for-fertiliser-sale-talks-20230802-p5dt77>

⁴⁷ <https://indonesien.ahk.de/en/infocenter/translate-to-english-demand-for-fertilizers-and-factories-is-increasing>

⁴⁸ <https://www.dfat.gov.au/australia-vietnam/eees/en/strategy/overview.html>



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processing technologies that can aid the development of a local mining and processing industry for rare earth metals⁴⁹.

In 2022, Vietnam Rare Earth Joint Stock Company signed an agreement on rare earth export with ASM & KSM Metal Co. Ltd and the government of Chungcheongbuk-do province in South Korea. This will see the two companies work together to develop mining operations in Yen Bai province. It is estimated that the site contains 30,000t of rare earth reserves⁵⁰.

Production increased in 2022 to a still relatively small 4,300tpa from 400t in 2021. In December 2022, Vietnam's Ministry of Industry and Trade signed an agreement with South Korea's Ministry of Trade, Industry and Energy to increase cooperation on rare earths and other core minerals, and help strengthen the global rare earths supply chain. Canada's Saskatchewan province has also been in talks with the country, sending a trade mission in December 2022 to look for opportunities to collaborate on "green energy, sustainable mining, and rare earths"⁵¹.

Phosphate Rock:

Vietnam is one of the major producers and exporters of phosphoric acid in the world. According to the Observatory of Economic Complexity, Vietnam exported US\$127 million worth of phosphoric acid in 2021, making it the 10th largest exporter of this product globally. The main destinations of Vietnam's phosphoric acid exports were India, Indonesia, Malaysia, Bangladesh and South Korea.

Vinachem is planning an expansion of existing capacity by 190,000t of phosphate rock demand⁵².

5.6.4 Korea

In 2021-22, the Republic of Korea (**ROK**) was Australia's fourth-largest trading partner (valued at A\$68.7 billion) – representing 6.5 per cent of Australia's total trade – and Australia's third-largest export market (valued at A\$48.8 billion). The trade relationship is complementary, with Australia's major exports including iron ore, coal, natural gas and beef, and our major imports from the ROK including refined petroleum and cars.

The Korea-Australia Free Trade Agreement (**KAFTA**) entered into force on 12 December 2014. KAFTA is one of Australia's most comprehensive trade agreements, delivering significant improvements in market access and tariff liberalisation for merchandise trade. Under KAFTA, Australian services providers receive advantageous treatment from the ROK.

Business links are supported by the Korea-Australia Business Council and the Australia-Korea Business Council. Their annual joint meeting allows members to exchange views and expand private sector links between the countries⁵³.

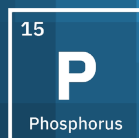
⁴⁹ <https://monre.gov.vn/English/Pages/Rare-earth-industry-developed-in-Vietnam.aspx>

⁵⁰ <https://www.vietnam-briefing.com/news/rare-earth-mining-vietnam.html>

⁵¹ <https://vinachem.com.vn/content/market-and-product-vnc/rare-earths-reserves-top-8-countries.html>

⁵² Argus – Quarterly Phosphate Outlook

⁵³ <https://www.dfat.gov.au/geo/republic-of-korea/republic-of-korea-country-brief#trade-investment>



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Major ROK investments in Australia are primarily concentrated in the resources sector, though there has been a recent trend towards diversification into other areas. Australian total investment in the ROK was A\$27.1 billion in 2021, making it the 16th-largest destination for Australia's investment abroad. KAFTA protects investment commitments and enhances investment in both directions.

Phosphates:

In 2021, South Korea imported US\$125M in phosphoric acid and polyphosphoric acids, becoming the 13th largest importer of phosphoric acid and polyphosphoric acids in the world⁵⁴. Domestic production appears to be centred around OCI and its Gunsan plant with a capacity of 30,000tpa of phosphoric acid production. Imports are primarily sourced from China which provides US\$104M⁵⁵ of the phosphoric acid import market.

Rare Earths:

ASM has developed an MOU with two regional governments in South Korea to develop rare earth processing capacity⁵⁶ and Setopia – a South Korean company – recently expanded through acquisition into the rare earth segment with intent to secure local supply of rare earths and rare earth oxides globally.

5.6.5 Japan

Australia and Japan have a long held economic relationship of significance since the 1970s. The two countries maintain ongoing collaboration at ministerial level through a regular dialogue that allows for high-level engagement on strategic economic and trade cooperation to complement high-level defence and security cooperation and annual leaders' meetings. The dialogue supports the strong and growing trade and investment relationship between Australia and Japan in new areas such as energy, including hydrogen and critical minerals.

Following the June 2019 signing of a Memorandum of Cooperation on Energy and Minerals, Australia and Japan signed a Joint Statement on Cooperation on Hydrogen and Fuel Cells in January 2020 and a Partnership on Decarbonisation Through Technology in June 2021. During the Leaders' Meeting in October 2022, Minister King and Vice Minister Hirai signed a new Critical Minerals Partnership. During the Leaders' Meeting in October 2022, Minister King and Vice Minister Hirai signed and a new Critical Minerals Partnership to establish a framework for building secure critical minerals supply chains between Australia and Japan and to promote opportunities for information sharing and collaboration in October 2022. The Japan-Australia Economic Partnership Agreement (**JAPEA**), which entered into force on 15 January 2015, gives Australian exporters significantly improved market access in goods and services and substantially improves investment protections. Australia and Japan are members of the CPTPP, RCEP and the Indo-Pacific Economic Framework (**IPEF**)⁵⁷.

Japan is the largest consumer of rare earths outside of China as the world's second largest producer of permanent magnets. Overall, Japan still relies on China for two thirds of its rare earth demand, but has

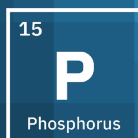
⁵⁴ <https://oec.world/en/profile/bilateral-product/phosphoric-acid-and-polyphosphoric-acids/reporter/kor>

⁵⁵ <https://www.oci.co.kr/eng/sub/business/chemical.asp>

⁵⁶ <https://www.scmp.com/economy/global-economy/article/3124883/australian-rare-earth-firm-signs-south-korea-deal-west>

⁵⁷ <https://www.dfat.gov.au/geo/Japan/Japan-country-brief#trade>





Phosphate
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started to diversify over the last decade with investments in Vietnam for mining of raw materials as well as investments in Australia's Lynas Corporation⁵⁸.

The phosphoric acid market is relatively small and Japan is fully dependent on imports of phosphate sources as it does not have resources of its own. In 2019 Japan imported 42,000t of phosphoric acid⁵⁹.

5.6.6 China

China has generally been able to meet its internal demand for phosphate rock at production levels around 80 Mtpa. With the introduction of environmental restrictions and the rise of LFP battery production in the wake of electrical vehicle adoption and incentives around the world, comparatively small volumes of phosphate rock had to be imported as domestic prices exceeded import options in certain regions.

In 2023 it is expected that up to 0.8 Mtpa of phosphate rock will be imported and these imports are generally driven by phosphate producers who do not have direct access to domestic rock suppliers. Supply comes from Egypt and Syria and is understood to be of a lower grade (around 26% P_2O_5), which is then blended with higher grade local supply. At nominal import rates of US\$110/t, the option to ship phosphate rock into China is not immediately attractive, compared to other potential markets closer by.

6 Permits and Approvals

Permitting and approval for mining is advancing commensurate to the development stage with the aim to secure approvals for Stage 1 in advance of Stage 2. The immediate focus for permitting and approvals are the following components:

1. Initiate primary approvals which consist of:
 - a. environmental approvals consisting of:
 - i. Self-referral of the project to state and federal level environmental agencies;
 - ii. Part IV assessments under Environmental Protection (EP) and Environment Protection and Biodiversity Conservation (EPBC) acts; and
 - iii. Part V environmental license under EP act for both mining and port related activities.
 - b. mining lease.
 - c. road development:
 - i. Ongoing engagement with station owners;
 - ii. Application for miscellaneous license; and
 - iii. Finalise environmental and heritage surveys.
 - d. port approvals:
 - i. With particular focus on material handling differences compared to Iron Ore;
 - ii. Related dust generation; and
 - iii. Spillage related risks (e.g. eutrophication).
2. Secondary and tertiary approvals will be worked on in parallel once primary approvals are underway and include such aspects as:

⁵⁸ Japan aims to diversify rare earth supply (argusmedia.com)

⁵⁹ <https://wits.worldbank.org/trade/comtrade/en/country/ALL/year/2019/tradeflow/Imports/partner/WLD/product/280920>



- groundwater abstraction licenses;
- dangerous goods licenses; and
- building and electrical approvals etc.

More detailed descriptions of individual approval aspects are discussed in the following sections of this report.

6.1 Primary Approvals

6.1.1 Environmental Approvals

Approvals for the Project are planned to be sought in a staged manner that matches the proposed staged development.

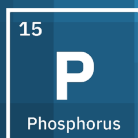
Likely approvals required for each of the three proposed stages are shown in Table 6-1.

Table 6-1: Overview of primary approvals elements needed to progress the Project towards operation.

Approval Type	Stage 1	Stage 2	Stage 3
EPA referral (State)	Yes	Yes	TBD
EPBC Act referral (Federal)	TBD	Yes	TBD
Mining Proposal	Yes	Yes - amendment	Yes - amendment
Mine Closure Plan	Yes	Yes	Yes
Native Vegetation Clearing Permit	Yes	If not assessed under Part IV of EP Act	Yes
Groundwater Licence	TBD	Yes	No
Works Approval	Yes <ul style="list-style-type: none"> Crush & screen >50,000 tpa WWTP Landfill 	Yes <ul style="list-style-type: none"> Processing of metallic and non-metallic ores >50,000 tpa WWTP Landfill 	Yes <ul style="list-style-type: none"> Processing of metallic and non-metallic ores >50,000 tpa Port (export of bulk products)

Results of the 2023 wet season fauna baseline assessment will be critical in determining whether approvals for the Stage 1 Project can be fast tracked. Results from the 2022 dry season survey indicated the presence of four conservation significant fauna species (greater bilby, grey falcon, mulgara and tropical short-tailed mouse). Targeted surveys for these species were conducted as part of the wet season assessment in May 2023. Results of the survey will provide greater knowledge regarding presence, abundance and distribution of conservation significant species within the Project area. If the Project layout can be designed to avoid or minimise impacts on these species such that significant environmental impacts do not result, formal assessment of the Project under Part IV of the West Australian EP Act (EPA) and the Commonwealth EPBC Act may not be required. Approvals would then be via the Mining Act (Mining Proposal and Mine Closure Plan) and a Native Vegetation Clearing Permit.

If formal assessment of the Stage 1 Project is not required, the time frame for assessment of the required Mining Act and Native Vegetation Clearing Permit applications is much shorter (circa 4-6 months) than if formal assessment by State and Federal agencies is required (12-18 months).



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Timing for Stages 2 and 3 of the Project will be dependent on whether formal assessment by State and Commonwealth regulatory authorities are required.

An application for a mine proposal under WA's Mining Act goes hand in hand with the environmental approvals of a mining project. The relevant regulatory authorities have MOUs in place to govern their collaboration on assessment of any given project and final approval depends on all regulatory bodies to provide their respective approvals.

Depending on the environmental surrounds and factors of the project, approvals can involve the EPA at state level in addition to Water and Environmental Regulation (**DWER**) as well as the federal Department of Climate Change, Energy, the Environment and Water (**DCCEEW**). Table 6-2 provides an overview of the key dimensions that need to be described by RareX on the basis/results of ongoing baseline studies. This project description against the environmental factors is the basis for productive engagement with the regulatory bodies and aims to develop appropriate environmental management plans that minimise environmental impacts.

Whilst assessment by the EPA and DCCEEW is not always required, it is generally the best strategy to refer the project to these agencies upfront, for an initial assessment of the project and its potential to impact the environment. If complexity and risk to environmental receptors is perceived as low by EPA or DCCEEW, assessment can proceed at state level with DWER and is generally less complex and costly compared to detailed assessments by EPA and DCCEEW.

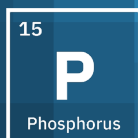
RareX will prepare for a referral under State and Commonwealth EP and EPBC Acts respectively at the completion of the PFS following early engagements with key state and federal stakeholders. RareX will consider early identification/self-selection of the Public Environmental Review (**PER**) process through the EPA Referral which maximises transparency via required public display of Environmental Review Document (**ERD**) and associated documents. Concurrent development and submission of secondary approval assessment applications (e.g. mining proposal, works approval, groundwater licence) will be undertaken.

In preparation for the referral, key baseline studies have been initiated and will continue through 2023 and early 2024. Final results of the flora and fauna surveys, a critical component to the state and federal level referrals, are expected in Q4CY23 and form a critical part for the project description required for engagement with the regulator. This project description will be complemented with:

- a high-level heritage survey coordinated with the Jaru Prescribed Body Corporate (**PBC**) and its representatives, later to be complemented by a detailed archaeological and ethnographic survey through Kimberley Regional Economic Development (**KRED**);
- initial groundwater chemistry baseline datasets;
- initial soil/waste rock chemistry datasets; and
- first stage subterranean fauna assessment.

With initial staging of a DSO project and therefore a more limited impact compared to stage 2, it is envisaged to keep referrals and approvals at state level and progress initial applications ideally before the end of CY23.





As some of the baseline studies as well as the referral outcomes may identify knowledge gaps in light of observations made, submissions for environmental licenses, mining proposals and construction will likely occur in H2CY24.

6.1.2 Mining Lease

The mining lease has been applied for and is currently subject to finalisation of the heritage mining agreement with the Jaru PBC. The negotiations are in their final stages with draft agreements under review.

Once negotiations conclude, sign-off can occur between the regulatory departments, the Jaru and the Company, which is the last step for the mining lease to go live.

To RareX's knowledge no other outstanding items need to be satisfied to secure the mining lease.

6.1.3 Road Miscellaneous License

RareX intends apply for a miscellaneous license to cover the development of a site access road that can be used for haulage. This transport corridor will connect the project site directly with the Tanami Road. It is envisaged to initially develop a single lane haulage road to support the project at start-up, works will be conducted under relevant Department of Mines, Industry Regulation and Safety (**DMIRS**), DWER and Shire approvals, as part of an early works programme strategy to be confirmed with the regulator after initial engagements for the primary approval strategies.

6.1.4 Port Approvals

In collaboration with Kimberley Metals Group (**KMG**) and Cambridge Gulf Limited (**CGL**), the Port of Wyndham operators, amendments to existing environmental licenses will be made at the same time as submission of the mining proposal and environmental license is currently planned.

RareX phosphate rock product at Stage 1 is similar to the iron ore bulk commodity that KMG is approved for at port and the proposed RareX product volume of less than 1 Mtpa throughput is within the limits of the currently held environmental licenses and available equipment capacities. Some testing of the phosphate rock product with regards to dust emissions or modelling of impacts from spillage are likely required to support the amendment.

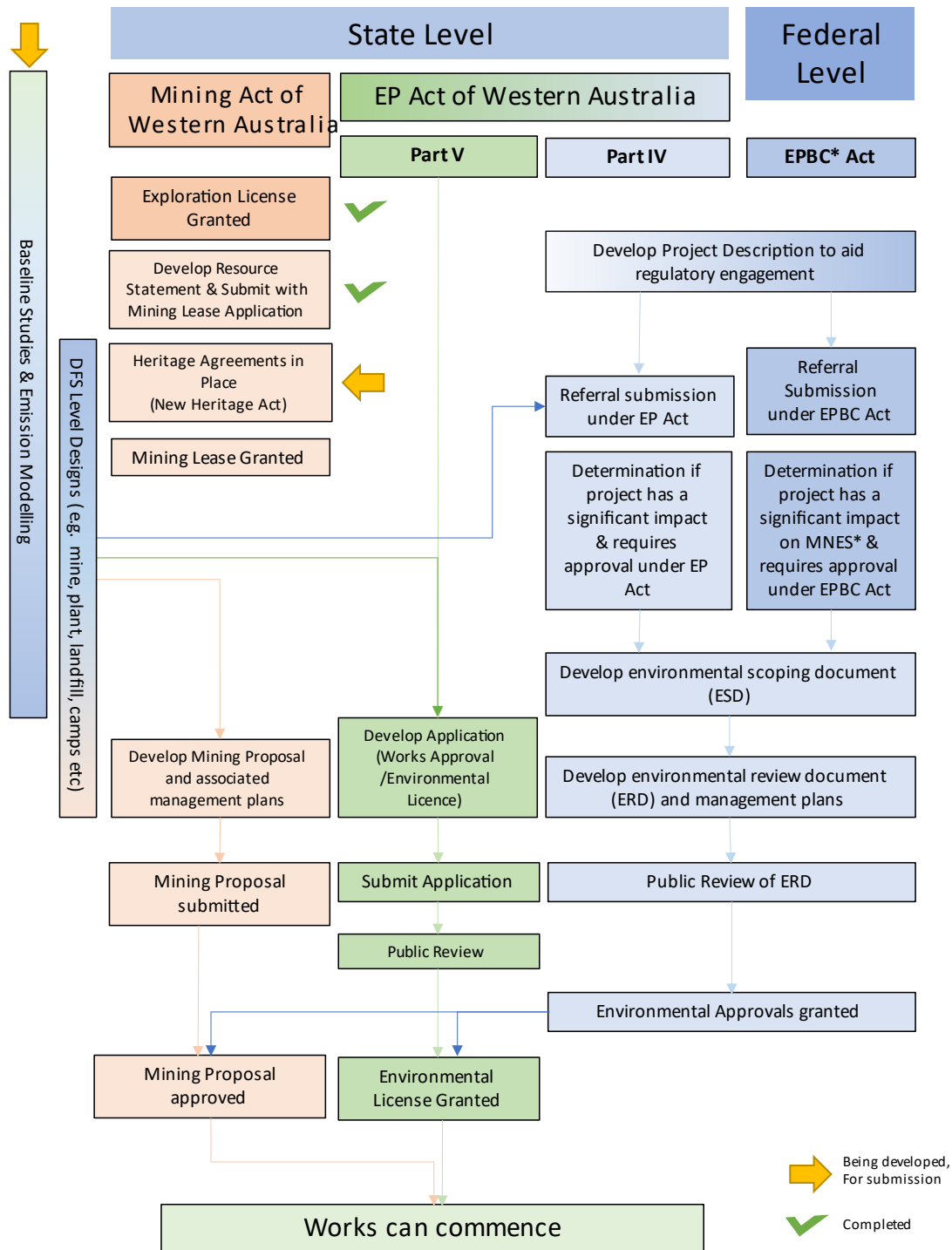
Table 6-2: EPA environmental factors and objectives⁶⁰

Theme	Factor	Objective
Sea	Benthic communities and habitats	To protect benthic communities and habitats so that biological diversity and ecological integrity are maintained.
	Coastal processes	To maintain the geophysical processes that shape coastal morphology so that the environmental values of the coast are protected.
	Marine environmental quality	To maintain the quality of water, sediment and biota so that environmental values are protected.
	Marine fauna	To protect marine fauna so that biological diversity and ecological integrity are maintained.
Land	Flora and vegetation	To protect flora and vegetation so that biological diversity and ecological integrity are maintained.
	Landforms	To maintain the variety and integrity of distinctive physical landforms so that environmental values are protected.
	Subterranean fauna	To protect subterranean fauna so that biological diversity and ecological integrity are maintained.
	Terrestrial environmental quality	To maintain the quality of land and soils so that environmental values are protected.
	Terrestrial fauna	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.
Water	Inland waters	To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected.
Air	Air quality	To maintain air quality and minimise emissions so that environmental values are protected.
	Greenhouse gas emissions	To minimise the risk of environmental harm associated with climate change by reducing greenhouse gas emissions as far as practicable.
People	Social surroundings	To protect social surroundings from significant harm.
	Human health	To protect human health from significant harm.

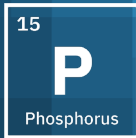
⁶⁰Environmental Protection Authority, www.epa.wa.gov.au

Table 6-3: Flow diagram of the primary approvals processes to start a mining project

Environmental Approval Process For Mining Operations



*Environmental Protection and Biodiversity Conservation Act
* Matters of National Environmental Significance



6.2 Secondary Approvals

Secondary approvals typically cover state level approvals for items with impact to public infrastructure, examples include:

- power connections (where integration with grid is required);
- transport (where public roads are used);
- dangerous goods; and
- export approvals.

As the Project reaches DFS stage and primary approvals submissions have been completed, submissions for secondary approvals will commence.

6.3 Tertiary Approvals

Tertiary approvals generally relate to compliance with local codes or certain state legislation, examples include:

- building permits (subject to final designs);
- electrical compliance of dwelling type buildings (e.g., camps and office blocks); and
- Department of Health-related aspects towards water, specifically:
 - potable water provision at site; and
 - wastewater treatment plant designs and management plans.

As quite detailed information is required to be supplied for the tertiary approvals, application for such will be post-DFS up to commissioning of camps, offices and potable water infrastructure.

7 Geology and Resource

7.1 Geology

The Cummins Range deposit is centred around 2 subparallel carbonatite dykes that are striking at 320 degrees and dipping at 60 degrees to the south west. The carbonatite dykes have intruded into the clinopyroxenite forming large apatite rich carbonatised alteration holes. Within the carbonatites and wall rock alteration zones are monazite-bastnaesite-parisite rich veins or zones that reach up to >20m wide. These fluorine, phosphorous, and rare earth rich rocks are present to significant depths with intersections drilled 600m below surface.

Sitting on top of the larger dyke (**Rare Dyke**) is a well developed weathering profile hosting high grade rare earths, phosphate, scandium, and niobium mineralisation. The weathering profile can extend to greater than 100m depth and quickly thins as you move away from the carbonatite. A combination of residual, or eluvial, chemical weathering and primary mineralisation has contributed to the strong enrichment of rare earths and phosphate at surface (Siegfried, 2022). A majority of the rare earths mineralisation is contained in monazite with the remainder contained in other rare earth minerals and intergrowths.

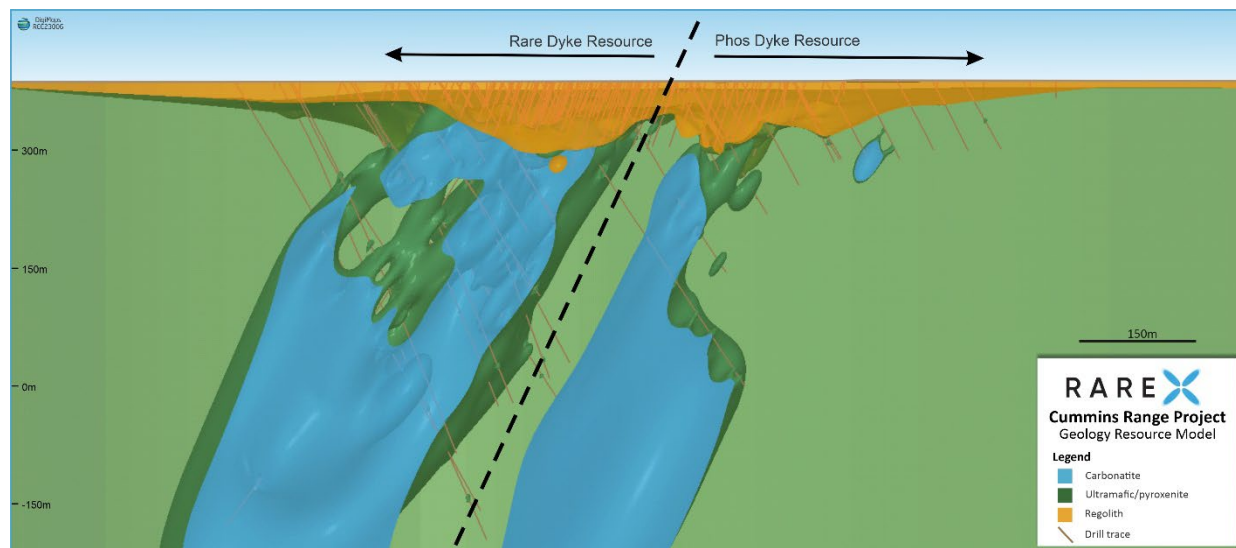


Figure 7-1: Resource cross section

7.2 Mineral Resource Estimate

The updated Mineral Resource Estimate was announced by RareX on 1 May 2023 and estimates a deposit with significant rare earths, dominated by neodymium and praseodymium, the magnet rare earths, significant amount of phosphate and, additionally, appreciable amounts of scandium and niobium⁶¹.

The Company confirms that it is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed.

Summaries of the MRE are presented in Table 7-1, Table 7-2 and Table 7-3.

Table 7-1: Cummins Range Mineral Resource Estimate – Global ($P_2O_5 \geq 2.5\%$)

Classification	Tonnes (Mt)	P_2O_5 (%)	TREO + Y_2O_3 (ppm)	HREO (ppm)	Nd_2O_3 (ppm)	Pr_6O_{11} (ppm)	Nb_2O_5 (ppm)	Sc_2O_3 (ppm)	ThU (ppm)
Indicated	66.6	6.8	5010	290	850	250	830	90	90
Inferred	452.7	4.2	2900	170	490	140	550	60	40
Total	519.3	4.6	3170	190	540	160	580	70	50

Note:

- HREO = Heavy Rare Earth Oxides

Table 7-2: Cummins Range Mineral Resource Estimate – Rare Dyke ($P_2O_5 \geq 2.5\%$)

RARE DYKE Classification	Tonnes (Mt)	P_2O_5 (%)	TREO + Y_2O_3 (ppm)	HREO (ppm)	Nd_2O_3 (ppm)	Pr_6O_{11} (ppm)	Nb_2O_5 (ppm)	Sc_2O_3 (ppm)	ThU (ppm)
Indicated	45.9	6.2	5700	290	910	270	1000	90	90
Inferred	368.9	4.0	3030	160	490	150	570	60	40
Total	414.8	4.2	3320	180	540	160	620	70	50

⁶¹ ASX Announcement 01 May 2023: Cummins Range Resource Soars to 519Mt 0.32% TREO, 4.6% P_2O_5

Table 7-3: Cummins Range Mineral Resource Estimate – Phos Dyke ($P_2O_5 \geq 2.5\%$)

PHOS DYKE Classification	Tonnes (Mt)	P_2O_5 (%)	TREO + Y_2O_3 (ppm)	HREO (ppm)	Nd_2O_3 (ppm)	Pr_6O_{11} (ppm)	Nb_2O_5 (ppm)	Sc_2O_3 (ppm)	ThU (ppm)
Indicated	20.8	8.0	3580	300	720	190	470	80	100
Inferred	83.8	5.4	2340	200	470	120	450	60	60
Total	104.6	5.9	2590	220	520	140	450	70	70

Figure 7-2 shows the comparison of the Cummins Range Mineral Resource to other Australian undeveloped rare earths projects. The updated MRE has made Cummins Range the largest undeveloped rare earths deposit in Australia.

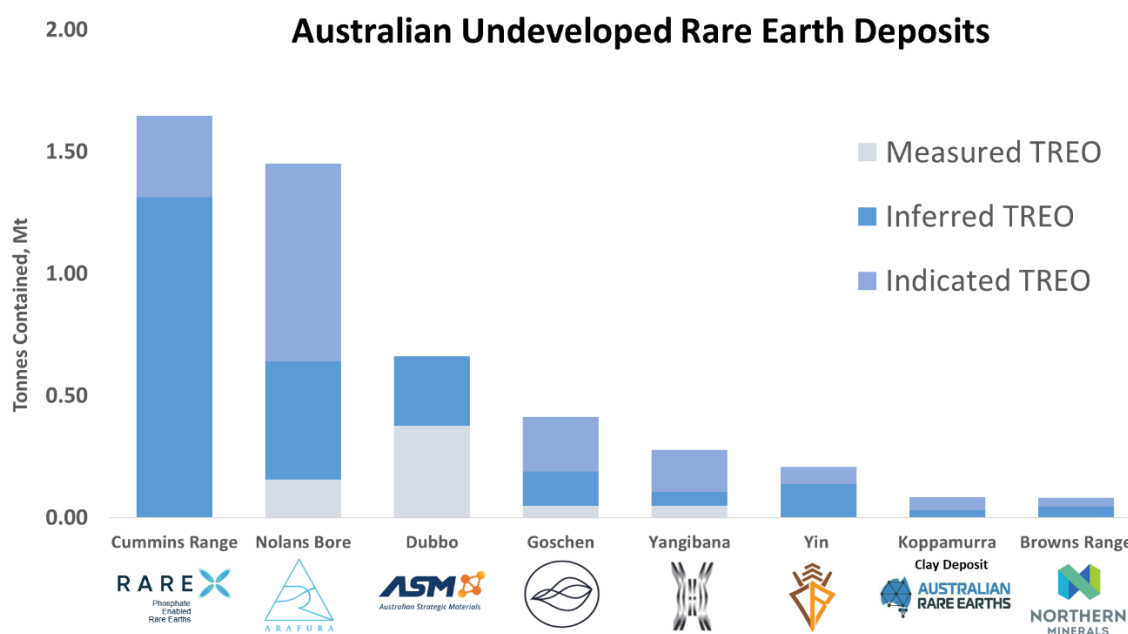


Figure 7-2: Mineral Resource peer comparison⁶²

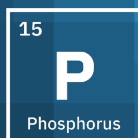
7.3 Block Model

The model is referenced to MGA2020 and is sufficiently large enough to cover the extent of the shells discussed in this announcement.

7.4 Rare Earth Basket Price

The Rare Earth Basket Price is essentially the in-situ value of a kilogram of material of separated rare earth oxide, in the proportions as defined in the Mineral Resource Estimate. This is the typical way rare earth deposits are presented. Basket Price varies day to day.

⁶² Refer to Section 19 for detail references of the graph



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RareX's Basket Price and underpinning price assumptions are shown in Table 7-4. An equivalent Basket Price using the same content, but alternative pricing inputs, was presented in the Mineral Resource Estimate market announcement in May 2023⁶³. Except for Nd, Pr, Ce, La, Tb, Dy, SEG (Sm, Eu and Gd) and Y, all other elements have been excluded in the RareX Basket Price calculation.

Cautionary Statement

The Basket Price does not reflect an in-situ valuation of the Project. To determine the value and assess the viability of the Project, investors should have regard to the application of the modifying factors set out in Sections 5 to 15 and the financial metrics contained in Section 12.3.

Table 7-4: Mineral Resource Estimate-based basket price

Element	MRE RE Dist.		MRE Modelled Price			Asian Metal Current Price	
	% of TREO	Modelled Price US\$/kg	Basket Price US\$/Kg	% of Basket Price	Current Price ^{14F} ⁶⁴	Basket Price US\$/Kg	% of Basket Price
LREO							
La ₂ O ₃	24.1%	1.1	0.3	0.8%	0.8	0.20	1.0%
CeO ₂	45.5%	1.1	0.5	1.5%	0.9	0.42	2.2%
Pr ₆ O ₁₁	4.9%	110.0	5.4	15.8%	66.8	3.29	16.8%
Nd ₂ O ₃	16.9%	110.0	18.6	54.3%	66.5	11.22	57.4%
Sub-Total	91.4%		24.7	72.4%		15.13	77.4%
HREO							
Sm ₂ O ₃	2.4%	2.5	0.1	0.2%	2.1	0.05	0.3%
Eu ₂ O ₃	0.6%	26.0	0.2	0.4%	25.0	0.15	0.8%
Gd ₂ O ₃	1.5%	36.0	0.5	1.6%	38.0	0.57	2.9%
Tb ₄ O ₇	0.2%	2,300.0	3.9	11.4%	1,007.0	1.71	8.8%
Dy ₂ O ₃	0.8%	595.0	4.5	13.2%	325.5	2.46	12.6%
Y ₂ O ₃	2.7%	10.0	0.3	0.8%	6.7	0.18	0.9%
Sub-Total	8.1%		9.4	27.6%		5.12	26.2%
Total Basket Price							
US\$/kg			34.2			20.2	

Note: Basket Price excludes Sc₂O₃

The Mineral Resource Estimate referred to in this announcement was reported by the Company in accordance with ASX Listing Rule 5.8 on 1 May 2023. The Company confirms it is not aware of any new information or data, including changes in the basket price, that materially affects the information included in the previous announcement and that all material assumptions and technical parameters underpinning the estimates in the previous announcement continue to apply and have not materially changed.

⁶³ ASX Announcement 1 May 2023; Cummins Range Resource Soars to 519Mt 0.32% TREO, 4.6% P₂O₅.

⁶⁴ China FOB (US\$/kg), Source Asian Metal, 14 August 2023.



CR MRE Basket Price Distribution - Modelled Price

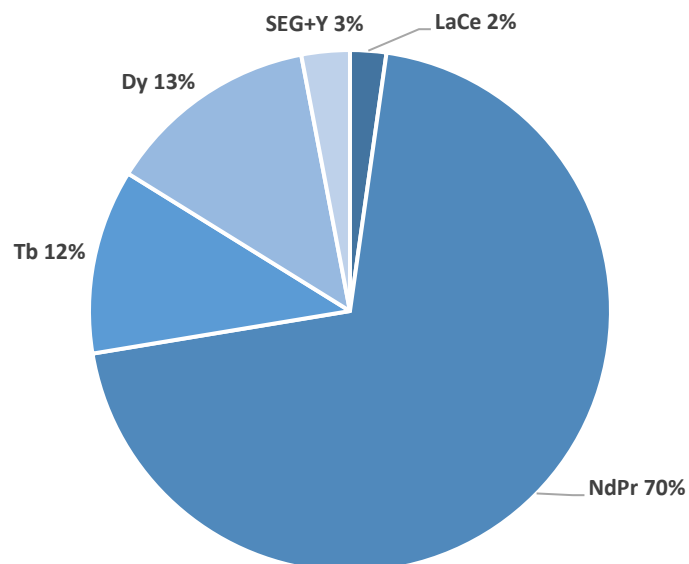


Figure 7-3: Basket price distribution – modelled price

CR Basket Price Distribution - Asian Metal Price

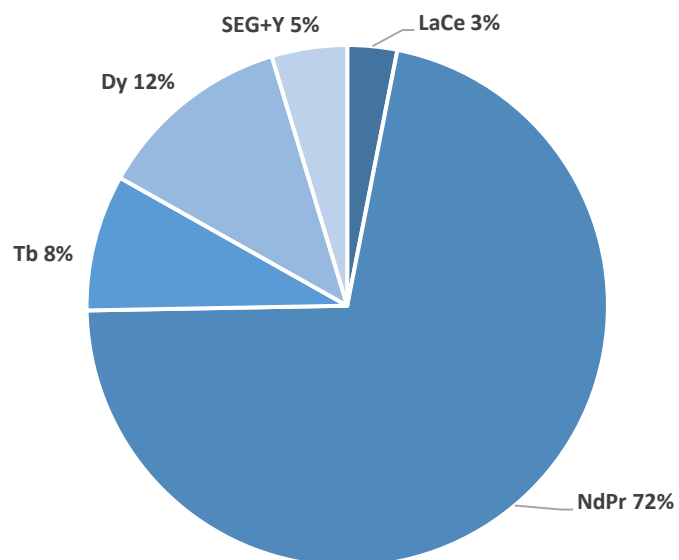


Figure 7-4: Basket price distribution – Asian Metal current price

8 Metallurgy

The goals of metallurgical testing to date have been to determine the more fundamental aspects of the Project through a series of programs and associated mineralogy interpretation spanning ore-sorting, flotation, gangue leaching and digestion (acid baking and alkali cracking). Optimisation of reagents selection and process conditions has also begun and is currently in progress.



Figure 8-1: Drill core used for metallurgical studies

Testwork was performed at Auralia Metallurgy, ALS, Nagrom Perth, LabWest Mineral Analysis, Tomra and Australian Nuclear Science and Technology Organisation (**ANSTO**).

Testwork will subsequently go through further optimisation which presents additional opportunity for the Project. Current results, as confirmed by Mr Gavin Beer, are conducive to representing the Project in the manner in which it is presented in this announcement and the underpinning process design criteria (**PDC**) and process flow diagrams (**PFD**). Mr Damien Krebs, through Primero, has also been a key metallurgical, process and strategic consultant for the duration of this work.

8.1 Mineralogy

Quantitative X-ray Powder Diffraction (**XRD**) and Quantitative Evaluation of Materials by Scanning Electron Microscopy (**QEMSCAN**) were performed on both regolith and fresh materials of the Cummins Range Project. According to the results, the primary rare earth mineralisation was identified as monazite in both the regolith and fresh zones. Secondary rare earth bearing minerals were found to be crandallite in the regolith zone, bastnasite, parisite and xenotime in the fresh zone. The primary phosphate hosting mineral in both the regolith and fresh zones is apatite. The dominant gangues in the deposit were goethite, silicate and carbonate minerals.



Figure 8-2: Drilling for geological and metallurgical samples

8.2 Ore Sorting

Ore sorting tests were performed on two drill core samples from the regolith and fresh zones⁶⁵. While the soft nature of regolith sample limited the mass feed to the ore sorter, the ore sort concentrate returned a TREO grade that was 3.75 times of the feed grade. The mass yield and recovery, however, are yet to be optimised. The fresh sample feed mass to the ore sorter were considered more appropriate hence more reliable results which showed good TREO concentration at a good recovery to the ore sort concentrate. Potentials still exist for the ore sorting process, particularly improving the gangues rejection for both regolith and fresh materials.

8.3 DSO Characterisation

Metallurgical testing of DSO material to date was focused on defining the deleterious element levels and confirming the phosphorus bioavailability of potential DSO material^{66,67}. The tests were performed on samples selected from a range of P₂O₅ grades, locations within the orebody, and different weathering profiles.

⁶⁵ ASX Announcement 11 October 2022: Positive Ore Sorting Testwork Results for Cummins Range

⁶⁶ ASX Announcement 23 March 2023: Phosphate Testwork Confirms Potential to Produce Fertiliser

⁶⁷ ASX Announcement 8 June 2023: Bioavailability Tests Confirm Potential of Cummins Range

Industry-standard 2% citric acid test and were performed at ALS and LabWest Mineral Analysis on a total of 89 samples. The results (Figure 8-3 and Figure 8-4) showed very high phosphorus bioavailabilities with majority of the samples having bioavailabilities of 2-5 times the industry high standard (>9.4% P_2O_5 dissolution in 2% citric acid). Good bioavailabilities were also observed across all grades and weathering zones.

It is hypothesised this high bioavailability is due to a combination of the weathering and the re-precipitation and metamorphosis of the apatite since its initial crystallisation and may be a significant differentiator for this deposit.

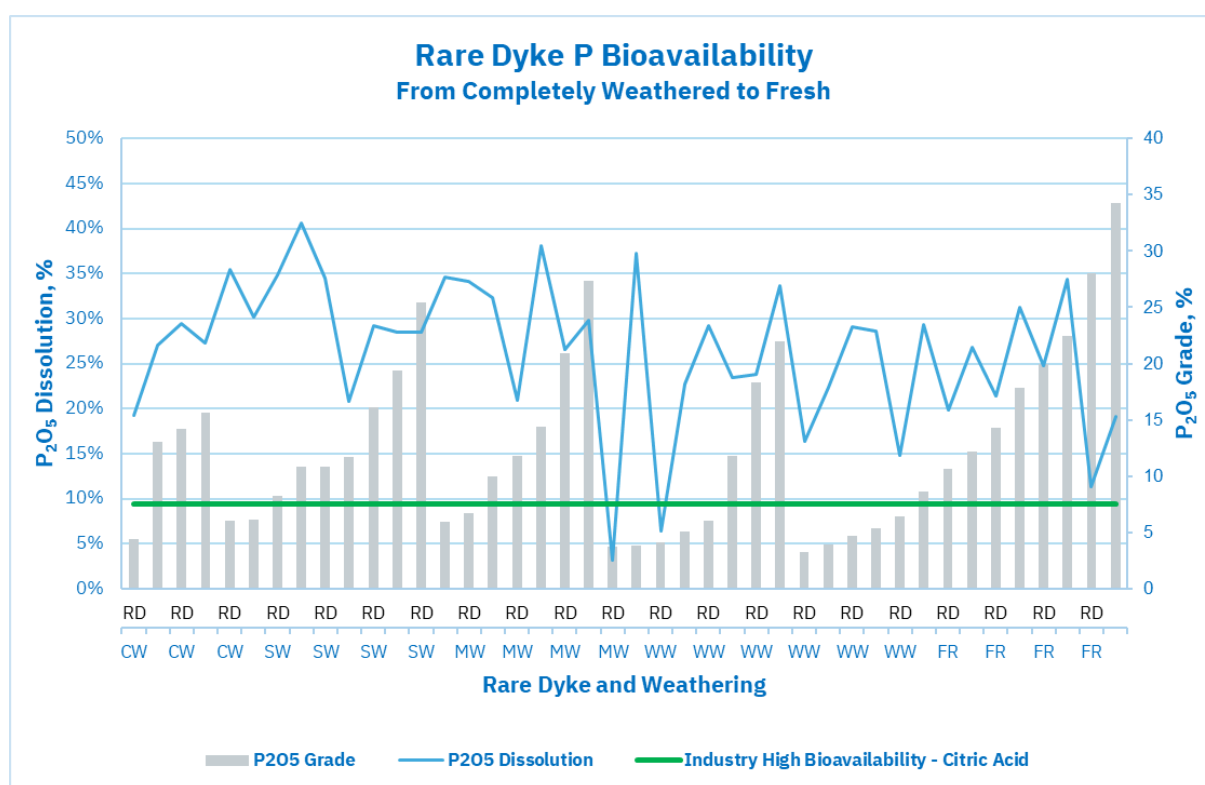


Figure 8-3: Phosphorous bioavailability results vs. industry standard - Rare Dyke (RD)

Note: CW – Completely Weathered; SW – Strongly Weathered; MW – Moderately Weathered, WW – Weakly Weathered; FR - Fresh

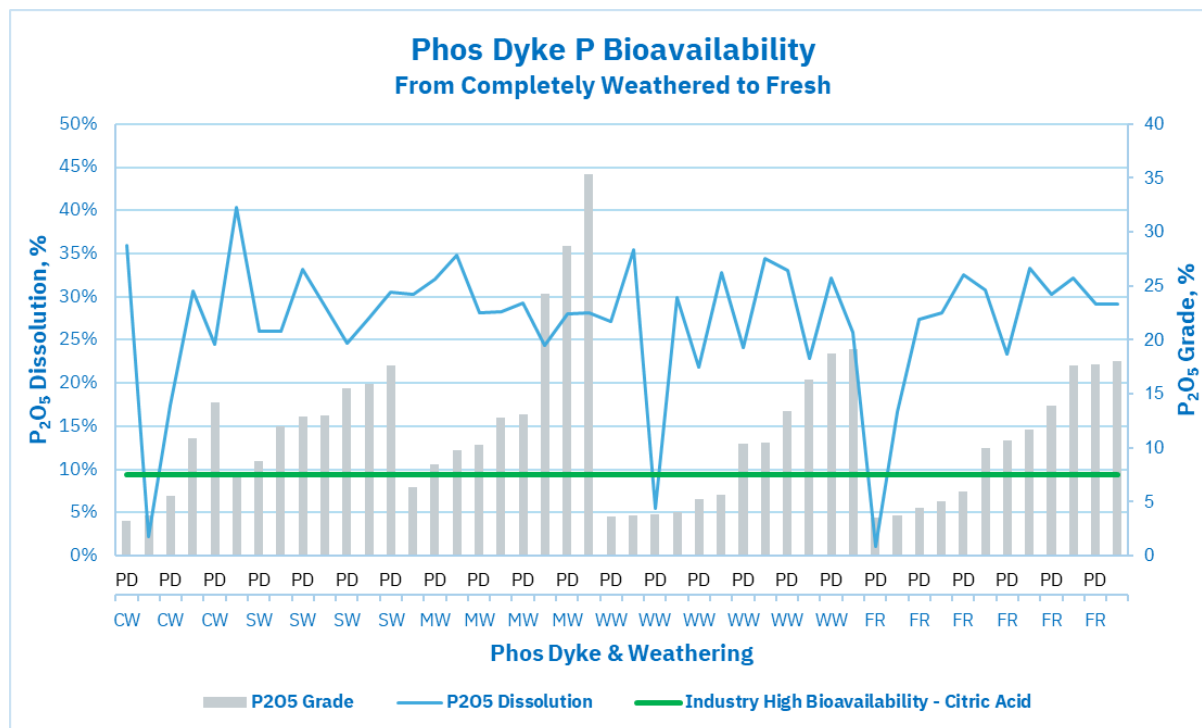


Figure 8-4: Phosphorous bioavailability results vs. industry standard - Phos Dyke (PD)

The bioavailability test samples and an additional 9 samples from the potential DSO zones were also analysed for deleterious element levels. Out of all the deleterious elements, cadmium (Cd) is of particular concern for phosphorus fertilisers. The Cummins Range Project, being an igneous deposit, has naturally low amounts of Cd and other deleterious elements when compared with sedimentary phosphate rocks. This has been verified in the chemical assay results of 98 samples (Table 8-1) which showed very low deleterious element levels and are well below industry limits.

Table 8-1: Deleterious element results summary

Deleterious element	Unit	Assay range	Average level	Industry limit
F	%	0.18 - 4.00	1.02	<4
Cl	%	0.01 - 0.11	0.03	<2
Cd	mg/kg P	3.31 - 137.64	32.82	<300
Pb	mg/kg	1.70 - 208.00	24.32	<500

8.4 Beneficiation

8.4.1 Rare Earth Beneficiation – Rare Dyke

Initially, RareX focussed on rare earth flotation as its primary means of processing and concentrate. Rare earth beneficiation tests, including flotation and magnetic separation, were carried out in 2021 and 2022

targeting a TREO grade between 10% and 20%, with acceptable recovery. This was the approach presented in the 2022 Scoping Study⁶⁸. The recommendation from this initial study was to look for opportunities of focussing on phosphate optimised flotation and this has subsequently been tested.

The approach to produce a combined float of apatite and monazite (combined concentrate) appears to be quite promising and is the primary approach included in this 2023 Scoping Study. As predicated, it looks to provide for a simplified float circuit while adding value to the Project by allowing the monetisation of rare earths and phosphate through monazite and apatite credits.

8.4.2 Phosphate Beneficiation – Phos Dyke

Proof-of-concept flotation tests were performed at Auralia Metallurgy on Phos Dyke material and showed good upgrading of the phosphate mineral and produced phosphate concentrates of greater than 34% P₂O₅ from ~13% P₂O₅ feed material⁶⁹. The regolith phosphate concentrate (34% P₂O₅) and fresh phosphate concentrate (39% P₂O₅) were also tested for phosphate bioavailability and showed very high bioavailability of 2 to 3 folds of industry high standard for direct application fertilisers⁷⁰. A summary of the phosphate beneficiation results is shown in Table 8-2. Although the proposed market for commercialisation is the phosphoric acid producers, direct application remains an option for the combined concentrate.

Table 8-2: Phosphate float results summary

Product	CDX0015 Fresh			CDX0015 Regolith		
	P ₂ O ₅		Bioavailability	P ₂ O ₅		Bioavailability
	Grade %	Recovery %	%P ₂ O ₅ dissolution in 2% citric acid	Grade %	Recovery %	%P ₂ O ₅ dissolution in 2% citric acid
Final concentrate	39.1	80.3	19.7	34.1	85.7	24.3
Head grade	13.4	-	-	12.8	-	-

8.4.3 Phosphate Optimised Beneficiation – Combined Dykes

Phosphate optimised beneficiation testwork of the overall regolith zone were started in late 2022 and is currently in progress. Testwork to date mainly included collector screening, gangue mineral depression, desliming and magnetic separation and were conducted on a regolith composite representing ROM typical grades. The composites were created with material from both Rare and Phos dykes. To date of reporting, limited testing on the overall regolith material has been reported upon and is subject to ongoing testing.

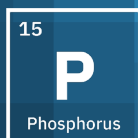
8.4.3.1 Collector Screening

Fifteen collectors were tested during the collector screening tests and the results showed fatty acid collectors had better performance compared with hydroximates and succinamates collectors. The best three collector identified were Hexafloat C3025, DC-OMC-1210 and FA1.

⁶⁸ ASX Announcement 12 September 2022: Positive Scoping Study for Cummins Range Rare Earths Project

⁶⁹ ASX Announcement 4 October 2022: Met Testwork Delivers Premium Phosphate Concentrate

⁷⁰ ASX Announcement 23 March 2023: Phosphate Testwork Confirms Potential to Produce Fertiliser



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8.4.3.2 Depressants Tests

Gangue mineral depression tests were conducted with 6 depressants at varying dosage. While the tests are still in progress, results to date have shown that sodium silicate and quebracho based depressants offered better gangue mineral rejection. Further tests are planned to confirm optimal depressant type and dosages.

8.4.3.3 Desliming and Flotation

Desliming trials were also conducted on the regolith material to assess potential clay removal, however the latter flotation tests on deslimed material and whole ore did not show material difference of flotation performance making the deslime step less viable for inclusion into the beneficiation circuit.

8.4.3.4 Magnetic Separation

Preliminary magnetic separation tests were performed on two cleaner concentrates, results showed good TREO recovery although modest TREO upgrade in the magnetic fractions due to dilution of other gangue minerals. Further tests are required to confirm process viability and optimise process parameters.

8.5 Hydrometallurgy

Preliminary hydrometallurgy testwork was conducted at Nagrom and ANSTO to assess the amenability of Cummins Range rare earth and phosphate concentrate, to different refining processes including gangue leach, acid bake and water leach, caustic cracking and hydrochloric (HCl) acid leach. Although the majority of the tests were performed to support a previous project configuration, they remain valid tests to support third party downstream processing of separated rare earth residues.

8.5.1 Gangue Leach

Both rare earth and phosphate concentrates were subjected to gangue leaching testwork to dissolve apatite and understand the rare earth and gangue element deportments to solution and residue. Different acids, pulp densities and acid concentrations were tested in the gangue leaches. Gangue leaches at Nagrom and ANSTO demonstrated good results where the bulk of rare earths reported to the leach residue whilst the phosphate bearing apatite reported into the leach solution, allowing for selective extraction and monetisation in downstream processes. Amongst all the gangue leaches performed, phosphoric acid showed better performance.

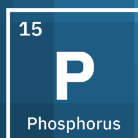
The results of the rare earth gangue leach tests are summarised in Table 8-3. It should be noted that the purity of the phosphoric acid leach solution is remarkable and will be a key focus of further testing and ultimately value-in-use modelling.

Table 8-3: Gangue leach results summary^{71, 72}

Sample	Laboratory	Acid	Ca extraction, %	P extraction, %	Nd extraction, %	Pr extraction, %	LRE extraction, %
RE Con	Nagrom	HCl	10.71 - 91.89	0.48 - 53.79	0.00 - 38.36	0.00 - 37.54	0.00 - 39.55
		H ₂ SO ₄	6.82 - 11.84	0.07 - 33.02	0.00 - 7.18	0.00 - 6.09	0.02 - 6.13
		H ₃ PO ₄	9.74 - 91.00	0.00 - 45.00	0.00 - 2.00	0.00 - 2.00	0.00 - 1.00

⁷¹ ASX Announcement 12 September 2022: Positive Scoping Study for Cummins Range Rare Earths Project

⁷² ASX Announcement 11 July 2023: Phosphoric Acid Leach Test Supports RareX Stage-3 Operations



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Sample	Laboratory	Acid	Ca extraction, %	P extraction, %	Nd extraction, %	Pr extraction, %	LRE extraction, %
	ANSTO	H ₃ PO ₄	55.00 - 91.00	82.00 - 98.00	0.30 - 2.00	0.30 - 2.00	0.12 - 1.21
		H ₂ SO ₄	10.00	97.00	0.80	0.60	0.36
Phos Con	Nagrom	H ₃ PO ₄	65.25	91.98	14.98	11.42	9.02

Note the high dissolution of P, whilst NdPr remains in the residue.

8.5.2 Acid Bake and Water Leach Tests

The acid bake and water leach tests were conducted at ANSTO with conventional conditions. The results showed good RE extraction of >90% Nd and >97% Pr extractions for both sulfuric acid and phosphoric acid gangue leach residues. This suggests that all the RE-containing phases were attacked in the acid bake and confirms the Cummins Range RE concentrate, post gangue leach, is amenable for the acid bake and water leach route.

8.5.3 Caustic Cracking and HCl Leach Tests

Diagnostic caustic conversion tests were also performed on gangue leached concentrate at ANSTO. The results showed encouraging reactivity in the context of a caustic conversion / HCl leach process flowsheet. It is worth noting that the resultant HCl leach liquors contained significantly less impurities as compared to the water leach liquors after sulfation baking, which should make impurity removal simpler.

The positive gangue leach, caustic cracking and acid bake results further supports the proposed RE operation and will assist with product offtake negotiations to better realise and maximise the RE values.

8.6 Metallurgical Models and Conclusions

For this study phase, theoretical models for P₂O₅ and TREO were developed for the regolith and fresh materials to predict the most likely performance that could be achieved using the better performing tests to date as a basis. According to current testwork results and Primero's experience of similar projects, concentrate grades and recoveries would increase with higher feed grades and vice versa for lower feed grades.

To date limited variability testing has been undertaken on the deposit, the flotation response to changing mineralogy, oxidation states and head grades is yet to be defined hence these factors have not been considered when developing the models. Additional testing to understand the likely effects of these parameters is required as part of subsequent study phases.

8.6.1 Concentrate Recovery Prediction

Based on testwork results to date, the P₂O₅ recovery model was developed by assuming an average of the following:

- Constant recovery of 80% P₂O₅ independent of head grade; and
- A constant P₂O₅ loss of 24 kg/tonne (which equates to 80% recovery at a head grade of 12%).



The P_2O_5 recovery equation that represents this relationship is:

- P_2O_5 Recovery = Average of (P_2O_5 Head Grade $\times$ 0.8, P_2O_5 Head Grade - 0.024) / P_2O_5 Head Grade.

REO recovery tends to follow the P_2O_5 , albeit slightly lower than P_2O_5 and Primero recommends the following relationship:

- TREO Recovery = 0.742 * (P_2O_5 Recovery).

8.6.2 Concentrate Grade Prediction

For the typical plant feed head grade range, the concentrate grade is relatively insensitive to head grade. Based on testwork to date, reasonable grade assumptions were made to simulate the relationship of final concentrate grade and different P_2O_5 grade:

- 34% P_2O_5 at 12% feed grade;
- 33.3% P_2O_5 at 10% feed grade; and
- 32% P_2O_5 at 7.5 feed grade%.

Based on Primero's experience, it is also recommended that the concentrate grade to be capped at 35.5%, which represents 85% pure apatite in concentrate (i.e. 41.8% P_2O_5 in apatite) and 15% gangue. A concentrate with no more than 15% gangue is generally considered relatively clean but should still be achievable at high recoveries.

Fitting a logarithmic equation to the above assumed data, gives the following relationship:

- P_2O_5 Concentrate Grade = Minimum of ($0.355, 0.0426 \times \ln(P_2O_5 \text{ Head Grade}) + 0.431$)

The TREO concentrate grade can be then calculated from the TREO head grade, P_2O_5 concentrate recovery and grade. This approach was used as part of economic modelling, to help convert plant feed grades to resulting concentrate grades and volumes.

9 Mining

Mining will be by conventional open cut methods, currently over an 18-year mine made up of 3 Stages:

- Stage 1: Direct Shipping Ore with 3 years nominal life at 0.3 Mtpa at full ramp up capacity
- Stage 2: High grade and medium grade regolith ores with ~10 years nominal life at 2 Mtpa feed rate
- Stage 3: Lower grade fresh rock ore with 4.6 years of nominal life at 2.5 Mtpa feed rate

9.1 Orebody Parameters

The mineralisation underpinning the mine schedule is predominantly hosted in the weathered portion of the underlying carbonatite intrusion with the deposit outcropping in multiple locations leading to a potential low-cost open pit mining scenario. The underlying fresh rock carbonatite intrusion contains both carbonatite and pyroxenite units with occasional massive phoscorite. Where the fresh rock resource is indicated or inferred it has been included as part of the mine schedule where considered economical by the whittle optimisation.

9.2 Mining Method

Mining of the REO deposit will be undertaken using industry standard conventional open pit mining methods utilising grade control, drill and blast pre-conditioning where required, and bench mining utilising a 120t excavator, trucks and ancillary mining equipment. Whilst the use of surface miners is also being considered, OPEX costings are completed on the basis of a conventional drill and blast operation. The Project has been planned to be mined on a double-shift continuous 24 h roster.

Pit walls are generally dug on an overall slope angle between 32 to 48 degrees depending on the geotechnical rock mass characteristics and structural conditions. The pit walls will consist of a batter and berm configuration with a berm every 20m to prevent rock falls continuing down the entire face of the wall. A ramp will be situated within the pit, forming a route along which haul trucks can transport ore and waste rock to the ROM, ore-stockpiles, or waste dumps.

The mining costs used in the optimisations were derived from several mid-sized, rare earth mining studies recently undertaken by Mining Plus including both owner mining and contractor operations and utilised 120t excavators with 90t trucks. The mining cost includes variable rates for drilling and blasting by material type, and a load and haul rate by bench level. In addition to these rates, overhead costs, mining services and mine management costs have been applied. The pit design for the Scoping Study has been considered at a depth of 160m and approximately 500m in diameter.

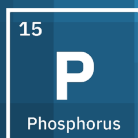
Table 9-1 summarises the selected slope parameters for the pit optimisation in this scoping level Study. Detailed geotechnical studies will be required to provide firm inputs to detailed pit designs.

Table 9-1: Overview of selected slope parameters

OPTIMISATION SLOPE PARAMETERS				
<i>Pit Slope Parameters</i>	Unit	Regolith/Oxide	Trans (UPX/Carbo)	Fresh (UPX/Carbo)
Bench Height	m	15.0	20.0	20.0
Berm Width	m	7.0	8.0	9.0
Batter Angle	deg	50.0	60.0	75.0
Nominal depth	m	90.0	40.0	160.0
Batters	m	75.5	23.1	42.9
Berms	m	42.0	16.0	72.0
Horizontal Distance	m	117.5	39.1	114.9
rise/run		0.77	1.02	1.39
Inter Ramp Angle (IRA)		37.4	45.7	54.3
Ramp Width	m	27.0	27.0	27.0
Ramp Passes	no	1.0	0.5	1.00
Horizontal Distance (inc ramp)	m	144.5	52.6	141.9
rise/run		0.62	0.76	1.13
Overall Slope Angle (OSA)	deg	31.9	37.3	48.4
	deg	31.0	37.0	48.0

9.3 Ore Mining and Recovery

The costed mining method considers ore to be extracted by conventional drill and blast methods on 5m benches and mined in 2.5m flitches or surface miners. The resource block model dimensions are 12.5m x 12.5m x 5m RL at parent cell level with local sub-celling down to 3.1m x 3.1m x 1.25m RL which should adequately account for ore loss and mining dilution, when utilising a 120t excavator for ore mining.



9.4 Mine Optimisation

Multi-commodity resource ore bodies are often difficult to evaluate using a standard cut-off grade approach. As this is a multi-product deposit producing a concentrate, the optimisation is performed as an NSR-type run with the value of each respective ore bin being added to the total concentrate value for a mining block. Concentrate costs are accordingly apportioned based on the mass of mineral in concentrate. This results in some material with low value minerals having a negative payable factor after applying the mining and processing cost. This is a function of the fixed concentrate grade and fixed milling recovery for each element.

Mining Plus conducted several iterations of Whittle runs ultimately calibrated to a nominal case around 250 US\$/t at 32% P₂O₅ and ~30 US\$/kg TREO, which resulted in 31.8 Mt of inferred and indicated mineralisation and 39 Mt of waste material inside the Whittle shell. This Whittle run and associated inventory were used to inform an economic model developed originally by Naust Capital and then adapted to consider:

- ore grades & volumes;
- waste volumes; and
- metallurgical algorithms to determine P₂O₅ and REE recovery as well as resulting product volumes.

Capital and operating cost assumptions are based on other studies conducted by Primero, Ausenco and Shawmac in particular. Figure 9-1 shows the outlines of the Whittle run at surface, with the higher grade DSO shell, surrounded by the lower grade “Phos Con” shell, supporting a staged development targeting higher grades first.

The pit optimisations considered the strategic approach of an initial high-grade DSO stage and consequently developed 2 shells:

1. DSO shell targeting the highest grades located centrally in the deposit along the Rare Dyke.
2. A Phos Con shell that targets surrounding lower grade materials destined for the beneficiation process discussed in section above.

These shells (Figure 9-1) were then supported with a high-level mining schedule across both weathered (regolithic) and fresh rock domains and unclassified material (~1.7 Mt) being excluded. The bulk of unclassified material is located along the north-western edge of the Whittle shells and currently subject to drilling as existing drill spacing was insufficient for classification.

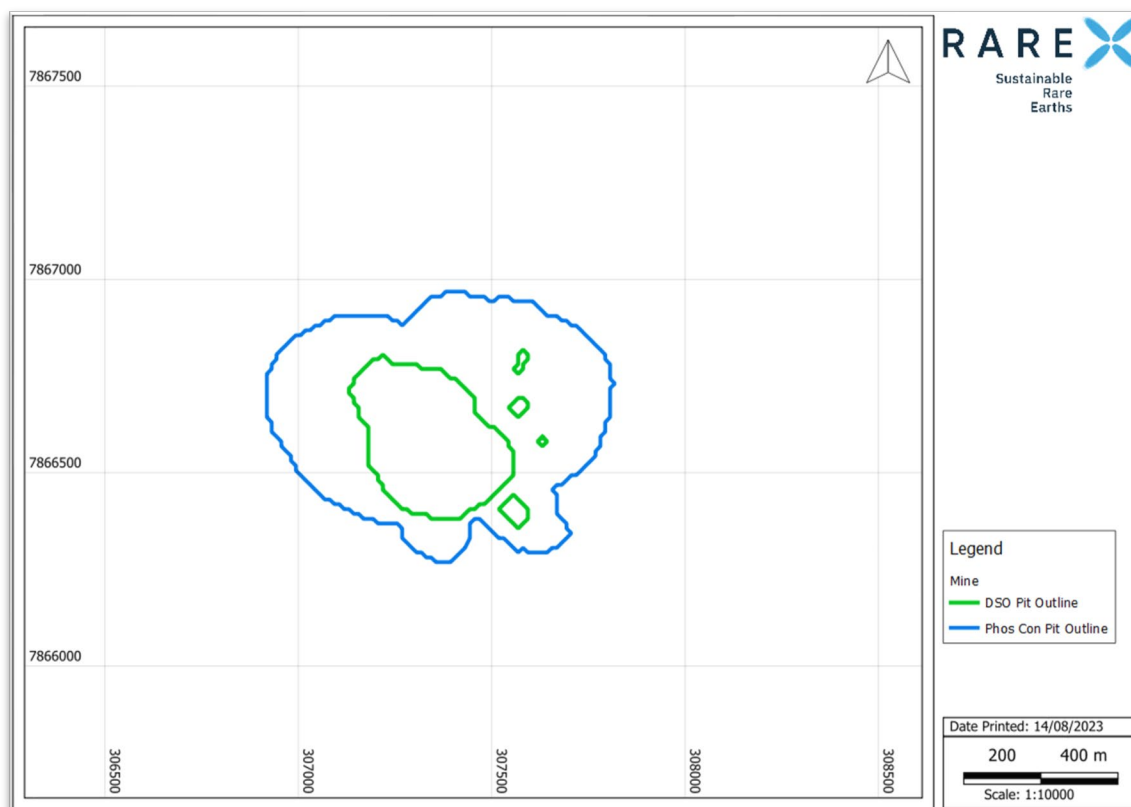


Figure 9-1: Outlines of the respective Whittle shells used to inform schedule and economic model

9.5 Production Schedule

The smaller revenue factor pit shell containing approximately 3 million tonnes of DSO was selected for the scheduling of DSO, and Revenue Factor 1 pit shell for the Phos Con. For the purpose of the Whittle runs, grades above 12% P_2O_5 were considered DSO grade. For financial modelling discussed in Section 12, only material with a head grade of above 20% P_2O_5 was considered as DSO product (~0.8 Mt). This reflects the latest market research and therefore ore with less than 20% P_2O_5 that is inside the initial DSO shell is considered as an initial high-grade feed for the concentrator stage of the project (Stage 2a). This enables the scheduling of higher feed grades for the concentrator upfront improving project economics. Once the DSO shell is depleted the lower grade Phos Con shell will be mined, effectively as a cutback. Further pit shell and sequence optimisations are planned as part of subsequent study stages.

Scheduled rates for the DSO plant were adjusted to reflect a smaller operation nominally running at around 0.3 Mtpa for DSO material for 3 years, before the processing of lower grade materials through a concentrator built towards the end of the DSO operating period.

Whilst mine scheduling considered a range of product bins within the inventory of the two Whittle shells for the purpose of economic modelling the below simplified inventory was used. The inventory is directly derived from the Mining Plus schedule and simply considers grade subsets that are aligned to the staged strategic approach (DSO vs Phos Con shell) that is being tested by this Scoping Study. Processing operating costs

currently account for up to 20% rehandle of material to enable a supporting stockpiling strategy. More detailed schedules will need to be developed as part of the next study phase to assess time-based impacts to grade presentation and provide a smoothed plant feed by grade.

Table 9-2: Simplified mining inventory

Scheduled Resource		Stage 1: DSO	Stage 2a: Regolith High Grades	Stage 2b: Regolith Lower Grades	Stage 3: Fresh Rock
Size	tonnes	761,045	3,813,105	15,725,330	11,506,874
RE grade	%	1.50%	1.40%	0.73%	0.44%
Phos grade	%	23.19%	14.26%	9.86%	8.25%
RE contained	tonnes	11,118 ⁷³	53,271	115,221	51,070
Phos contained	tonnes	176,492	543,881	1,550,507	949,470

For the above schedule on average 73% of ore is indicated and 27% is inferred with regards to resource classification. Figure 9-2 indicates how these proportions nominally change over time.

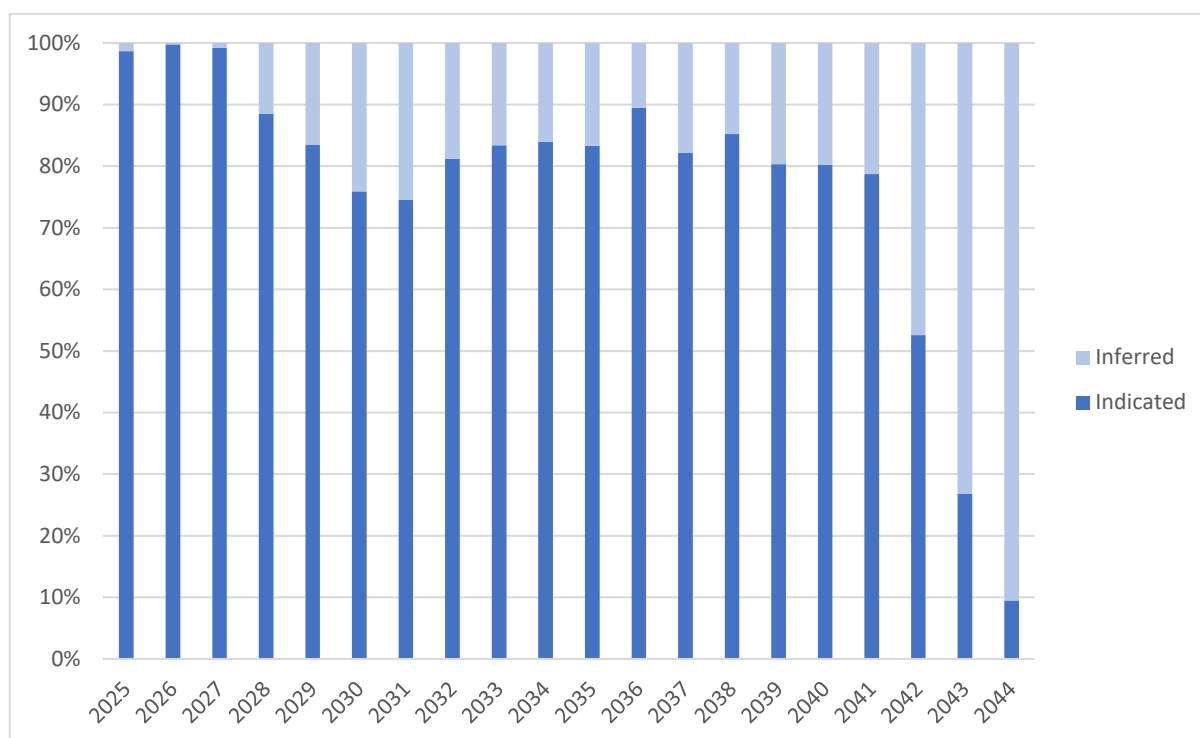
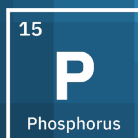


Figure 9-2: Resource classification by period mined

Note: Step change after year 3 related to mining the more expansive Phos Con pit shell, which at its north-west periphery is not drilled out to the same extent as the centrally located DSO shell used for the first three years of the schedule. The last 2 years of the schedule would likely consolidate to improve fleet efficiencies as mining rates are sub 1 Mtpa with the balance of plant feed sourced from stockpiles. Timeline is indicative only.

⁷³ No credits are received for TREO contained within DSO product



9.6 Mining Equipment

Mining is either conventional drill, blast, load and haul utilising a mid-sized excavator and trucks typical of the region or to be undertaken with surface miners.

Given the relatively soft material in the regolith zone utilising surface miners could be beneficial particularly during a DSO stage as crushing and screening could be integrated or simplified at the ore processing stage.

Some near surface high grade material, the most competent material onsite, has been lab tested geotechnically and UCS test results indicate a compressive rock strength around 70Mpa. The size of the mining fleet is selected to match the scale of the operation using a single PC1250 excavator matched with four 60t-90t trucks. The full fleet mobilisation cost is based on contractor rates used in previous Mining Plus studies. Practical fleet considerations will be addressed in more detail during future study phases.

9.7 Waste Rock Disposal

It is assumed all fresh waste material is potentially acid generating with the potential to create acid- mine drainage hazards and will be contained within the core of waste dumps, encapsulated by the oxide waste.

This means that the waste dump construction will need to have an oxide floor (5m), then the fresh is tipped on this floor, and then oxide is placed on the sides and the top to encapsulate any potentially acid forming (PAF) material. This may require an oxide dump for rehandle or if the staging of the pit is possible then the oxide can be placed around the edges as the dump is built with dozers in logical construction method. A high level waste dump design showing material placement is shown in material is placed in 20m lifts with 37 degree repose angle and 5m berms to accommodate for total waste movement per the production schedule.

Detailed waste characterisation studies will be undertaken to confirm waste dump design parameters and encapsulation of PAF material in the later stages of the Project.

10 Processing

The DSO pathway consists of crushing and screening before trucking to Port of Wyndham (Stage 1).

Stage 2 upscales the crushing and screening installation from Stage 1 and augments this process infrastructure with phosphate optimised flotation beneficiation on site; this will deliver a monazite-apatite concentrate for further refining.

The Stage 3 operation further upgrades the Stage 2 processing equipment and infrastructure to accommodate the different mineralogy and grade profile of the fresh material, i.e. modification to the crushing circuit and addition of an ore sorting process for upfront gangue removal before flotation of a monazite and apatite mineral concentrate.

Both the DSO and mineral concentrate products are transported by road to the Port of Wyndham for product distribution.

The approach to determine the process design, scale and performance utilised the learnings from the original scoping study and adjusted the flotation regime to focus on a combined apatite-monazite flotation, as learnt from metallurgical testing. The fundamental process design remains unchanged, although increased scale

and modified design specifications for process optimisation. Industry experts, including Mr Gavin Beer and Mr Damien Krebs, were closely consulted when developing the process flowsheet. Whilst not all details have been definitively confirmed through metallurgical testing, there is sufficient data to give confidence to our lead consultants to extrapolate forward from current metallurgical results in predicting performance and product specifications. These are the subject of ongoing and priority testwork which will be used to support the PFS.

10.1 Stage 1 DSO Crushing and Screening

10.1.1 Stage 1 Processing and Product Physicals

Table 10-1: Processing and product physicals – Stage 1

DSO crushing and screening	Units	Stage 1
Annual throughput (dry)	ktpa	300
P ₂ O ₅ feed grade	%	23.2
P ₂ O ₅ recovery	%	90
DSO product		
DSO produced (dry)	ktpa	270
P ₂ O ₅ grade	%	23.2
P ₂ O ₅ produced	ktpa	63

10.1.2 Stage 1 DSO Processing

The proposed DSO plant will mainly consist of a simple crushing and screening circuit located close to the ore stockpile on site. It is assumed that the crushing and screening plant will be contractor supplied and operated.

The plant will operate continuously 24 h/day, 365 days/annum with an assumed plant availability of 65% (~5,700 h/a) taking into account plant downtimes for equipment maintenance and shutdowns etc.

DSO lump ore will be transferred to the crusher via front end loader (**FEL**) where the ore will be crushed down to a particle size of 80% passing (**P80**) 5 mm. The crusher discharge will then be conveyed to a vibrating screen where the crushed ore will be dry screened to produce an undersize product and an oversize product. The screen undersize material will be transferred to the DSO packaging area to package for transportation to port. The screen oversize material will be recycled back to the crusher to further break down the ore. Depending on the compositions of the screen oversize, the material could also be sent to an oversize waste stockpile if it is not rich in phosphate. A schematic flow diagram of the DSO operation is shown in Figure 10-1.

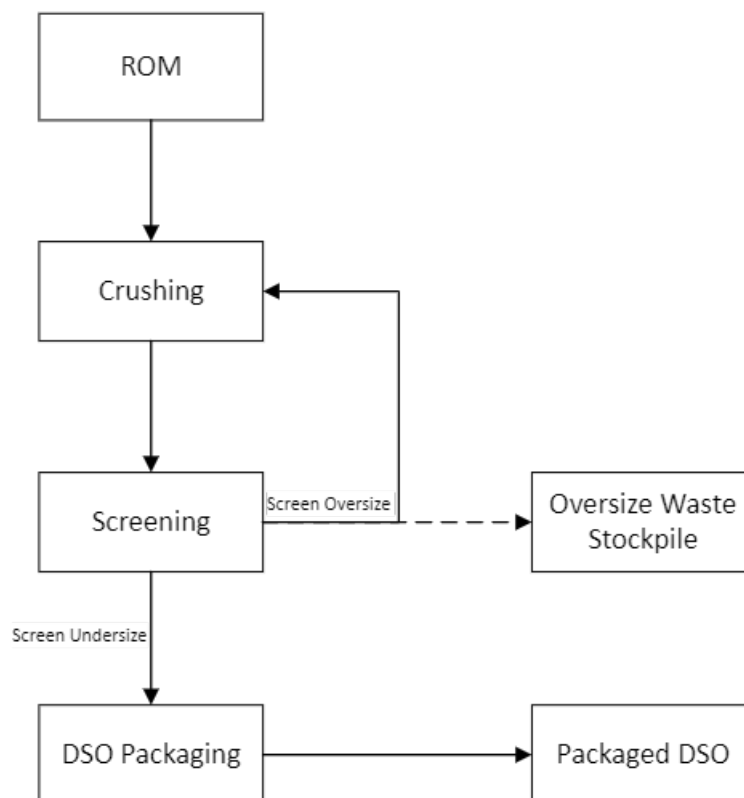


Figure 10-1: DSO flowsheet

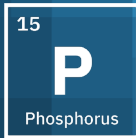
Based on chemical analysis of the potential DSO material, a 10% mass loss is assumed for the DSO operation account ore moisture, dust generation and potential rejection of any oversize material with low P₂O₅ content. No chemicals or reagents will be used for in the processing of the DSO material. Process water will be used mainly for dust suppression purpose.

10.2 Stage 2 and Phosphate Optimised Operation

10.2.1 Stage 2 Processing and Product Physicals

Table 10-2: Processing and product physicals – Stage 2

Beneficiation	Units	Stage 2a	Stage 2b
Annual throughput (dry)	ktpa	2.0	2.0
P ₂ O ₅ feed grade	%	14.3	8.3
TREO feed grade	%	1.4	0.4
P ₂ O ₅ recovery	%	81.6	77.8
TREO recovery	%	60.5	57.8
Phosphate mineral concentrate			
Phosphate concentrate produced (dry)	ktpa	669.8	462.7
%P ₂ O ₅	%	34.7	33.2
%TREO	%	2.5	2.3



10.2.2 Stage 2 Beneficiation

The Stage 2 beneficiation plant (**bene plant**) is proposed to be built adjacent to the mine that will produce a rare earth and phosphate mineral concentrate by optimising the flotation regime to collect monazite and apatite together.

Based on the metallurgy testwork to date and similar concentrator flowsheets by industry peers, the current Cummins Range process flowsheet concept incorporates industry proven unit processes including:

- primary crushing, single stage gyratory crusher;
- crushed ore stockpiling;
- SAG mill and ball mill comminution and classification circuit to P80 53 µm;
- flotation (1 stage roughing and 3 stages of cleaning);
- tails thickening;
- concentrate thickening; and
- concentrate filtration with plate & frame filter press for production of a filtered concentrate.

The overall process flow diagram of Stage 2 operation is shown in Figure 10-2.

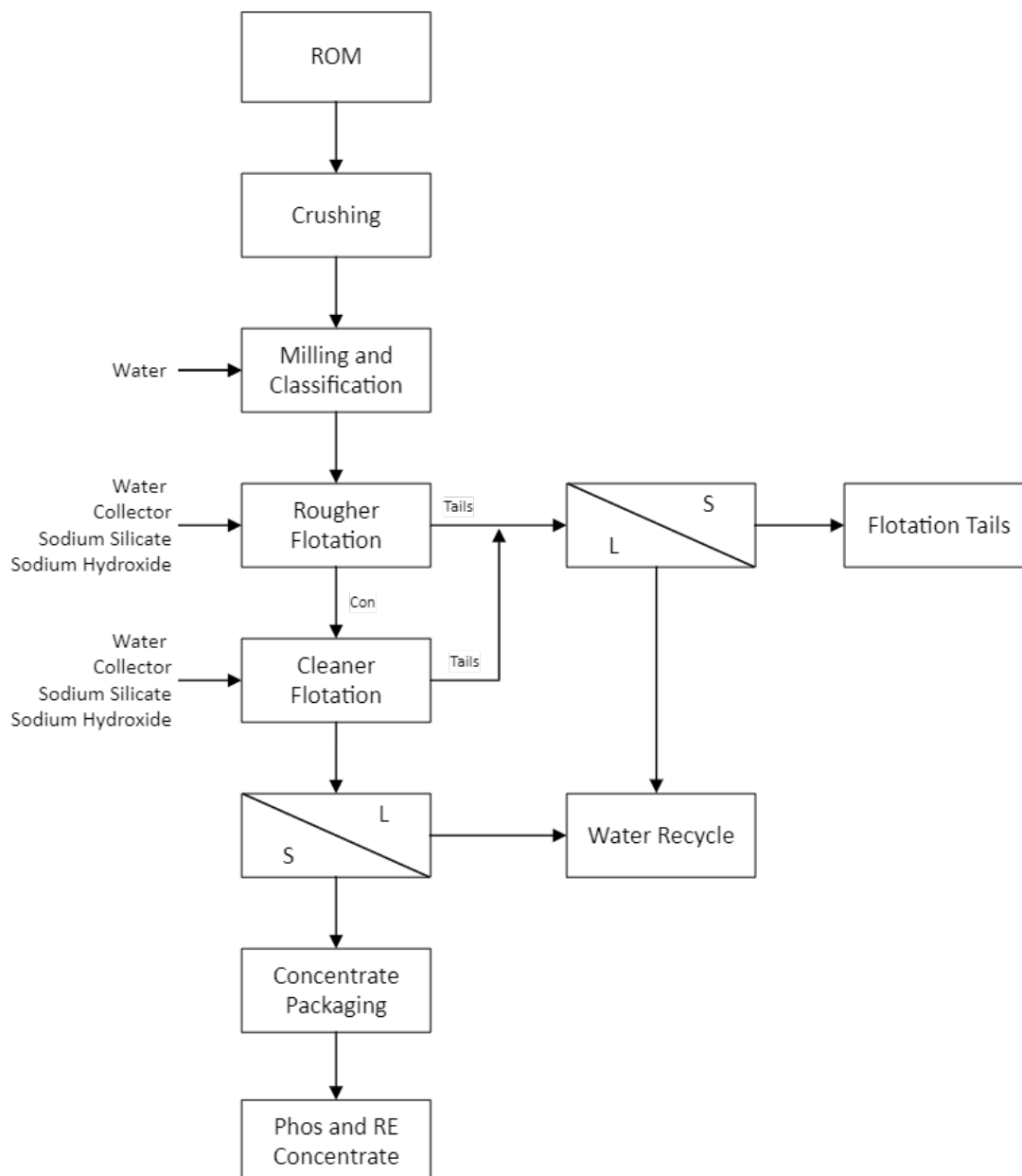


Figure 10-2: Stage 2 bene plant flowsheet

The process design basis assumes continuous operation (24 h/day, 365 days/annum), and treatment of 2Mtpa of ROM ore with typical plant availabilities (i.e. 65% for crushing plant and 91% for concentrator) and industry standard operating hours of 5700 h/a (crushing plant) and 8,000 h/a (concentrator), which is considered appropriate given the type of process infrastructure. The nominated availability considers all downtime associated with planned maintenance and typical process interruptions.

The Stage 2 high-level process mass balance model was developed by Primero from the process design criteria assumptions and testwork data.

The beneficiation plant uses the following reagents:

- flotation collector;
- sodium hydroxide;
- sodium silicate; and
- flocculant.

Reagents, consumables and utilities cost build-ups are based on unit pricing (database), consumption rates and hours of operation, and transport to site. Reagents and other consumable usage rates have been determined from the following sources:

- process design criteria and mass balance;
- first principles, testwork, database/allowances; and
- a tailings dam has been factored into the design for handling inert tailings waste.

The bene plant design basis is shown in Table 10-3.

Table 10-3: Stage 2 bene plant process design basis

Parameters	Description	Units	Stage 2a	Stage 2b
Plant design basis	Operating hours	h/annum	8,760	8,760
	Availability	%	91.3%	91.3%
	Actual operating hours	h/annum	8,000	8,000
Plant feed	Annual tonnage (dry)	Mtpa	2.0	2.0
	P ₂ O ₅ feed grade (dry)	%	14.3	8.3
	TREO feed grade (dry)	%	1.4	0.4
Product	P ₂ O ₅ recovery	%	81.6	77.8
	TREO recovery	%	60.5	57.8
	P ₂ O ₅ grade in flotation concentrate (dry)	%	34.7	33.2
	TREO grade in flotation concentrate (dry)	%	2.5	2.3
	Annual flotation concentrate (dry)	ktpa	669.8	462.7
Reagents	Flotation collector	tpa	600	600
	Sodium hydroxide	tpa	4,000	4,000
	Sodium silicate	tpa	3,600	3,600
	Flocculant	tpa	40	40
Power	Installed power	MW	16	16
Water	Process water	ktpa	677	677
Fuel	Diesel	kL/a	498	498
	LNG	ktpa	10	10

10.3 Stage 3 Fresh Material Beneficiation

10.3.1 Stage 3 Processing and Product Physicals

Table 10-4: Processing and product physicals – Stage 3

Beneficiation	Units	Stage 3
Annual throughput (dry)	ktpa	2.5
P ₂ O ₅ feed grade	%	8.3
TREO feed grade	%	0.4
P ₂ O ₅ recovery	%	75.5
TREO recovery	%	67.2
Phosphate mineral concentrate		
Phosphate concentrate produced (dry)	ktpa	480
%P ₂ O ₅	%	32.4
%TREO	%	1.6

10.3.2 Stage 3 Beneficiation

The processing flowsheet of the Stage 3 operation is anticipated to remain the same except optimised for fresh rock and with the addition of an ore sorting circuit in between the crushing and mining circuit as illustrated in Figure 10-3.

The crushed material will be screened to produce an oversize fraction and an undersize fraction. The screened undersize material that is not suitable for ore sorting will bypass the ore sorter and be fed to the milling circuit. The screen oversize material will be treated with ore sorting that will remove low density material, i.e. siliceous minerals, and upgrade the material before feeding to the milling and flotation circuit.

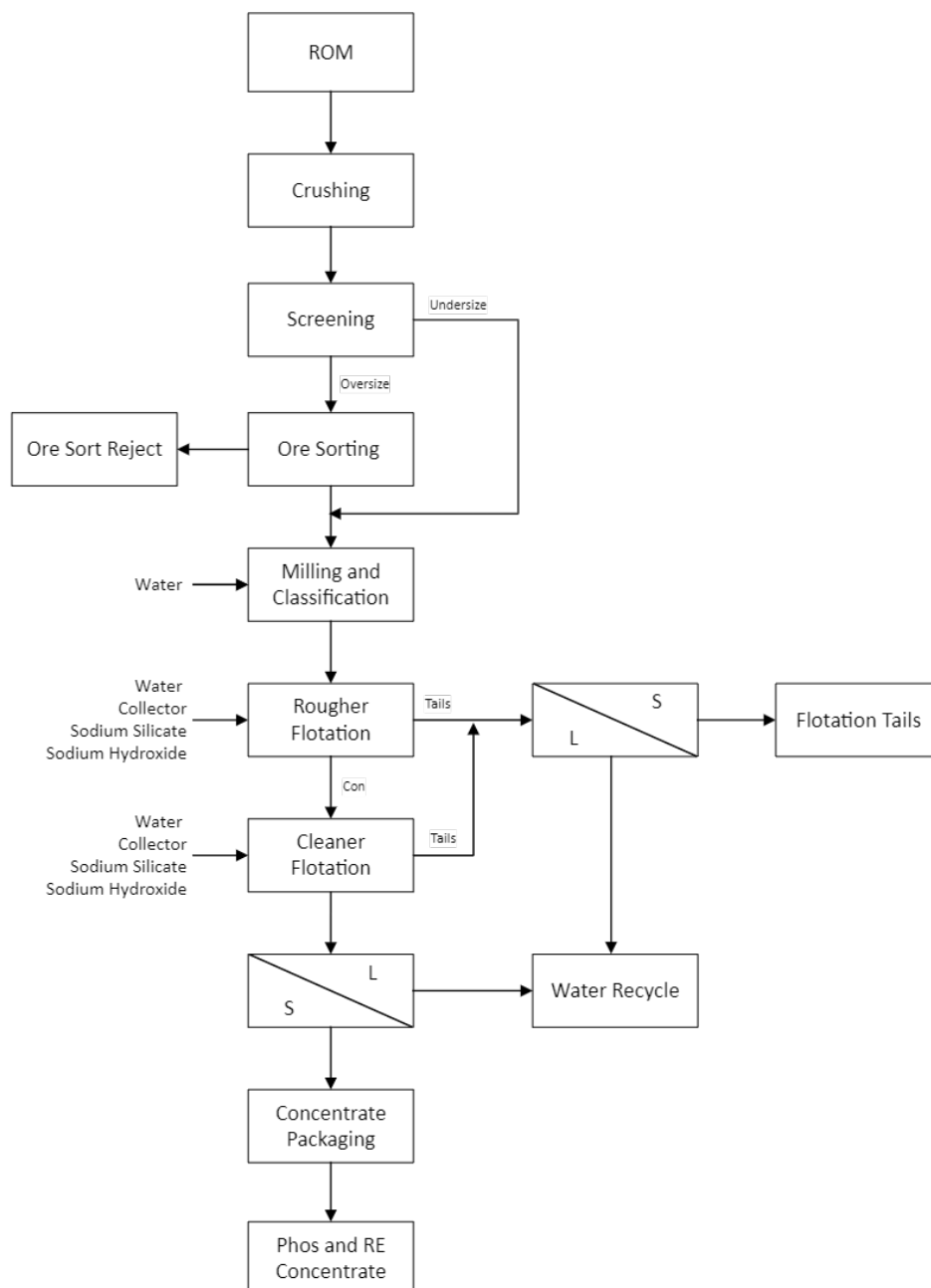


Figure 10-3: Stage 3 bene plant flowsheet

The proposed Stage 3 operation will have the same plant availability as Stage 2 with slightly increased ROM feed rate of 2.5 Mtpa to account for the lower feed grade and implementation of the ore sorter.

It is assumed that the reagent types and consumptions will not be materially different to the Stage 2 operation. A high-level process mass balance was developed by RareX based on Stage 2 design data and testwork data. The Stage 3 bene plant design basis is shown in Table 10-5.

Table 10-5: Stage 3 bene plant process design basis

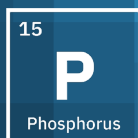
Parameters	Description	Units	Stage 3
Plant design basis	Operating hours	h/annum	8,760
	Availability	%	91.3%
	Actual operating hours	h/annum	8,000
Plant feed	Annual tonnage (dry)	Mtpa	2.5
	P ₂ O ₅ feed grade (dry)	%	8.3
	TREO feed grade (dry)	%	0.4
Product	P ₂ O ₅ recovery	%	75.5
	TREO recovery	%	67.2
	P ₂ O ₅ grade in flotation concentrate (dry)	%	32.4
	TREO grade in flotation concentrate (dry)	%	1.6
	Annual flotation concentrate (dry)	ktpa	480
Reagents	Flotation collector	tpa	750
	Sodium hydroxide	tpa	5,000
	Sodium silicate	tpa	4,500
	Flocculant	tpa	50
Power	Installed power	MW	24
Water	Process water	ktpa	846
Fuel	Diesel	kL/a	623
	LNG	ktpa	12

10.4 Radiation Management

According to Code of Practice and Safety Guide – Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (2005) published by Australian Radiation Protection and Nuclear Safety Agency (**ARPANSA**), material containing naturally occurring radionuclides in secular equilibrium, with cumulative head-of-chain uranium (**U**) or thorium (**Th**) specific activity less than 1 Bq/g are generally considered inherently safe and therefore exempt from regulation. Where the specific activity exceeds 1 Bq/g by ten times (i.e. 10 Bq/g), the material is classified as a Class 7 radioactive material and must be transported with full compliance to legislation and regulation.

There are three main streams produced from the DSO and beneficiation operations:

1. DSO rock – based on DSO rock chemical assays and mine schedule, the average uranium and thorium level of the DSO rock is about 150 ppm and 40 ppm respectively, this is equivalent to a specific activity concentration of 2.04 Bq/g.
2. Rare earth and phosphate mineral concentrate – based on flotation testwork results, the average U and Th level in the concentrate is 30 ppm and 70 ppm respectively, this is equivalent to a specific activity of 0.66 Bq/g.



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3. Flotation tailings – based on flotation testwork results, the average U and Th level of flotation tailings produced from similar feed material is 20 ppm and 70 ppm respectively, this is equivalent to a specific activity of 0.54 Bq/g.

Based on above, the materials from the Cummins Range Project all have a radiation concentration well below 10 Bq/g, hence are exempt from radioactive transport (Class 7) regulations and can be shipped / transported as general cargo. Ongoing analysis will be carried to closely monitor the radioactivity of each process stream.

11 Logistics and Port

11.1 Road

The site access haulage road design was developed by Shawmac, who also designed and built the Northern Minerals road.

Shawmac's designs will be used in the miscellaneous licence application in the second half of 2023 and reflects an optimised path, which generally follows the fence line. In consultation with stakeholders and with support from the Eastern Kimberley Jobs Pathway (EKJP) & local non-profit organisations; on-the-job (OTJ) training is being considered to allow inclusion and upskilling of local residents. As the road will be developed on Jaru grounds its maintenance is considered as part the Mining Heritage Agreement and the intent is for maintenance to be conducted by a Jaru civil contracting team.

The road is designed as a dual lane road with an option to execute as a single lane initially for A\$15M (excluding contingency) to manage capital costs. RareX will be looking at options for government funding of this road to help enable early stages of this Project for which local precedent exists, including for another near-by rare earths project. Additionally, the proximity to the Tanami Road upgrade presents an opportunity for significant synergies in construction activities, which already heavily involve local traditional owner groups.

Creek crossings have been considered for major creek intersections and an allowance made for relief culverts at a spacing of 1km for smaller drainage lines. Furthermore, the design basis considered haulage rates around 1 Mtpa, which at currently considered production rates at the mine is sufficient for operations.

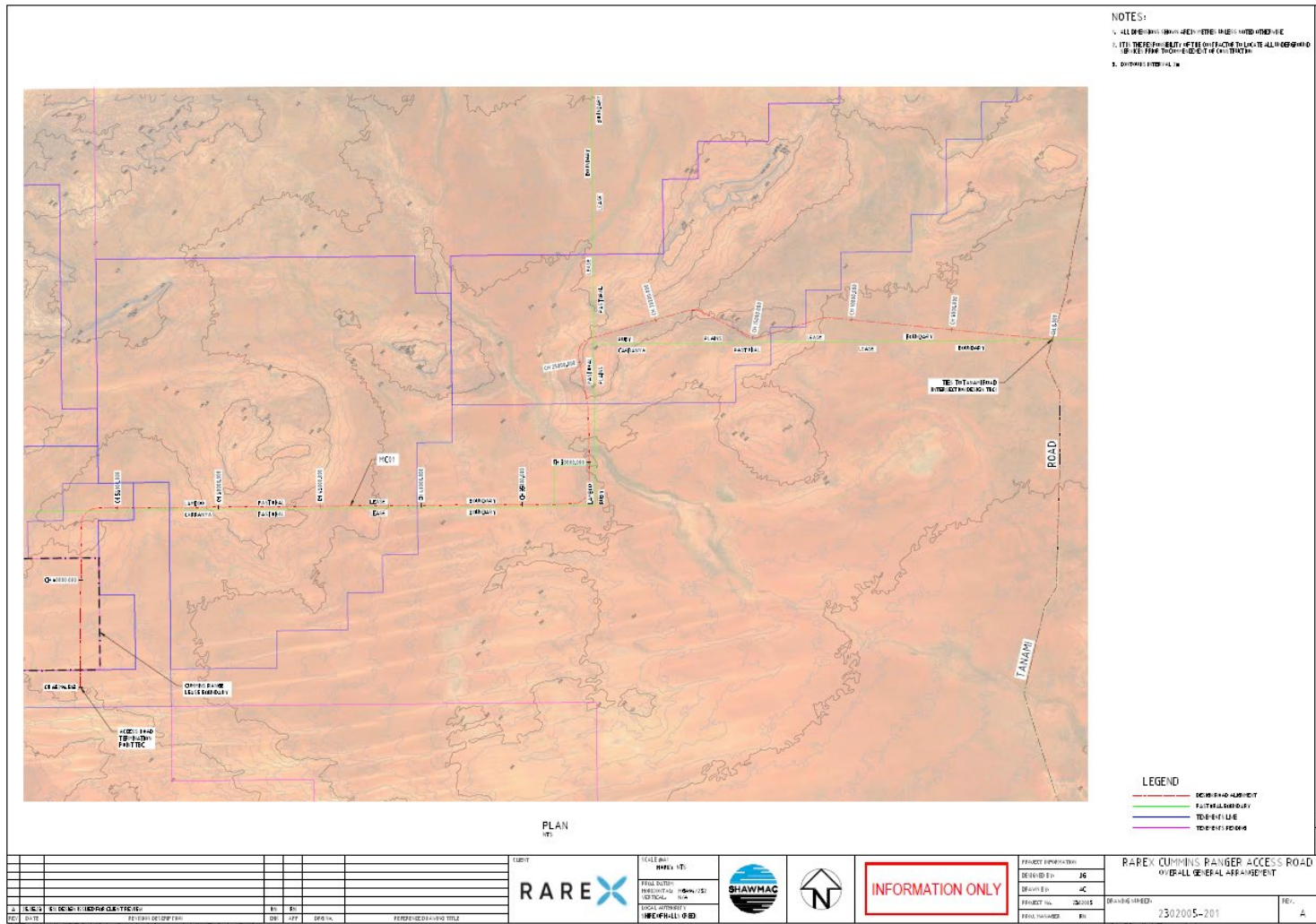


Figure 11-1: Shawmac design overview of the proposed site access haulage road

11.2 Haulage

RareX is proposing a contract trucking operation for its combined concentrate product from site to the Port of Wyndham. RareX has an advanced term sheet for a trucking contract which is undergoing final negotiations. As part of negotiations, indicative costs were provided and factored into the economic assessment. The anticipated rate of product haulage is outlined in Table 11-1 below and aligns to the estimated plant output based on recoveries and process design discussed in Section 10:

Table 11-1: Product Haulage by operational stage

Stage	Haulage rate (A\$/t/km)	Annualised product haulage rate, wet (ktpa)
Stage 1 – DSO	\$0.10	284
Stage 2 – Regolith Phos-RE Con		547
Stage 3 – Fresh Phos-RE Con		522

At the mine site concentrate will be loaded using front end loaders (FEL) into highway haul trucks. Triple road trains for road haulage consisting of a truck with three side tipping trailers are proposed to be used. Trucks will be weighed then proceed to the site access road, linking the mine site to the Tanami road, before travelling to the Port of Wyndham.

From the mine, trucks will travel 50km to Tanami Road, then 95km north to meet Great Northern Highway just south of the town of Halls Creek. The final stretch is 390km along the Great Northern Highway. The Tanami Road and Great Northern Highway are part of the Tri Drive Network serviced by the Government of Western Australia. Speed limits of 110km/hr on the Great Northern Highway and 80km/hr on Tanami Road have been considered. For the study, a truck speed of 80km/hr was assumed on Great Northern Highway and 50km/hr on Tanami Road and the spur road to the mine site resulting in travel time of approximately 8.5 hours one way.

The total distance from mine site to port is 535km.

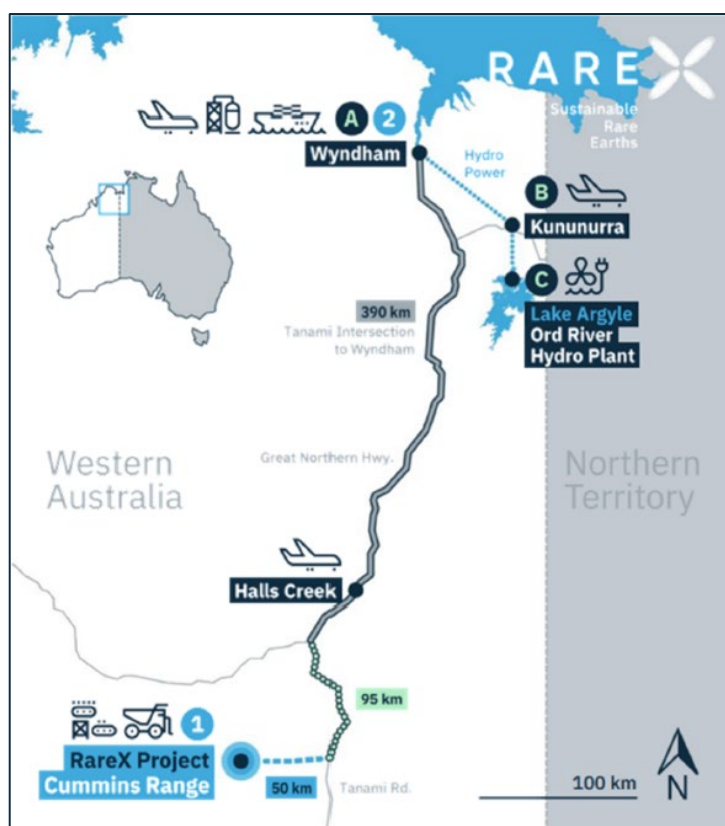


Figure 11-2: Location map of haulage route

11.3 Port

Ausenco designed the port solution based on the MOU with Agrimin and with feedback from Kimberley Metals Group (KMG) about the potential to co-share the iron ore loading facility. A draft term sheet is well advanced for KMG tolling RareX product through its barge loader.

At the Port of Wyndham, trucks will dump the concentrate in a storage building on a lot leased by RareX and in vicinity to existing or planned barge loading facilities either by KMG or Agrimin.

Several lots are under consideration with preference given to lots near the KMG and proposed Agrimin facilities (Lots 700 & 701 respectively, see Figure 11-3).



Figure 11-3: Land positions around the Port of Wyndham. Available land exists subject to negotiations with incumbent lease holders.

KMG has likely a level of spare capacity over the medium term as development and ramp-up of its undeveloped assets will take several years. The Agrimin co-share option is subject to Final Investment Decision (**FID**) and timing risks in the near-term, where RareX may already be operating its Stage 1 operation whilst Agrimin may still be in development or vice-versa. Other options for port operations to consider may include leasing of land from CGL in areas closer to a deep-water section of Port of Wyndham where transhipping would not be required. Given the higher upfront capital costs, this option was not assessed as part of this Study, but provides a strategic alternative.

The concentrate will be stored until an ocean-going vessel is available for loading. It is proposed to use KMG's barge loading facility and shuttle barge will be used to tranship concentrate to the ocean-going vessels. The shuttle barge will be equipped with a crane (E-Crane) to transfer the concentrate from the barge to the vessel hold.

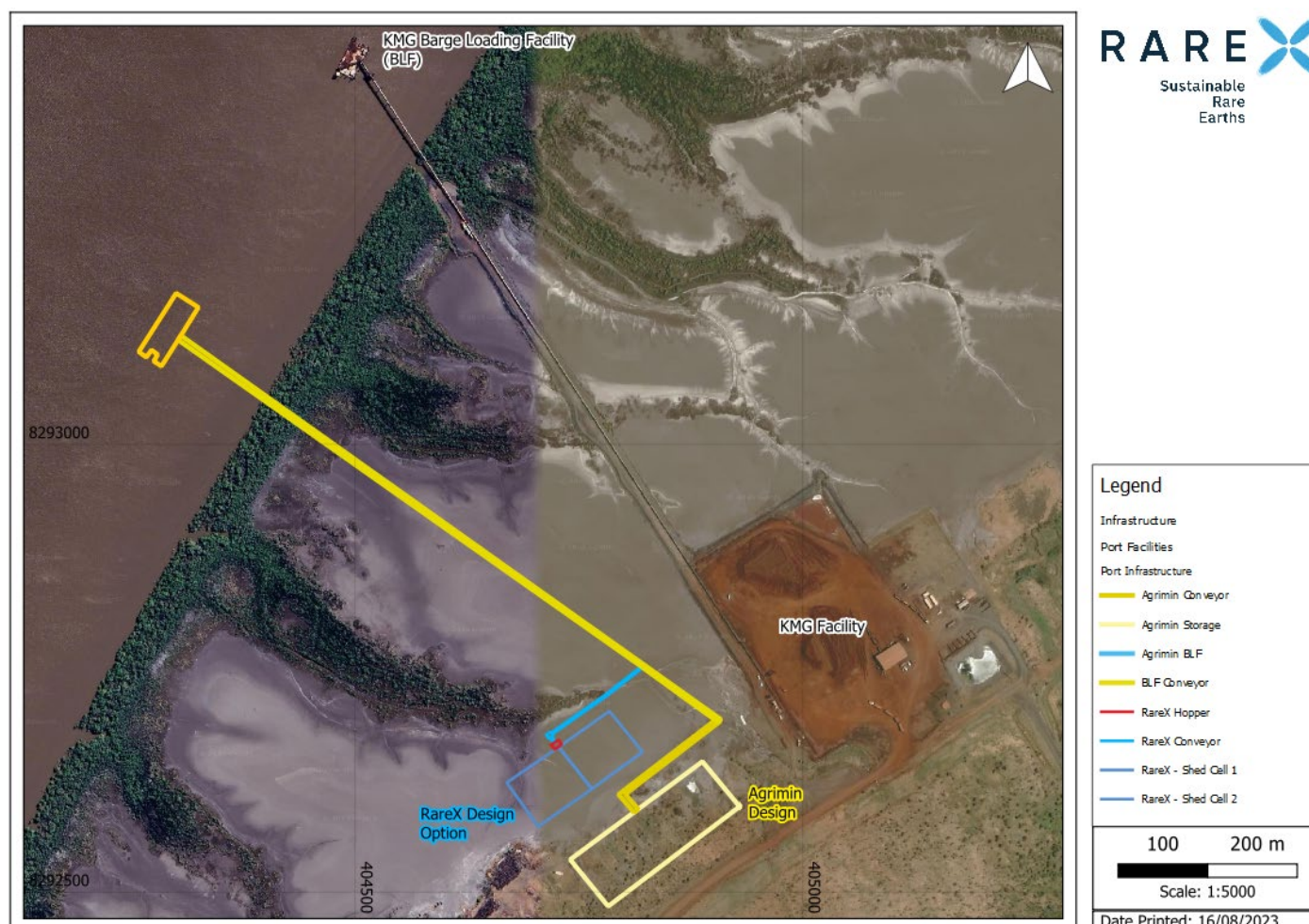
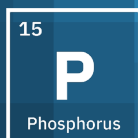


Figure 11-4: Agrimin option whereby RareX material is stockpiled alongside the Agrimin BLF. Other options include to secure lots opposite the Agrimin and KMG facilities and connect with mobile grasshopper conveyors.



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An advanced term sheet is being developed with a transshipment company, who have operating experience at the Port of Wyndham and provide the required equipment and operational personnel to execute the transshipping.

RareX plans to ship concentrate using Ultramax type vessels supported by port storage to provide space for 1 month of production/port shipping and a safety margin to cover late vessels or supply chain disruptions. The storage requirement can be further optimised as it is based off a larger production rate.

Port operating parameters considered in this study are shown in Table 11-2.

Table 11-2: Design basis for port facilities and transshipping operations

Design basis	Units	Value
Port throughput	tpa	728,000
Vessel size	tonnes	62,000
Port storage facility	tonnes	70,000
Vessels per year	#	12
KMG conveyor rate (operator feedback)	tph	800
Agrimin conveyor rate (design rate)	tph	1,000

On the basis of discussions with both KMG – who own an existing barge loading facility – and Agrimin, who plan on building a potassium sulphate loading facility which RareX may share as described in the current MoU, available capacities of the respective loading facilities are able to accommodate the proposed production rates as outlined in Table 11-1. KMG's facility, under consideration of current operational plans over the coming years, could handle up to 1 Mtpa of RareX product.

12 Financials

12.1 Capital Expenditure

Capital costs have a typical level of estimation accuracy, +/-40%, commensurate to a scoping study and an AACE Class 5 estimate (Table 12-1). All capital costs are presented in Australian dollars (A\$) and are presented in real dollars Q3 2023. USD to AUD FX has been considered at 1:1.4.

Equipment pricing was derived from a combination of vendor inputs, recent history database pricing on similar projects, build-up of rates and allowances. Indirect costs were estimated using factors derived from industry standard project factors.



Table 12-1: AACE estimation class⁷⁴

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic			
	LEVEL OF PROJECT DEFINITION Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges [a]	PREPARATION EFFORT Typical degree of effort relative to least cost index of 1 [b]
Class 5	0% to 2%	Concept Screening	Capacity Factored, Parametric Models, Judgment, or Analogy	L: -20% to -50% H: +30% to +100%	1
Class 4	1% to 15%	Study or Feasibility	Equipment Factored or Parametric Models	L: -15% to -30% H: +20% to +50%	2 to 4
Class 3	10% to 40%	Budget, Authorization, or Control	Semi-Detailed Unit Costs with Assembly Level Line Items	L: -10% to -20% H: +10% to +30%	3 to 10
Class 2	30% to 70%	Control or Bid/Tender	Detailed Unit Cost with Forced Detailed Take-Off	L: -5% to -15% H: +5% to +20%	4 to 20
Class 1	50% to 100%	Check Estimate or Bid/Tender	Detailed Unit Cost with Detailed Take-Off	L: -3% to -10% H: +3% to +15%	5 to 100

- Notes:
- [a] The state of process technology and availability of applicable reference cost data affect the range markedly. The +/- value represents typical percentage variation of actual costs from the cost estimate after application of contingency (typically at a 50% level of confidence) for given scope.
 - [b] If the range index value of "1" represents 0.005% of project costs, then an index value of 100 represents 0.5%. Estimate preparation effort is highly dependent upon the size of the project and the quality of estimating data and tools.

12.1.1 Stage 1 – DSO

Stage 1 capital costs assume that mining and processing departments are operated by contractors. As such only a small allowance was made to consider top soil pre-strip, mobilisation charge and development of a small scale open air workshop. No mining fleet or processing plant will be purchased or built and key costs required to support a contracting operation are captured under the NPI line item as it encompasses the enabling infrastructure requirements listed below Table 12-2.

The NPI costs are derived from the benchmark study by Primero which had the design basis for a 5 Mtpa beneficiation plant required for Stage 2 and assumed no Stage 1 infrastructure would be present. These costs have been adapted to reflect costs related to infrastructure required to run a contract mining operation for a DSO product in Stage 1.

⁷⁴ Cost Estimate Classification System – As Applied in Engineering, Procurement, and Construction for the Process Industries

The haulage road is another critical asset and costings are based on a PFS level road design by Shawmac, who designed the Northern Minerals Haulage Rd.

Table 12-2: CAPEX summary for Stage 1

Area	Construction cost (A\$ million)
Mining & processing	0.75
NPI	10
Haulage road	15
Port developments	9
Owners costs	3
Contingency	7
Total	45

NPI for Stage 1 comprises:

- Product haulage road which will be developed to suit Stage 1 operations. It is assumed that no road upgrades will be required at subsequent operation stages.
- Grade control lab, with benchtop X-ray fluorescence (XRF).
- Warehouse or equipment laydown.
- Communications equipment & IT.
- Gatehouse.
- Vehicle washdown facility.
- Water treatment facilities.

Existing production bores (4x) onsite are expected to supply sufficient water for a small mining operation.

A site access haulage road is proposed to be the focus of funding through development grants, for Stage 1, as it is a key enabler for regional development by de-risking stage 1 of the operation and supporting the subsequent development of Stages 2 and 3.

12.1.2 Stage 2 – Regolith Beneficiation

The Stage 2 operation will upscale and augment the Stage 1 equipment and infrastructure to construct a beneficiation plant for phosphate optimised beneficiation on site.

Capital costs for Stage 2 were estimated based on the Benchmark Study undertaken by Primero for a full beneficiation plant of 5 Mtpa capacity. The processing plant equipment costs has been scaled accordingly to suit the 2 Mtpa operation.

Table 12-3: CAPEX summary for Stage 2

Area	Construction cost (A\$ million)
Mine	17
Processing	164
Borefields	4
TSF	12
Owners costs	16
Indirects & EPCM	40
Contingency	51
Total	304

Assumptions:

- Mine:
 - Contract mining ongoing from Stage 1.
 - The A\$17M refers to capitalised strip from Stage 1 operations where bene plant feed material has been stockpiled in preparation for Stage 2 and as part of the DSO mining sequence.
- Processing:
 - In the economic cashflow model it is assumed that all required capital costs for the DSO and beneficiation plant are deployed the year prior to commissioning and operations.
 - The processing CAPEX line item also includes NPI such as:
 - Accommodation camp (partially built in Stage 1, and upgraded for stage 2 CAPEX (~A\$16M)
 - Assay laboratory (partially built in stage 1, expansion requirements for increased grade control in Stage 2, A\$0.25M)
 - Warehouse and reagent stores
 - Fixed plant workshop
 - Offices and ablution blocks (already built in stage 1, ~A\$0.1M)
 - Fuel storage (partially built in stage 1; A\$1M)
 - Mobile equipment
 - Power supply (included in OPEX, not CAPEX)
 - 2 Mtpa case scaled off of 5 Mtpa case which was developed as initial core case by Primero
- Borefields:
 - Local water supply from fracture bedrock aquifer assumed to be sufficient for small concentrator plant (Nominally 1-2 GL/a could be required)
 - Associated water treatment plant upgrades
- TSF:
 - Development of a starter cell with intent to use mine waste for ongoing development and assumed to be covered under Mining OPEX and sustaining capital expenses. Initial costings are based on the previous scoping study outcomes.

12.1.3 Stage 3 – Fresh Rock Conversion

This stage covers the conversion of the plant to handle lower grade fresh rock material, that is likely to have different mineralogy and rock characteristics, requiring plant modifications to ensure ongoing and optimised rare earth and phosphate mineral recovery. The main items for the Stage 3 operation included plant modifications and scale-up to accommodate lower feed grades and an addition of an ore sorting circuit to pre-treat the ore.

Table 12-4 below is a high-level estimate based on proposed items required for the adjustment of the beneficiation plant. Exact requirements will be subject to further metallurgical testing and engineering design after Stage 1 and 2 studies are completed.

Table 12-4: CAPEX summary for Stage 3

Item	Construction cost (A\$ million)
Scale up	29
Ore sorter	17
Plant modification	12
Other	6
Total	63

12.2 Operating Expenditure

Operating costs have been developed using the process design criteria parameters and information provided by third parties.

The average annualised cost per annum is shown in Table 12-5:

Table 12-5: Operating costs summary

OPEX breakdowns	Stage 1 (A\$/t product)	Stage 2a (A\$/t product)	Stage 2b (A\$/t product)	Stage 3 (A\$/t product)
Mining	40	18	36	57
Beneficiation	13	115	167	201
Haulage	54	54	54	54
Port operations	16	16	16	16
Total	123	203	273	328

Assumptions:

- Mining:
 - Costs are based on rates provided by Mining Plus and reflect mining costs of a typical drill and blast, load and haul operation in Australia.
- Processing:
 - Stage 1: Crushing and screening costs based on order of magnitude (OOM) quote from crushing services provider, to be refined further and given to competitive quote as well as

assessment. With the potential use of surface miners this might further improve optionality and costs in this space.

- Stage 2 & 3: Based on Primero led benchmark level studies and adapted for proposed plant size of 2 Mtpa.
- Includes incidentals such as:
 - Labour
 - Power
 - Reagents
 - Other consumables
 - Operational maintenance
 - Fuel
 - General & Administration
 - Workers Liability Insurance
 - Mobile equipment operating costs
- Haulage & Port Operations:
 - Product logistics between the mine site and the Port of Wyndham (535 km) is assumed to be contract conventional trucking.
 - Port Operating costs as per Ausenco study commissioned by RareX (2023) and KMG feedback
 - Transport costs are based on quotes and a logistic study completed by Ausenco and are in line with expected rates for road haulage as indicated by Freight Rates in Australia⁷⁵.
- Fuel:
 - Fuel costs are included in operational expenditure rates for mining, processing, road haulage and transshipping activities.
- General and Administration:
 - G&A costs have been based on allowances and Primero database for similar operations. It includes items such as:
 - Site office
 - Light vehicle insurance
 - Security contract
 - Office cleaning
 - Allowances for consultants, medical, entertainment and training for personnel
 - General costs for services, waste disposal and sewage disposal

12.3 Economic Outcomes

12.3.1 Financial Metrics

Financial modelling was undertaken with support from Naust Capital. The key project economic outcomes are presented in Table 12- as ranges across price assumptions previously discussed in Section 5.

Taxes and royalties applied are aligned to schedules as outlined in:

⁷⁵ Freight Rates in Australia, Bureau of Infrastructure and Transport Research Economics (bitre.gov.au)

- Mineral royalties - DMIRS⁷⁶ with regards Western Australian government royalties
- Draft mining heritage agreement with regards to Native Title royalties and fixed contributions
- Federal corporate tax rate of 30%

The following general parameters and assumptions were applied when performing the economic analysis:

General parameters and assumptions	
Discount rate	8%
Owners costs	8% of direct and indirect capital costs for each stage
Sustaining capital	2% of deployed capital each operating year
Product price	Pricing as indicated in result tables below
Product payability	90% for P ₂ O ₅ 20% for REE
State royalties	7.5% for DSO 5% for concentrate
Native title royalties	Based on draft Heritage Mining Agreement
Depreciation	Reducing balance method applied over 20yrs
Mine closure	10% of all CAPEX applied after the last operating period
Contingency	20% applied to direct and indirect capital costs

Phosphate product component price ranges have been determined and benchmarked according to their grades, market intelligence and forecasts, including from independent consultants and market reports. Additionally, a 10% discount has been applied for the mineral concentrate entering the phosphoric acid market. Current (July 2023) Argus reporting has 32% P₂O₅ Moroccan FOB at US\$258 per tonne⁷⁷ (A\$361 per tonne at an FX of 1.4).

Rare earth product component pricing considers a discounted Cummins Range total rare earth oxides (**TREO**) basket price (to take into consideration further processing requirements). The basket price is dominated by NdPr value. Adamas Intelligence forecasts that due to demand from the electric vehicle and wind power sectors the value of NdPr oxide consumed will increase eleven-fold by 2035. Prices are forecast to rise from current levels of US\$67,000 per tonne to US\$100,000 per tonne by 2025, increasing steadily to over US\$200,000 per tonne by 2035⁷⁸.

12.3.2 Economic Modelling

The below model outcomes represent RareX's primary strategy for bringing the Cummins Range project into production and is founded on the 3 staged approach, where:

- Stage 1: Targets the highest phosphate grades, from surface, to produce DSO that can be delivered at a very low CAPEX point. This is a strategically important step to get primary approvals in place and develop the supply chain and operational capabilities needed whilst developing and funding the more complex beneficiation Stages 2 and 3.

⁷⁶ www.dmp.wa.gov.au/Minerals/Royalties-1544.aspx

⁷⁷ Argus monthly phosphorous outlook, July 2023 Average

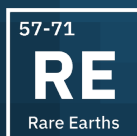
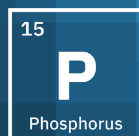
⁷⁸ <https://miningreview.com/energy/pensana-looks-to-achieve-first-production-at-longonjo-in-2025>

- Stage 2: Additional capital deployment for the construction of a beneficiation plant to unlock the critical minerals rare earth component of this deposit and produce a rare earth and phosphate concentrate from regolith rock with grades below the DSO cut off.
 - Stage 2a – Considers high grade bene feed. This is preferentially mined to increase revenues in earlier periods to payback the cost of Stage 2 as quick as possible.
 - Stage 2b – Considers low grade bene feed for the remainder of the regolith resource.
- Stage 3: Focus shifts towards extracting fresh rock, which has lower head grades, from lower resource definition, and differences in mineralogy to consider. Assumptions placed on capital requirements are high level and based on hypothetical requirements derived from early-stage metallurgical testing.

The results of the economic modelling are shown in Table 12-6 and Figure 12-1 below.

Table 12-6: Project financial metrics – nominal case

Mining physicals	Stage 1	Stage 2a	Stage 2b	Stage 3
Ore mining rate (dry) (ktpa)	300	1,227	1,747	2,500
Waste mining rate (dry) (ktpa)	1,943	1,297	1,847	3,779
Strip ratio	6.5	1.1	1.1	1.5
Average grades (%)	23% P ₂ O ₅	14% P ₂ O ₅ ; 1.4% TREO	10% P ₂ O ₅ ; 0.7% TREO	8% P ₂ O ₅ ; 0.4% TREO
Production physicals	Stage 1	Stage 2a	Stage 2b	Stage 3
Product type	DSO	Phos-RE Con	Phos-RE Con	Phos-RE Con
Av. prod. rate (dry) (ktpa)	270	670	463	480
Average grade (%)	23% P ₂ O ₅	35% P ₂ O ₅ ; 2.5% TREO	33% P ₂ O ₅ ; 2.3% TREO	32% P ₂ O ₅ ; 1.6% TREO
Duration (yr)	3.0	2.0	8.0	5.0
Costs	Stage 1	Stage 2a	Stage 2b	Stage 3
CAPEX (A\$M)	45	304	-	63
OPEX (A\$M/a)	35	148	137	171
OPEX (A\$/t Product)	123	203	273	328
Total SUSCAP (A\$M/a)	0.9	6.6	6.6	8.2
Closure	-	-	-	41
OPEX breakdowns	Stage 1	Stage 2a	Stage 2b	Stage 3
Mining (A\$/t product)	40	18	36	57
Beneficiation (A\$/t product)	13	115	167	201
Haulage (A\$/t product)	54	54	54	54
Transshipping (A\$/t product)	16	16	16	16

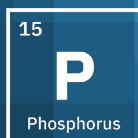


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CAPEX breakdowns	Stage 1	Stage 2a	Stage 2b	Stage 3
Mine (A\$M)	0.5	17	-	-
Processing (A\$M)	0.25	164	-	63
NPI (A\$M)	10	4	-	-
New road (A\$M)	15	-	-	-
TSF (A\$M)	-	12	-	-
Port upgrades (A\$M)	9	-	-	-
Owners Costs (incl. EPCM) (A\$M)	3	56	-	-
Subtotals (A\$M)	37	253	-	63
Contingency (20%) (A\$M)	7	51	-	-
Total (A\$M)	45	304	-	63
Production outcomes	Stage 1	Stage 2a	Stage 2b	Stage 3
Average annual TREO production (ktpa)	-	17	11	7
Average annual P ₂ O ₅ production (ktpa)	63	233	153	156

Products	Low-Case	Mid-Case	High-Case	Mid-Case RE Spot Price
Stage 1 - DSO (A\$/t)	203	254	304	254
Stage 2a - Phos-RE Con (A\$/t)	515	584	652	485
Stage 2b - Phos-RE Con (A\$/t)	480	545	611	456
Stage 3 - Phos-RE Con (A\$/t)	404	468	532	407
Pricing basis	Low-Case	Mid-Case	High-Case	Mid-Case RE Spot Price
Morocco 32% FOB basis (US\$/t)	200	250	300	250
NdPr oxide basis (US\$/kg)	110	110	110	67
P ₂ O ₅ con. payability (%)	90%	90%	90%	90%
TREO con. payability (%)	20%	20%	20%	20%
Tax and royalties	Low-Case	Mid-Case	High-Case	Mid-Case RE Spot Price
Government tax (30%) (A\$M)	212	406	607	178
Government royalty (A\$M)	178	205	231	175
NT contributions (A\$M)	74	84	94	72
Economic performance	Low-Case	Mid-Case	High-Case	Mid-Case RE Spot Price
NPV8 (pre-tax) (A\$M)	227	549	872	176
NPV8 (post-tax) (A\$M)	101	333	562	66
IRR (pre-tax) (%)	23%	39%	54%	22%





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IRR (post-tax) (%)	15%	27%	38%	13%
Stage 1 average EBITDA (A\$/a)	12	23	33	23
Stage 2a average EBITDA (A\$/a)	173	216	259	154
Stage 2b average EBITDA (A\$/a)	69	97	125	59
Stage 3 average EBITDA (A\$/a)	8	35	61	10
Average EBITDA LOM (A\$/a)	54	81	107	50
Stage-1 payback (pre-tax) (yr)	3.0	1.6	1.1	1.6
Stage-2a payback (pre-tax) (yr)	1.8	1.4	1.2	2.0
Stage-2b payback (pre-tax) (yr)	-	-	-	-
Stage-3 payback (pre-tax) (yr)	7.0	1.7	1.0	6.1

Notes:

- ktpa = kilo tonne per annum
- CAPEX = capital expenditure
- OPEX = operating expenditure
- SUSCAP = sustaining capital
- Government royalties: 7.5% DSO, 5% Con
- Native title (NT) contributions per currently negotiated outcomes - Note the agreement has not been executed.
- P₂O₅ con. payability = percentage of the linearly derived price of Cummins Range product from Morocco FOB, received as revenue
- TREO payability = the percentage of the product basket price of Cummins Range, received as revenue.



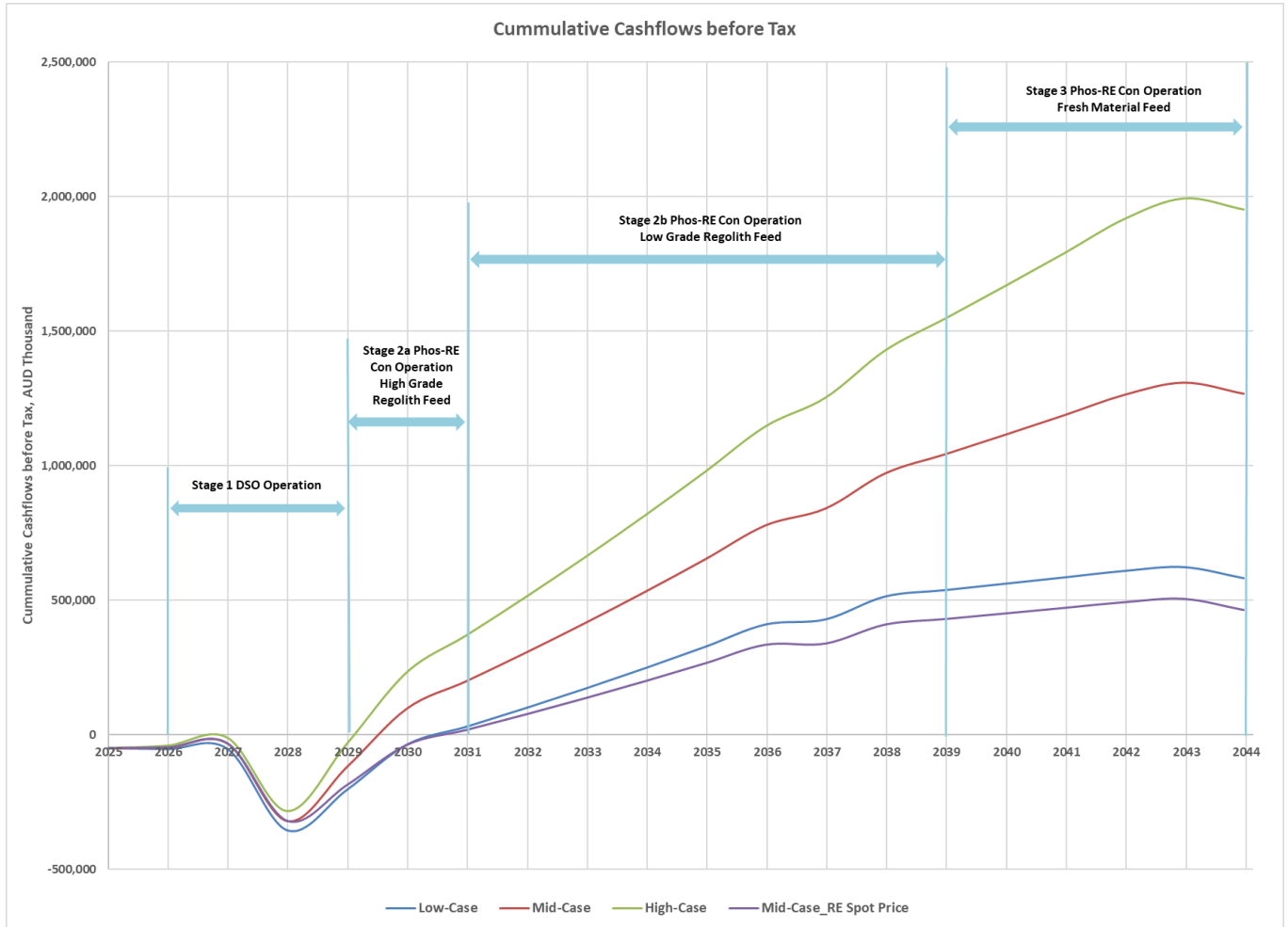


Figure 12-1: Cashflows of Cummins Range LOM operation

12.3.3 Sensitivity Analysis

Figure 13-1 shows NPV sensitivities to a +/-10% fluctuation across select parameters.

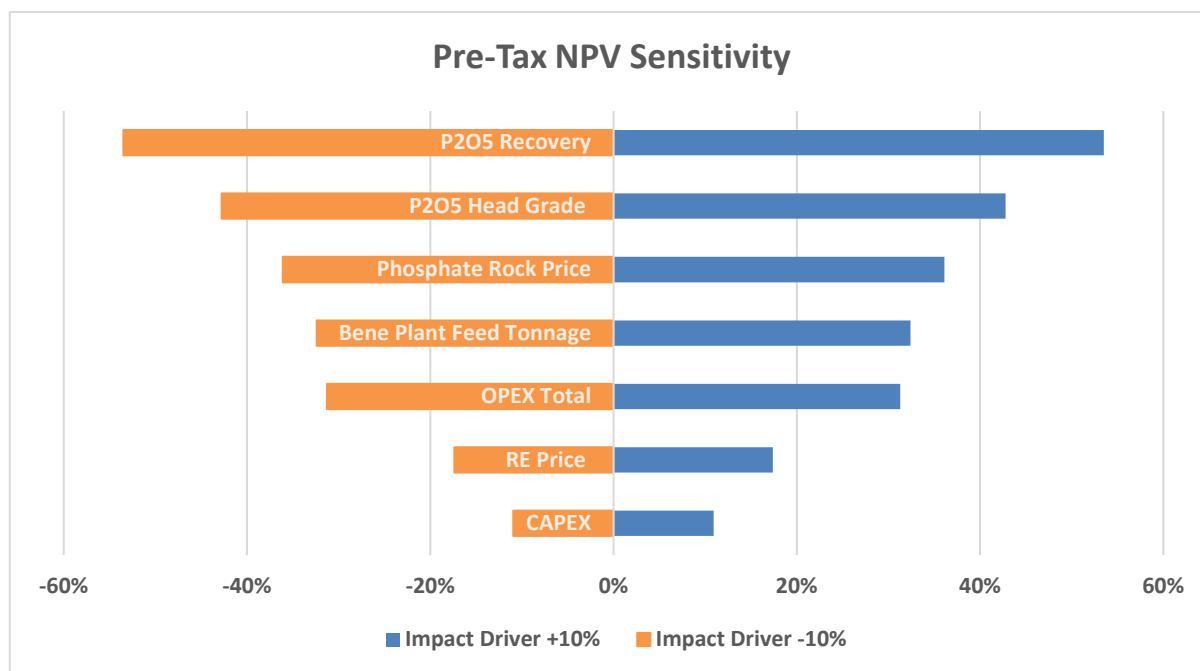


Figure 12-2: NPV sensitivity by percentage change

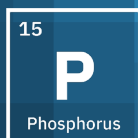
12.4 Funding

To achieve the range of outcomes indicated in the Study, funding of approximately A\$45M (including 20% contingency) will likely be required for Stage 1 of the Project. This includes the cost of the site access road (~A\$18M, including 20 % contingency) which is assumed to be funded through a development grant.

For Stage 2, a further A\$304M (including 20% contingency) will be required to develop Stage 2, this includes capitalised movement - valued at A\$17M - of material during Stage 1 operations that can be beneficiated during Stage 2 operations.

Stage 3 costings (~A\$63M) are high-level assumptions without specific engineering assessments. Based on current early-stage metallurgical understanding of the fresh rock material, items such as an ore sorter may be installed to aid recovery as well as additional cleaner cells to manage lower grade materials.

Given the low up-front capital, the low-risk development approach, and the strategic nature of Cummins Range as a critical minerals rare earth project, a Kimberley-located operation, and a future employer of aboriginal people from the disadvantaged communities of Halls Creek and Billiluna, funding is proposed through a combination of grant, debt and equity.



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The 50km road linking the Project to the Tanami Road is proposed by way of government sourced grant in a manner similar to the Seafarms road (A\$18M⁷⁹), and the Northern Minerals' road (A\$50M⁸⁰) - funded from state and federal budgets respectively. NAIF is anticipated to provide a substantial portion of project debt.

Relevant funding initiatives, including in the agricultural sector, include the following:

- Regional Grants Programme (up to A\$15M).
- CMDP grant (A\$50M over 3 years, typical grant sizes are c. A\$5M).
- Kimberley Development Commission Grants.
- NAIF Loan (A\$500m earmarked from Critical Minerals Strategy).
- Export Finance Australia – Critical Minerals Facility Loan (A\$2B facility).
- State and federal budget inclusion.
- A\$15B National Reconstruction Fund, where the resources sector is a priority area for companies conducting value-add in resources, supporting renewables and low emission technologies and enabling regional capabilities.
- Ord River Improvement Scheme in support of agricultural initiatives.

While RareX has reasonable grounds to believe it will be able to finance the Project using one or more of the avenues discussed below, the economic analysis does not price in the cost of funding over and above the application of the discount factor disclosed in Section 12. Practically, there are a number of avenues expected to be available to RareX to ultimately fund the development of Cummins Range, particularly due to the strategic nature of the products.

Investors should note that there is no certainty that RareX will be able to raise the amount of funding when needed. It is also possible that such funding may only be available on terms that may be dilutive or otherwise affect the value of RareX's existing shares.

13 Environmental Setting

The environmental setting of the Project has been described in an Environmental Strategy Document produced by MBS Environmental in July 2022 and updated in February 2023.

13.1 Biographic Region

The Interim Biogeographic Regionalisation for Australia (**IBRA**) places the CRP on the border of the Kimberley Interzone Subregion of the Ord Victoria Plain Region and the McLarty Subregion of the Great Sandy Desert Region. Bioregions were described by Thackway and Cresswell (1995)⁸¹.

The Ord-Victoria Plain Bioregion is described as comprising *"Level to gently undulating plains with scattered hills on Cambrian volcanics and Proterozoic sedimentary rocks; vertosols on plains and predominantly skeletal soils on hills; grassland with scattered Bloodwood and Snappy Gum with spinifex and annual grasses. It experiences dry hot tropical, semi-arid summer rainfall."*

⁷⁹ <https://seafarms.com.au/wp-content/uploads/2021/08/2236045.pdf>

⁸⁰ <https://investorinsight.com.au/browns-range-access-upgrade-to-follow-commitment-from-wa-govt-in-state-budget-northern-minerals/>

⁸¹ An Interim Biogeographic Regionalisation for Australia, Thackway and Cresswell, 1995



The Great Sand Desert Bioregion is described as *"Mainly tree steppe grading to shrub steppe in south, comprising open hummock grassland of Triodia pungens and Plectrachne schinzii with scattered trees of Owenia reticulata and Bloodwoods, and shrubs of Acacia spp., Grevillea wickhamii and G. refracta, on Quaternary red longitudinal sand dune fields overlying Jurassic and Cretaceous sandstones of the Canning and Armadeus Basins. Casuarina decaisneana (Desert Oak) occurs in the far east of the region. Gently undulating lateritised uplands support shrub steppe such as Acacia pachycarpa shrublands over Triodia pungens hummock grass. Calcrete and evaporite surfaces are associated with occluded palaeo-drainage systems that traverse the desert; these include extensive salt lake chains with samphire low shrublands, and Melaleuca glomerata - M. lasiandra shrublands. Monsoonal influences are apparent in the north western sector of this region. It experiences arid tropical with summer rain."*

13.2 Climate

The Project area has a tropical monsoonal climate with distinct wet and dry seasons, separated by brief transition periods. The Kimberley region is subject to a hot and humid wet season from November to April, and a warm dry season from May to October. The region receives approximately 90% of its annual rainfall during the summer wet season. Most of the rainfall is due to monsoonal lows and cyclonic disturbances, with frequent thunderstorm activity. The dry season experiences infrequent rainfall, with consecutive dry months common.

Evaporation rates are high throughout the year, and relative humidity is high during the wet season. Evaporation can reach, on average, 11 mm/day towards the end of the dry season (BoM 2019). Prevailing winds are usually the north-westerly monsoons during the wet season and south-easterly trade winds during the dry season.

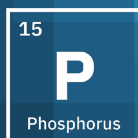
13.3 Hydrology and Hydrogeology

The Project is in the Sturt Creek Catchment. Based on satellite imagery, publicly available watercourse datasets provided by Geoscience Australia and field knowledge, there are no creeks or rivers located within E80/5092 or in close proximity to the Cummins Range site, although the existing access road to the site intersects local surface water systems.

The Project is situated within the proclaimed Canning-Kimberley Groundwater Area.

Mapping of the hydrogeological units of Western Australia completed by the Department of Mines in 1989 indicate that the Project area is located within the fractured rock province of the Halls Creek Orogen. Mapped aquifers within E80/5092 are Proterozoic sandstones and metamorphic rocks. These units are described as indurated and often deformed and metamorphosed, resulting in low permeability, fractured, and weathered local aquifers. Groundwater is generally restricted to weathered zones and fractures that extend to depths of up to approximately 100 (m bgl). Groundwater yields and salinity are highly variable.

A groundwater investigation program was performed on site by Advisian in 2022 to provide baseline data for the Project area. Groundwater levels ranged from 371 to 373 mAHD onsite across seven sets of paired shallow and deep monitoring bores. Bore testing identified connections between the weathered/saprolite and underlying fresh rock, indicating a single aquifer system flowing from north east to south west with an average hydraulic conductivity of 0.03 to 2.14 m/day. Water quality data indicated:



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- Groundwater is saline and slightly alkaline; temperature ranged between 24.9 and 29.7 °C.
- Concentrations of major ions are moderate to high and the hydro-chemical facies was mostly sodium chloride with elevated levels of sulfate.
- Concentrations for most metal and metalloid elements were very low or below their respective limit of reporting. Elevated levels of fluoride were detected above the Livestock Drinking Water Default Guideline Value (DGV)⁸² trigger value of 2 mg/L for all sampling locations. Concentrations of selenium (0.02 – 0.07 mg/L) above the Livestock DGV trigger value of 0.02 mg/L were also reported for deep bores MB3D and MB6D. Levels of boron were moderate and varied from 0.97 – 1.65 mg/L.
- Accumulated gross alpha (2.64 – 8.37 Bq/L) and gross beta (0.96 – 3.14 Bq/L) content is elevated due to mineral inclusions of radionuclide elements (uranium, thorium, radium, polonium) in the ore lode at equilibrium with local groundwater. Levels significantly exceeded the Australian Drinking Water Guidelines screening value of 0.5 Bq/L for both gross alpha and beta activity⁸³.

Additional groundwater monitoring has commenced to provide better knowledge of groundwater level fluctuations and water quality over time.

13.4 Ecology

The Project is located on the border of the Kimberley Interzone Subregion of the Ord Victoria Plain Region and the McLarty Subregion of the Great Sandy Desert Region⁸⁴.

Animal Plant Mineral (APM) conducted flora, vegetation and fauna studies for the Project in 2012 with the survey area corresponding with E80/5092. Additional flora, vegetation, fauna, habitat and targeted fauna surveys have been undertaken in the dry season of 2022 and immediately following the wet season of 2023 (May 2023) with the survey area focusing on the proposed mining lease and site access road. Results of the 2022 and 2023 flora and vegetation surveys are being compiled.

APM identified three broad landforms during the 2012 assessment: sandplains, sand dunes, and clay pans with the dominant landform being identified as sandplain accounting for 92% of the exploration tenement. Rapallo in the 2022 dry season survey recorded 115 flora taxa, representing 31 families. No threatened flora is known to be present. Three conservation significant (Priority 3) flora species were recorded (*Indigofera ammobia*, *Comesperma sabulosum* and *Corynotheca asperata*). Vegetation condition is variable and reflects disturbances related to fire and feral animals. Weeds were recorded as seldom and non-aggressive species.

Rapallo in the 2022 dry season survey identified circa 29 reptile species, 1 frog, 15 native mammal species and 3 introduced mammal species. The fauna species compilation appears to be typical of the Eremaean broad climatic region rather than the Northern, reflecting the Triodia sandplain habitat that dominates the survey area. Four conservation significant fauna species were recorded:

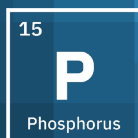
- Greater bilby - listed as Threatened under Federal and State legislation. Scats, tracks and burrows were observed.

⁸² ANZECC 2000/ANZG 2018 Water Quality Guidelines

⁸³ National Health and Medical Research Council – Australian Drinking Water Guidelines, 2011

⁸⁴ An Interim Biogeographic Regionalisation for Australia, Thackway and Cresswell, 1995





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- Brush-tailed mulgara -listed as Priority 4 under State legislation. Burrows and tracks were observed and one individual was trapped.
- Grey falcon - listed as Threatened under Federal and State legislation. One bird was observed.
- Tropical short-tailed mouse -listed as Priority 4 under State legislation. One individual was trapped at two locations.

It was noted that there is likelihood of occurrence of Night Parrot (*Pezoporus occidentalis*) which is listed as a Threatened species at a Federal and State level. The 2022 dry season survey identified presence of some potential habitat noting that influences of recent and repeated burning would likely have reduced suitability for the species. Additional targeted survey work was undertaken in the 2023 wet season survey. Results of this are still being compiled.

Feral animals are known to be present in the project area, particularly cats and after the large 2023 rainfall events, cane toads were observed in low lying areas.

13.5 Areas of Conservation Significance

No State or Commonwealth listed Threatened Ecological Communities (**TECs**) are known to occur within the vicinity of the Cummins Range Project (**CRP**) area.

The closest Environmentally Sensitive Area (**ESA**) is Wolfe Creek Meteorite Crater National Park, 60km to the east of the CRP, on the eastern side of the Tanami Road.

The Ord River Regeneration Reserve is 88km north east of the Project and is managed by the Department of Biodiversity and Conservation (**DBCA**). The reserve aims to revegetate bare, severely degraded and eroded parts of the Ord River catchment in order to minimise siltation of Lake Argyle, which provides irrigation water to the Kununurra area. It covers an area of over 10,000km².

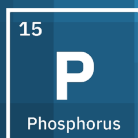
13.6 Environmental Studies

A number of baseline environmental studies will be required to support future environmental approval applications recognising the information needs will be staged to match the proposed staged development of the Project. Some of these studies have commenced and others are planned to be undertaken during the remainder of 2023 and into 2024. Timing for completion of studies has been scheduled to take into account availability of input information and site access availability.

It is recognised that the current site layout is conceptual, and changes are likely to occur as feasibility studies progress. Baseline ecological studies focused on the full proposed mining lease area and proposed site access road recognising the layout and proposed disturbance footprints may change. Collection of baseline information for the full area of the proposed mining lease will allow flexibility in planning and will aid in giving context to actual proposed disturbance areas recognising the paucity of baseline information for the local and regional area.

RareX has sought involvement of representatives of the Jaru people in baseline ecological surveys undertaken in 2023 with the aim of recognising cultural ecological values as well as scientific values.





Early engagement with Traditional Owners for completion of cultural heritage studies (archaeology and ethnographic assessments) will also be undertaken.

Knowledge from baseline studies will be incorporated into PFS, DFS and detailed design to minimise adverse environmental and social impacts, whilst maximising benefits.

14 Social Setting

The Cummins Range Project site is remote and completely on Jaru native title determined land. The Billiluna community, part of the Tjurabalan People, 60km to the south-east is the closest village community.

14.1 Native Title

E 80/5092 is situated within Jaru Native Title Determination Area WCD2018/013.

In October 2019, a Native Title Heritage Protection and Mineral Exploration Agreement was executed with the Kimberley Land Council (KLC) in relation to Jaru Lands in the East Kimberley where the Project is located. The Agreement provides for a cooperative framework in which the Company can conduct exploration on Project tenements that are granted on Jaru Lands and provides for community benefits to the Jaru People including opportunities for employment.

RareX is progressing development of a mining agreement for the Project with the Jaru People.

14.2 Indigenous Protection Title

An IPA is an area of Indigenous-owned land or sea where traditional Indigenous owners have entered into an agreement with the Australian Government to promote biodiversity and cultural resource conservation-making up over a third of Australia's National Reserve System.

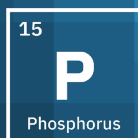
The Paruku IPA was declared in September 2001. It is located about 34km south of the Project and covers an area of 4,300 km² incorporating the Lake Gregory System, which is 90km from the Project. Paruku (ba-roo-goo), the Walmajarri name for the Lake Gregory System, is a remote, semi-permanent freshwater wetland. The area is owned and managed by the Walmajarri People to preserve its cultural and ecological values. Paruku is the terminus of several major dreaming tracks, including the Tjurabalan tingarri (Dreaming), which travels along Sturt Creek to the lakes, and links several language groups, predominantly Jaru and Walmajarri.

The Warlu Jilajaa Jumu IPA was declared on 9 November 2007. It is located about 78km south of the Project and covers a 16,430 km² area in the Great Sandy Desert, in the north eastern section of Ngurrara country. The IPA's name comes from the Walmajarri words Warlu, the fire used to keep country healthy, Jila meaning living water, permanent waterholes, and Jumu, seasonal soaks.

No IPAs exist within the proposed development area.

14.3 Aboriginal Heritage

A search of the DPLH Aboriginal Heritage Inquiry System (AHIS) indicates there are no Registered Aboriginal Heritage Sites or Other Heritage Sites within the Project area.



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RareX has worked with the Jaru people to obtain clearances for exploration related land disturbance, and continues to work with the Jaru and their PBC.

14.4 Pastoral Land Use

The primary land use in the area of the Project is rangeland grazing of cattle.

E 80/5092 overlies Lamboo Pastoral Lease (LPL N049432) and Carranya Station (LPL N049659). Lamboo homestead is located approximately 94km north northeast of the Project and Carranya homestead is located approximately 64km east of the Project.

The Carranya Station lease is held by the Indigenous Land and Sea Corporation (**ILSC**) and is subleased to the Yougawalla Pastoral Company.

Lamboo Station pastoral lease is owned by the Ngunjiwirri Aboriginal Corporation (**NAC**) on behalf of the Ngunjiwirri People. The property was purchased in 1994 by the (then) Aboriginal and Torres Strait Islander Commission (**ATSIC**) through the WA Aboriginal Lands Trust (**ALT**) and handed over to the local people in the same year. It is run as an agricultural enterprise and to provide land for the Jaru People to live.

14.5 Social Studies

A number of baseline social and economic studies are considered to be beneficial for Project development and implementation. Whilst not required by the West Australian approvals process, the information allows for alignment with RareX ESG commitments and provides a basis for investors with strong requirements around sustainably operating organisations.

Social and economic baseline studies may include:

- Demographics - population, age profile, employment, income, and levels of education.
- Economic overview of local area and East Kimberley region.
- Employment, livelihood and business.
- Community - identification of existing emergency services, health and well-being services, education services, community services and transport options.
- Housing and accommodation -availability and standards of short and long term accommodation options.
- Social cohesion within local and regional context.
- Indigenous values and interests.
- Indigenous participation - employment, training, business development opportunities.
- Economic assessment.

Scopes of works have been developed in collaboration with WSP-Golder and will be triggered as part of upcoming study phases.

These planned studies are consistent with RareX's ESG framework and are also a commitment to the Jaru Traditional Owners.

15 Stakeholder Identification

WSP Golders have been engaged by RareX to be the lead consultant for stakeholder engagement. MBS environmental consultants will work with WSP Golders and RareX to identify, engage with stakeholders and document stakeholder engagement.

Inclusion of information regarding stakeholder engagement is a requirement of the majority of all environmental approval applications. This includes provision of details of individual engagement activities, key concerns and actions taken to resolve or address concerns. A Stakeholder Engagement Register has been developed and is actively maintained.

A comprehensive list of stakeholders that are considered likely to have interests in the environmental and or social impacts of the Project has been prepared. Community road shows have been undertaken and will increase as project definition improves.

16 Opportunities and Risks

Table 16-1: Project opportunities summary

Opportunities	Action
DSO stage has potential for further mine schedule optimisation to reduce strip, particularly for a DSO standalone configuration.	<ul style="list-style-type: none"> As part of a DSO DFS study fully optimise for a 0.3 Mtpa case using DSO-23 as a grade target
Mine schedules to be improved to maximise high grade loading of plant early in timeline and potentially for a reduced plant installation to match the higher-grade feed.	<ul style="list-style-type: none"> For Stage 2-3 PFS studies, develop schedules that maximise grade loading upfront rather than targeting steady grade delivery. Link with plant design considerations and model OPEX over time as variable costs should improve.
Value-add of vertical integration to be tested into phosphorous supply chains (e.g. phosphoric acid, refined fertilisers such as superphosphate or MAP/DAP ⁸⁵); also supports offtake value-in-use analysis.	<ul style="list-style-type: none"> OOM desktop study with potential vendor on high level economics. Lab-scale trial of pre-leach flowsheet for phosphoric acid production to recover REE. Test alternative flowsheet with REE reporting into CaSO₄ residue from phosphoric acid production process. Pilot plant scale trial for phosphoric acid production.
Optimisation of crushing and milling infrastructure to reduce installation and power demand. Particularly in corroboration with the use of surface miners.	<ul style="list-style-type: none"> Rock properties analysis initiated to confirm suitability to surface mining. Metallurgical tests at coarser grind size in progress for circuit optimisation.
Improve Stage 2 grind size for beneficiation to ~106µm from currently 53µm	<ul style="list-style-type: none"> Verify applicability over a larger array of samples, lithologies and weathering zones.
Conduct plant trials to evaluate true bioavailability across key soil and plant types for value-in-use modelling	<ul style="list-style-type: none"> Start with glasshouse trials of select soils and crops to determine DSO performance vs commercially available products and zero-P soils.
DSO crushing and screening tests to determine size based upgrade potential	<ul style="list-style-type: none"> Drilling in progress for sample collection and tests are planned for DSO crushing, screening and comminution characterisation.

⁸⁵ Mono- and di-ammonium phosphate fertilisers, they are the current incumbent products in use across north Australia.



Opportunities	Action
Alternative case considerations (start with Stage 2)	<ul style="list-style-type: none"> Assess viability to fund, design and schedule highest grades (from DSO) into beneficiation plant from start of Project, options to partially defer plant components during the first few years of high P₂O₅ grade feeds.
Use of surface miners to simplify approvals and eliminate primary crushing	<ul style="list-style-type: none"> Continue assessment of viability with vendor and determine costings for DFS.

Table 16-2: Project risk summary

Risks	Action
Product markets for available product grades need to be secured through offtake agreements	<ul style="list-style-type: none"> Continue work with key consultants to develop domestic and regional markets.
Geotechnical drives timing risk for submission and economic risk for current whittle optimisation	<ul style="list-style-type: none"> Conduct geotechnical drilling and testing as soon as possible in FY24.
Pits & schedules not fully optimised to 23% DSO and early high-grade loading	<ul style="list-style-type: none"> Address as part of next study. Should generally provide upside.
Metallurgical samples underpinning recoveries and mass yields relatively limited across the deposit	<ul style="list-style-type: none"> Continue metallurgical test program in alignment to selected inventory.
Hydrogeology impacts to geotechnical and materials handling considerations	<ul style="list-style-type: none"> Continue baseline studies and include considerations in metallurgy, mining and geotechnical studies.
Heritage or environmental baseline surveys identify matters of materiality which slow down approval process due to risk management requirements	<ul style="list-style-type: none"> Complete all surveys as soon as practicable. Develop mitigation and management plans to highest standards if identified.

17 Study Contributors

RareX has used a select group of fit-for-purpose consultants to reach the level of project definition described within this announcement. Although likely to continue with the same group, RareX will continually strive to select the right combination of consultants that best suits the Project.

Table 17-1: Project consultants

Study component	Lead
Scoping Study Lead	RareX
Geology & Mineral Resource	Auralia / RareX
Metallurgy and Mineralogy	Gavin Beer Auralia Met Nagrom ANSTO Tomra ALS LabWest Primero
Mining	Mining Plus
Process Flowsheet	Primero
Process Plant	Primero
Site Infrastructure	Primero

Study component	Lead
Environmental, Permitting, Social and Community Impact	MBS Environmental WSP Golders
Capital and Operating Cost	Primero Mining Plus Ausenco Shawmac
Product Pricing & Marketing	RareX Argus Offtake consultants

18 Timeline

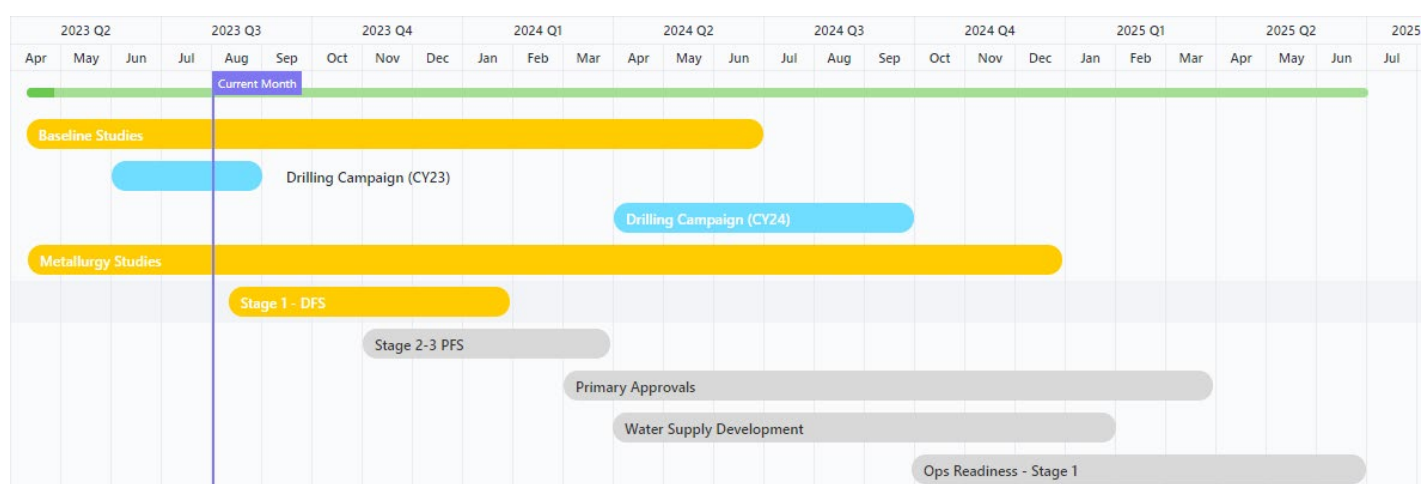


Figure 18-1: Anticipated timeline of future activities. The timetable is indicative only and is subject to change.

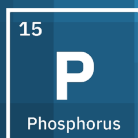
19 References

19.1 Mineral Resource Comparison

Mineral resource	Date	Project stage	Source of data
RareX	1/5/23	Scoping Study	Cummins Range Resource soars to 519Mt at 0.32% TREO, 4.6% P ₂ O ₅ becoming Australia's largest undeveloped rare earths deposit, https://wcsecure.weblink.com.au/pdf/REE/02660886.pdf .
Arafura	5/4/23	FEED	Future Facing Commodities Conference, https://wcsecure.weblink.com.au/pdf/ARU/02651944.pdf .
ASM	29/7/23	EPCD	Dubbo Project resources and reserves, https://asm-au.com/dubbo-project/resources-and-reserves/ .
VHM	26/3/23	Detail Design	Goschen Project DFS Refresh delivers NPV of approximately A\$1.5 billion and 44% IRR, https://wcsecure.weblink.com.au/pdf/VHM/02648405.pdf .
Hastings	8/3/23	DFS	Corporate Presentation - Into the Future, https://www.investi.com.au/api/announcements/has/1e680c3a-273.pdf .
Dreadnaught	5/7/23	Exploration	40% Increase in Resource Tonnage at Yin – Mangaroon (100%), https://www.investi.com.au/api/announcements/dre/2c555682-089.pdf .
Australian Rare Earths	3/4/23	Exploration	Koppamurra Mineral Resource up 25%, Indicated Resource up 40%, drilling points to a rare earth mineral province, https://ar3.com.au/3-4-23-koppamurra-mineral-resource-up-25-indicated-resource-up-40-drilling-points-to-a-rare-earth-mineral-province/ .
Northern Minerals	30/3/23	DFS	UBS Resources Corporate Day, https://wcsecure.weblink.com.au/pdf/NTU/02649250.pdf

19.2 Pricing Analysis

Phosphate pricing	Source of data
Argus Current	Argus monthly phosphorous outlook, July 2023 Average.
Argus Forecast 2035 Price	Phosphate Rock Analytics report - Argus 2Q2023 forecast.
IndexMundi	Commodity Price – Rock Phosphate, https://www.indexmundi.com/commodities/?commodity=rock-phosphate
CRU Forecast 2023 Price	Centrex Company Update and Future Outlook, https://www.listcorp.com/asx/cxm/centrex-limited/news/company-update-and-amp-future-outlook-2902097.html .
First Phosphate	First Phosphate Announces Positive Results of Preliminary Economic Assessment at its Lac à l'Original Property in Quebec, Canada, https://firstphosphate.com/preliminary-economic-assessment/ .
Centrex 3Q23	Quarterly Activities Report – March 2023, https://app.sharelinktechnologies.com/announcement/asx/114a29fb9a344e3c22dbcd1ba0e6b43d .
Centrex 4Q23	Quarterly Activities Report – June 2023, https://app.sharelinktechnologies.com/announcement/asx/2815eb9d17c279307ecb3b9beb7d2c3b .
Aguaia	Updated BFS ff Phosphate Project Confirms Robust Economics, https://aguiaresources.com.au/wp-content/uploads/2023/03/TEPP_BFS_2023_Final_compressed-1.pdf
Minbos	DFS Delivers Compelling Economics for Cabinda Phosphate Project, https://www.investi.com.au/api/announcements/mnb/aff7272d-fde.pdf



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NdPr pricing	Source of data
Adamas June 2023	Update on Longonjo Financing and Development, https://pensana.co.uk/wp-content/uploads/2023/07/Pensana-LSE-Announcement-_Funding-Update-27-June-2023.pdf .
Adamas Forecast 2035	Update on Longonjo Financing and Development, https://pensana.co.uk/wp-content/uploads/2023/07/Pensana-LSE-Announcement-_Funding-Update-27-June-2023.pdf .
Asian Metal	Prices, https://www.asianmetal.com/price/initPriceListEn.am?priceFlag=6 .
Hastings	Corporate Presentation - Into the Future, https://www.investi.com.au/api/announcements/has/1e680c3a-273.pdf .
Arafura	Nolans Project Update, https://wcsecure.weblink.com.au/pdf/ARU/02597137.pdf .
Peak Rare Earths	Ngualla Rare Earths Project Completion of Bankable Feasibility Study Update, https://wcsecure.weblink.com.au/pdf/PEK/02586372.pdf .
Pensana	Update on Longonjo Financing and Development, https://pensana.co.uk/wp-content/uploads/2023/07/Pensana-LSE-Announcement-_Funding-Update-27-June-2023.pdf .
Mountain Pass	SEC Technical Report Summary – Mountain Pass Mine, https://www.sec.gov/Archives/edgar/data/1801368/000180136822000010/d215279dex961.htm .
ASM Dec 2021	Dubbo Project Optimisation Delivers Strong Financials, https://asmd.irmau.com/site/PDF/ad9dcf23-41ca-4ebb-a779-b2cbc200217e/DubboProjectOptimisationDeliversStrongFinancials .
VHM Mar 2023	Goschen Project DFS Refresh delivers NPV of approximately A\$1.5 billion and 44% IRR, https://wcsecure.weblink.com.au/pdf/VHM/02648405.pdf .
Mkango Jul 2022	Mkango Announces Results of Definitive Feasibility Study for The Songwe Hill Rare Earths Project In Malawi - NPV of US\$559.0 Million and IRR of 31.5%, https://mkango.ca/site/assets/files/4893/20220705_songwe_feasibility_study_final_clean-v2.pdf .



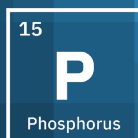
20 Summary of Modifying Factors Considered to Date

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul style="list-style-type: none"> Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statements as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. 	<ul style="list-style-type: none"> No ore reserve has been declared in this announcement. The Scoping Study is based on the Mineral Resource Estimate that was announced on 1 May 2023.
Site visits	<ul style="list-style-type: none"> Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	<ul style="list-style-type: none"> The competent persons for Geology and Mineral Resource have undertaken site visits and the following aspects were reviewed and were considered acceptable for supporting the Mineral Resource estimate: <ul style="list-style-type: none"> Inspection of geological outcrop, and discussions with RareX geological staff. Validation of a selection of drill hole collar surveys. Discussions regarding Project development and future Mineral Resource development activities. Form a judgement regarding the Reasonable Prospects for Eventual Economic Extraction test. The competent person for Metallurgy has not undertaken site visit for the Scoping Study.
Study status	<ul style="list-style-type: none"> The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. The code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resource to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material modifying factors have been considered. 	<ul style="list-style-type: none"> The study is a Scoping Study, and no ore reserve has been declared in this announcement.
Cut-off parameters	<ul style="list-style-type: none"> The basis of the cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> The basis of Mineral Resource estimate cut-off grade parameters are detailed in the Mineral Resource Estimate announcement

Criteria	JORC Code explanation	Commentary
		<p>released on 01 May 2023.</p> <ul style="list-style-type: none"> The Scoping Study cut-off grade parameters were based on P_2O_5 and TREO grades where stockpiling and blending were applied to optimise project NPV using scoping level cost estimation.
Mining factors or assumptions	<ul style="list-style-type: none"> The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method (s) and other mining parameters including associated design issues such as pre-strip, access, etc. The assumptions made regarding geotechnical parameters (e.g., pit slopes, stope sizes, etc.), grade control and pre-production drilling The major assumptions made, and the Mineral Resource model used for pit and stope optimisation (if appropriate). The mining dilution factors used. The mining recovery factors used. Any minimum mining widths used. The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. The infrastructure requirements of the selected mining methods. 	<ul style="list-style-type: none"> No ore reserve has been declared in this announcement. The below points of this section only provide an indication of what aspects were considered as part of the whittle optimisation and scheduling process. An open pit, drill and blast; load and haul operation is assumed as part of this study. Waste dumps and stockpiles have not been designed in detail as yet. No specific design issues have been considered at this point. Geotechnical parameters are only assumed at this stage with overall slope angles being 31.7° the weathered, 37.3° for transitional and 48.4° for fresh rock portions respectively. No mining dilution factors have been used, dilution is assumed to be reflected in the block model estimation. Recovery factors are aligned to processing recoveries. No minimum mining width was applied. Inferred resources were included as part of the modelling. A change of 10% in contained ore results in a 32% change of NPV. Key infrastructure required to support the operation includes haulage roads, camps, offices water supply and treatment, grade control facility, stockpiles, ROM and a waste dump.
Metallurgical factors or assumptions	<ul style="list-style-type: none"> The metallurgical process proposed and the appropriateness of that process to the style of the mineralisation. 	<ul style="list-style-type: none"> A conventional crushing and screening circuit has been assumed for the DSO operation. The rare earth and phosphate concentrate beneficiation plant has been assumed to mainly include crushing, milling, flotation

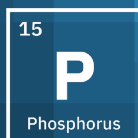
Criteria	JORC Code explanation	Commentary
		and dewatering.
	<ul style="list-style-type: none"> Whether the metallurgical process is well-tested technology or novel in nature. 	<ul style="list-style-type: none"> Refer to Metallurgy section. The metallurgical process is typical of phosphate and rare earth minerals processing, and the metallurgical testwork to date is considered sufficient and appropriate for this Scoping Study.
	<ul style="list-style-type: none"> The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. 	<ul style="list-style-type: none"> Refer to Section 8 (Metallurgy) and Section 10 (Processing) of this announcement. The metallurgical testwork undertaken to date is considered representative for the DSO and concentration production. Based on the metallurgical testwork results, P₂O₅ recoveries and TREO recoveries have been assumed. Additional ore characterisation and beneficiation tests are underway or planned to allow further process optimisation.
	<ul style="list-style-type: none"> Any assumptions or allowances made for deleterious elements. 	<ul style="list-style-type: none"> Testwork to date showed that the deleterious elements levels could be reduced to below industry thresholds, hence no assumptions have been made for deleterious elements.
	<ul style="list-style-type: none"> The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. 	<ul style="list-style-type: none"> No bulk sample and pilot scale testing undertaken.
	<ul style="list-style-type: none"> For minerals that are defined by the specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications? 	<ul style="list-style-type: none"> Not applicable as no ore reserve has been declared in this announcement.
Environmental	<ul style="list-style-type: none"> The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and 	<ul style="list-style-type: none"> Refer to Section 13 (Environmental Setting). ESIA baseline studies have commenced on site. Waste rock characterisation work has commenced. No environmental approval has been

Criteria	JORC Code explanation	Commentary
	waste dumps should be reported.	applied for.
Infrastructure	<ul style="list-style-type: none"> The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed. 	<ul style="list-style-type: none"> Refer to Sections 10 (Processing), 11 (Logistics and Port) and 12 (Financials). Sufficient land is available within the project area to support the proposed operation. The project can be accessed from Halls Creek via the Great Northern Highway and then the Tanami Road, then along station tracks to site. Halls Creek also has a sealed airstrip and connects to the ports of Wyndham and Darwin via the Great Northern Highway.
Costs	<ul style="list-style-type: none"> The derivation of, or assumptions made, regarding projected capital costs in the study. The methodology used to estimate operating costs. Allowances made for the content of deleterious elements. The source of exchange rates used in the study. Derivation of transport charges. The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. The allowances made for royalties payable, both Government and private. 	<ul style="list-style-type: none"> Refer to Section 12 (Financials), The capital cost estimates were based on benchmarking with similar operations and applying appropriate scaling factors (six-tenth rule) for a target accuracy of +/- 35%. Project operating costs were estimated based on budget quotations, consultant studies and benchmarking similar open pit mining and processing projects. Costs are estimated based reasonable unit cost assumptions for equipment consumables, reagents and utilities etc., which were derived from plant throughput, mass balance and process design criteria. No allowance was made for deleterious element as below threshold limits. (Refer to Section 8.3 on DSO characterisation) The costs in this announcement are reported in AUD, using a currency exchange rate of USD to AUD = 1.4. Transport costs were based on a contractor quotations and logistic studies. No refining charges/penalties were applied for DSO which is targeted for direct application fertiliser. A 10% discount of phosphate price was applied for refining based on market observations for similar products and feedback from market consultants. Government royalties 7.5% for DSO and 5%



Criteria	JORC Code explanation	Commentary
		for Phos-RE Con on net revenue were applied. (Refer to Section 12).
Revenue Factors	<ul style="list-style-type: none"> The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns etc. The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products. 	<ul style="list-style-type: none"> Refer to Sections 7 (Geology and Resource) and 9 (Mining). The derivation of head grades was based on the Mineral Resource Estimate. Refer to Section 5 (Products and Markets) for commodity prices assumptions. Product prices were assumed based on market research papers, market spot prices and benchmarking similar products.
Market Assessment	<ul style="list-style-type: none"> The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract. 	<ul style="list-style-type: none"> Refer to Section 5 (Products and Markets).
Economic	<ul style="list-style-type: none"> The inputs to the economic analysis to produce the net present value (NPV), the source and confidence of these economic inputs estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs. 	<ul style="list-style-type: none"> Refer to Section 12 for details of the economic analysis. NPV sensitivity analysis was performed for factors including product recovery, CAPEX, OPEX, product price, feed grade and tonnage with a +/- 10% variation. Refer to Section 12 for the sensitivity outcomes.
Social	<ul style="list-style-type: none"> The status of agreements with key stakeholders and matters leading to social licence to operate. 	<ul style="list-style-type: none"> Refer to Section 14 (Social Setting).

Criteria	JORC Code explanation	Commentary
Other	<ul style="list-style-type: none"> To the extent relevant, the impacts of the following on the project and/or on the estimation and classification of the Ore reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary government regulations will be received within the timeframe anticipated in the Pre-feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent. 	<ul style="list-style-type: none"> No ore reserve has been declared in this announcement. No naturally occurring risks have been identified. The Cummins Range Project is 100% owned by RareX and there is no marketing agreement in place. Not applicable as RareX is yet to commence Pre-Feasibility or Feasibility Study. There are no outstanding issues or requirements that may impact on approvals.
Classification	<ul style="list-style-type: none"> The basis for the classification of the Ore Reserves into varying confidence categories. Whether the result appropriately reflects the Competent Person's view of the deposit. The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). 	<ul style="list-style-type: none"> No ore reserve has been declared in this announcement.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of Ore Reserve estimates. 	<ul style="list-style-type: none"> No ore reserve has been declared in this announcement.
Discussion of relative accuracy / confidence	<ul style="list-style-type: none"> Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using and approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and if 	<ul style="list-style-type: none"> No ore reserve has been declared in this announcement.



Phosphate
Enabled
Rare Earths

Criteria	JORC Code explanation	Commentary
	<p>local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</p> <ul style="list-style-type: none">• Accuracy and confidence discussions should extend to specific discussions of any applied Modifying factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.• It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	

