

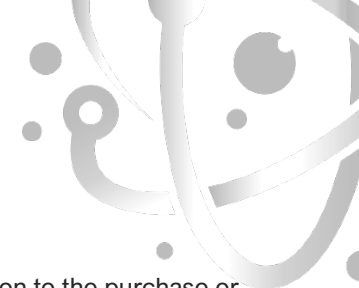


LANTHANEIN
RESOURCES

Investor Presentation
ASX: LNR
lanthanein.com

**Minerals for
an Electric Future**

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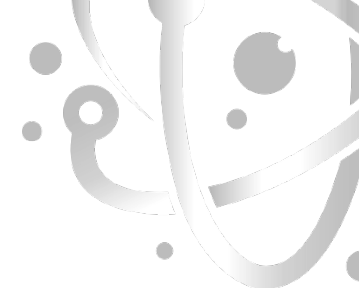
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COMPETENT PERSON'S STATEMENT

The information in this presentation that relates to Exploration Results for the Gascoyne, Mt Clere and Koolya Projects is based on and fairly represents information and supporting documentation prepared by Mr Thomas Langley, a consultant to Lanthanein Resources Ltd. Mr Langley is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Langley has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration and to the activity being undertaken 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 Langley consents to the inclusion in the report of the matters based on the information in the form and context in which it appears. Additionally, Mr Langley confirms that the entity is not aware of any new information or data that materially affects the information contained in any ASX releases referred to in this report.

The information in this report that relates to Geophysical Results for the Gascoyne, Mt Clere and Murraydium Projects is based on information compiled by Mr Peter Swiridiuk a Member of the Aust. Inst. of Geoscientists. Mr Swiridiuk is a Technical Consultant and Non-Executive Director for Lanthanein Resources Ltd. Peter Swiridiuk has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Peter Swiridiuk consents to the inclusion in the report of the matters based on the information in the form and context in which it appears. Additionally, Mr Swiridiuk confirms that the entity is not aware of any new information or data that materially affects the information contained in any ASX releases referred to in this report.



BRIAN THOMAS
Technical Director

Brian is a very experienced Director and Corporate Executive with significant domestic and international resources management experience



DAVID FRANCES
Non-Executive Chairman

David is an international executive of 30 years with a track record transacting, discovering, funding, developing and operating assets in Australia and Africa



PETER SWIRIDIUK
Non-Executive Director

Peter holds a BSC (Hons), DipEd, MAIG. Peter has over 32 years' experience exploring for copper, gold, diamonds, coal and base metals.



MATTHEW FOY
Company Secretary

Matthew is a professional company secretary and active member of the WA State Governance Council of the Governance Institute of WA



THOMAS LANGLEY
Exploration Geologist

Thomas has a BSc Geology and a MSc Economic Geology with a focus on discovery of company making projects, and environmental and resource economics. MAIG, MAusIMM

Capital Structure (post Capital Raising)

Shares on Issue	962,825,570	Market Capitalisation	\$13.48m
Options	139,250,000	Cash	\$ 5.77m
Performance Rights	64,423,076	EV	\$ 7.71m
Share Price <small>(Placement)</small>	\$0.014		

Project Profile

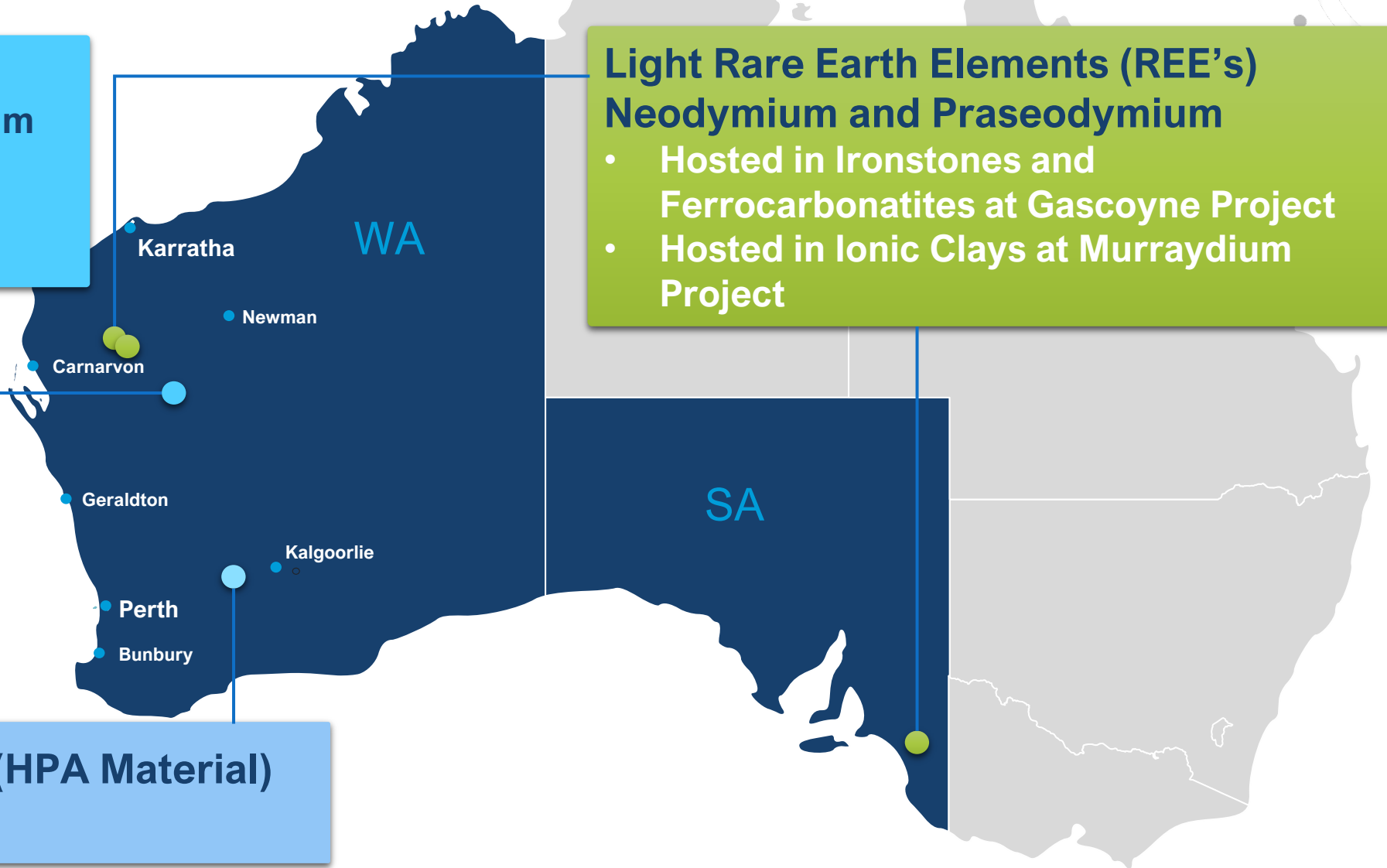
Lithium and Light REE's Neodymium & Praseodymium

- LCT Pegmatites and Carbonatites at Mt Clere Project

Light Rare Earth Elements (REE's) Neodymium and Praseodymium

- Hosted in Ironstones and Ferrocarnatites at Gascoyne Project
- Hosted in Ionic Clays at Murraydium Project

Kaolin and Halloysite (HPA Material) Koolya Project



First Nations Group

Lanthanein Resources acknowledges the traditional custodians of the land on which the company operates and pay respect to their Elders past, present and emerging

- Whadjuk Noongar people on whose lands the company has its offices
- Thiin-Mah Warriyangka, Tharrkari and Jiwarli people whose lands host the Gascoyne Project area
- Nharnuwangga, Wajarri and Ngarlawangga people whose lands host the Mt Clere Project area
- Marlinya Ghoorlie people whose lands host the Koolya Project area in the Yilgarn
- Bindjali people whose lands host the Murraydium Project in South Australia

Thiin-Mah Elder, Peter Salmon, Walking His Land, Sharing Stories and Songs of His Land



- The team at Lanthanein have a deep respect for the First Peoples of Australia. We are continuously working with the Traditional Owners and Elders from the areas where the projects are located
- In June Lanthanein conducted a Heritage survey on the Thiin-Mah country and had the privilege of walking alongside Peter Salmon, the Elder of the Thiin-Mah lands, hearing his stories and songs about the land and country which were truly insightful.
- Lanthanein are progressively embedding ESG reporting fully into all of our operations and governance systems. Lanthanein will continue to measure, improve, and disclose our ongoing progress with reporting ESG metrics and indicators.

			
<p>The definition of governance is evolving as organisations are increasingly expected to define and embed their purpose at the centre of their business. But the principles of agency, accountability and stewardship continue to be vital for truly 'good governance'.</p>	<p>An ambition to protect the planet from degradation, including through sustainable consumption and production, sustainably managing its natural resources and taking urgent action on climate change, so that it can support the needs of the present and future generations</p>	<p>An ambition to end poverty and hunger, in all their forms and dimensions, and to ensure that all human beings can fulfil their potential in dignity and equality and in a healthy environment</p>	<p>An ambition to ensure that all human beings can enjoy prosperous and fulfilling lives and that economic, social and technological progress occurs in harmony with nature</p>



Global Decarbonisation and Electrification builds momentum

- 100+ countries have pledged to reduce methane emissions by 30% by 2030
- 190 countries and organisations have committed to phase out coal generated power
- 20 countries have committed to cease funding oil, coal and gas projects by the end of 2022
- 5 large public banks, including the European Investment Bank have committed to cease funding oil, coal and gas projects by the end of 2022
- 30+ countries and dozens of states and cities have committed to the phase-out of the sale of new internal combustion engine (ICE) vehicles by 2035

USA pledge US\$555b aimed at the deployment of renewable energy and electric vehicles

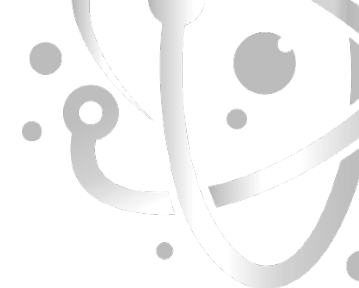
Canadian Government has committed to C\$964m to support smart renewable energy and grid modernization aimed at lowering emissions



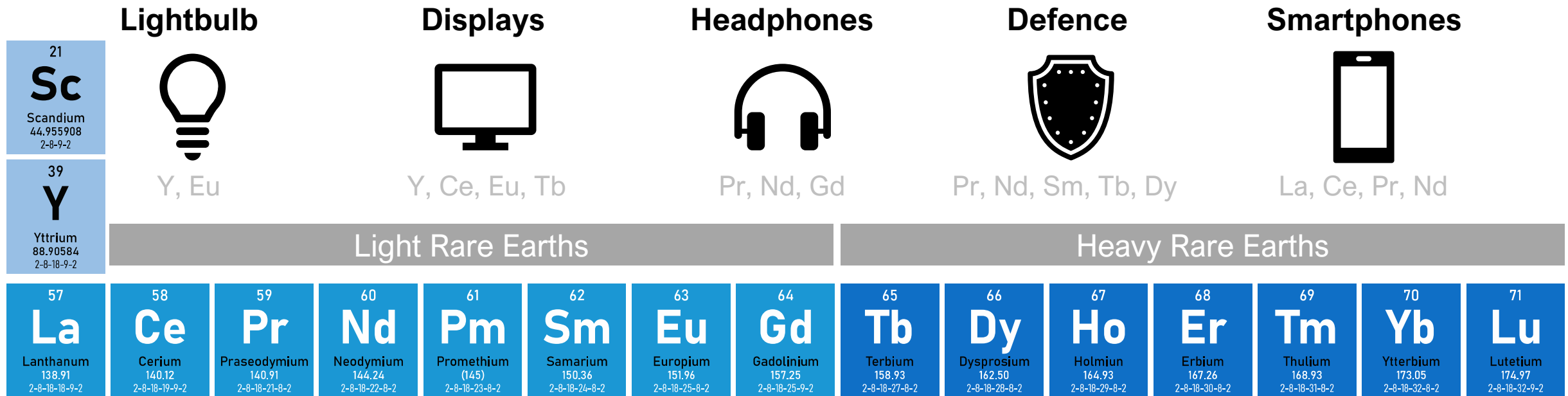
UK Government has committed \$3.2b funding towards EV and offshore wind development plus \$350m to its Automotive Fund

Japanese Government has committed to a US\$17.6b fund to assist ambitious green projects over the next decade

What are Rare Earth Elements



- Rare earth elements comprise 15 lanthanides plus scandium and yttrium
- Used in many high-tech applications in small volumes but are critical to performance
- **Demand for Neodymium Iron Boron (NdFeB) permanent magnets used in electric vehicles and wind turbines, will support prices for Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy) and Terbium (Tb)**



Rare Earths Market Opportunity



TRANSITION TO RENEWABLE POWER GENERATION

200kg NdPr Oxide per 1MW of wind generation capacity

- Each direct drive wind turbine uses a permanent magnet motor that generates between 2-6MW of performance
- Each megawatt requires approx. 200kg pure NdPr Oxide
- Wind turbines anticipated to grow at a **CAGR of 17%** through to 2025

MASS PRODUCTION OF EVS HAS COMMENCED

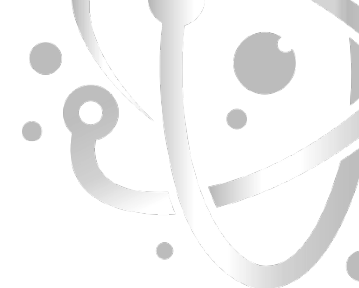
Behind each battery is a **Motor**

- Over 90% of all EVs will be equipped with an NdFeB permanent magnet
- Each EV consumes an incremental **~1kg** of NdPr Oxide
- EVs anticipated to grow at a **CAGR of 29%** over the next five years
- Hydrogen vehicles also reliant on permanent magnet motor technology
- Hydrogen vehicles also anticipated to grow at a **CAGR of 11%** through to 2025

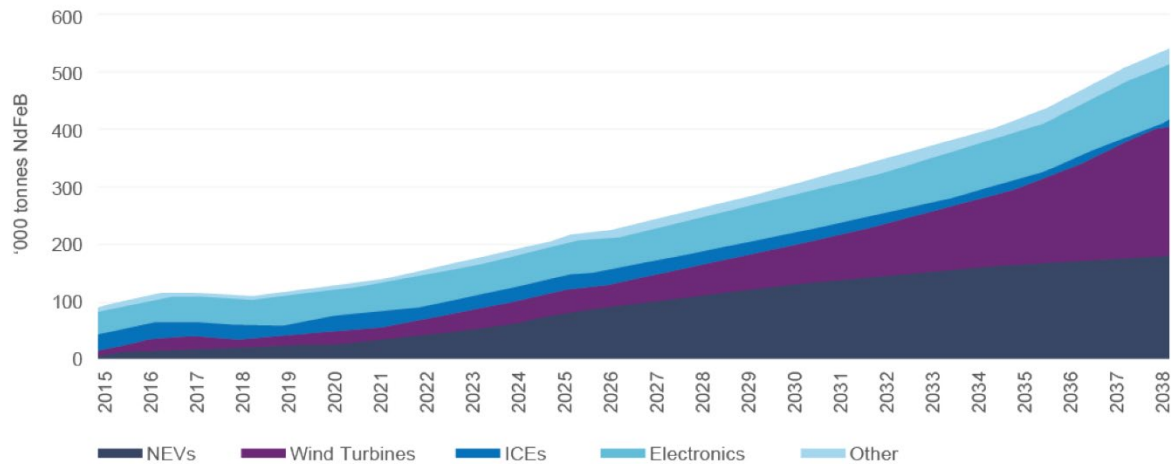
59	60	66
Pr	Nd	Dy
Praseodymium 140.91 2-8-18-21-8-2	Neodymium 144.24 2-8-18-22-8-2	Dysprosium 162.50 2-8-18-28-8-2

59	60	62	65	66
Pr	Nd	Sm	Tb	Dy
Praseodymium 140.91 2-8-18-21-8-2	Neodymium 144.24 2-8-18-22-8-2	Samarium 150.36 2-8-18-24-8-2	Terbium 158.93 2-8-18-27-8-2	Dysprosium 162.50 2-8-18-28-8-2

Strong Demand for both Neodymium and Praseodymium will result in a supply deficit over coming decade



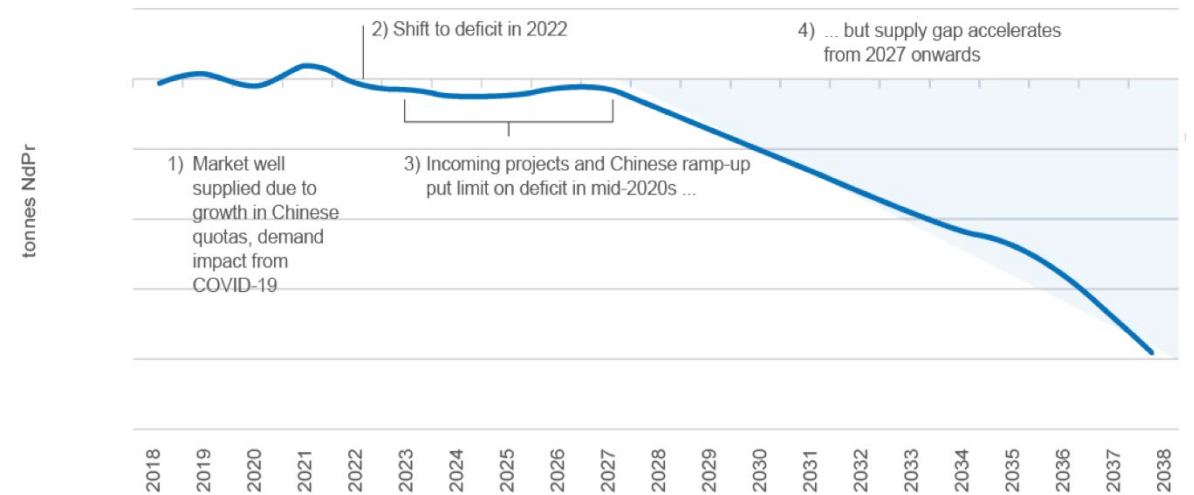
NdFeB Demand



Global NdFeB demand will increase 3.9% over the period 2021-2038 (CAGR 8.3%)

Source: Rare Earth Market Outlook, CRU International Ltd, August 2021
ICE= International combustion engine

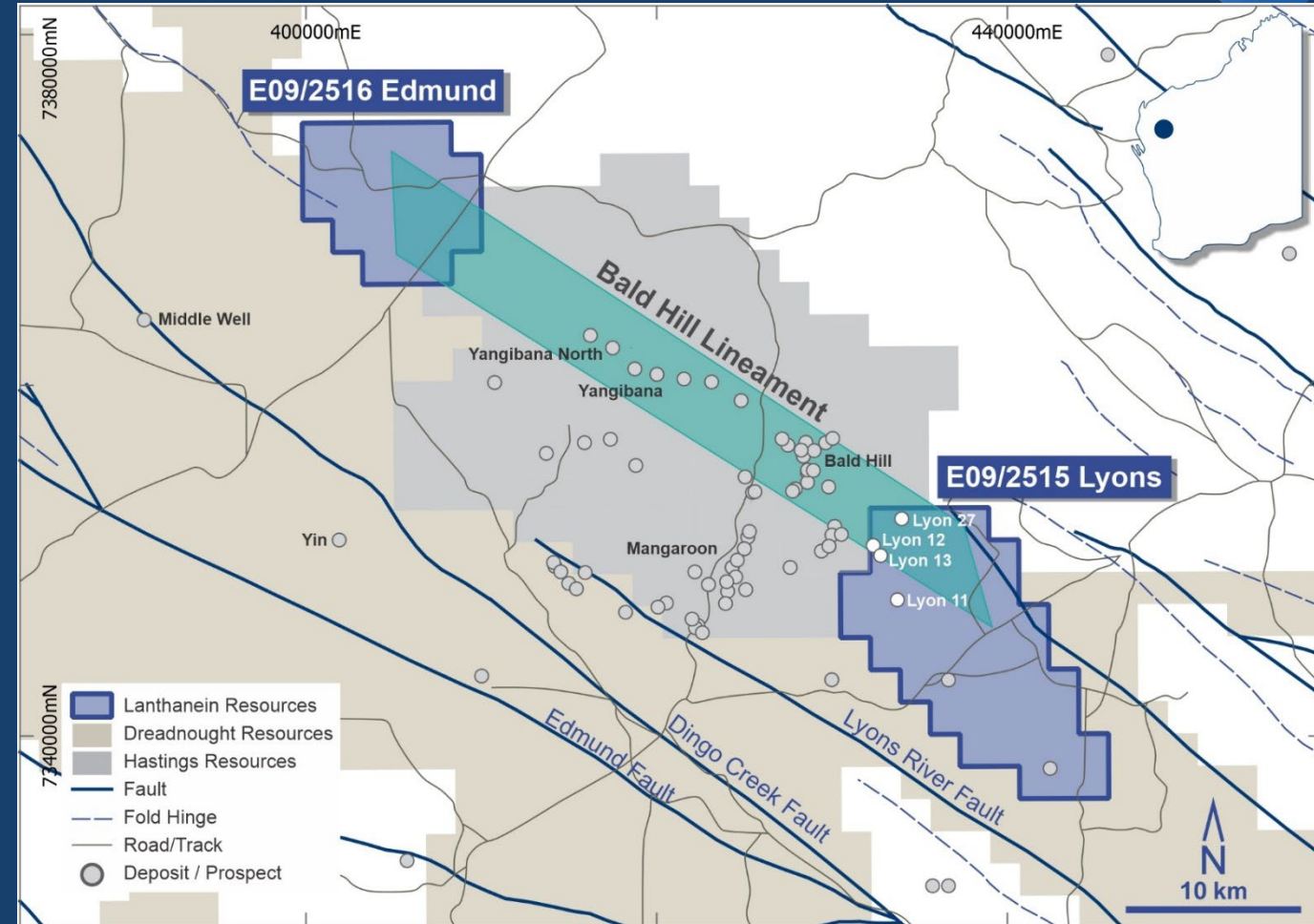
NdPr Market Balance



Source: Cu

Gascoyne REE Project

- High grade REE's discovered up to 8.01% TREO
- Rare Earth Elements Hosted in the Yangibana Ironstones within the Durlacher Supersuite Rocks
- Source of the REE's is from the Gifford Creek Ferrocarbonatites which have been intruded along the Bald Hill Lineament
- Hastings Technology Metals (HAS ~\$420m MC) is developing the Yangibana REE Project, Australia's next REE Mine
- Close proximity to Dreadnought's (DRE ~A\$200m MC) recent Yin Rare Earths discovery.
- Lyons and Edmund Project areas both on the Bald Hill Lineament
- No previous exploration for REE's on either area before recent sampling success
- Maiden drill program to test depth extent and width of outcropping ironstones planned for Q3, 2022



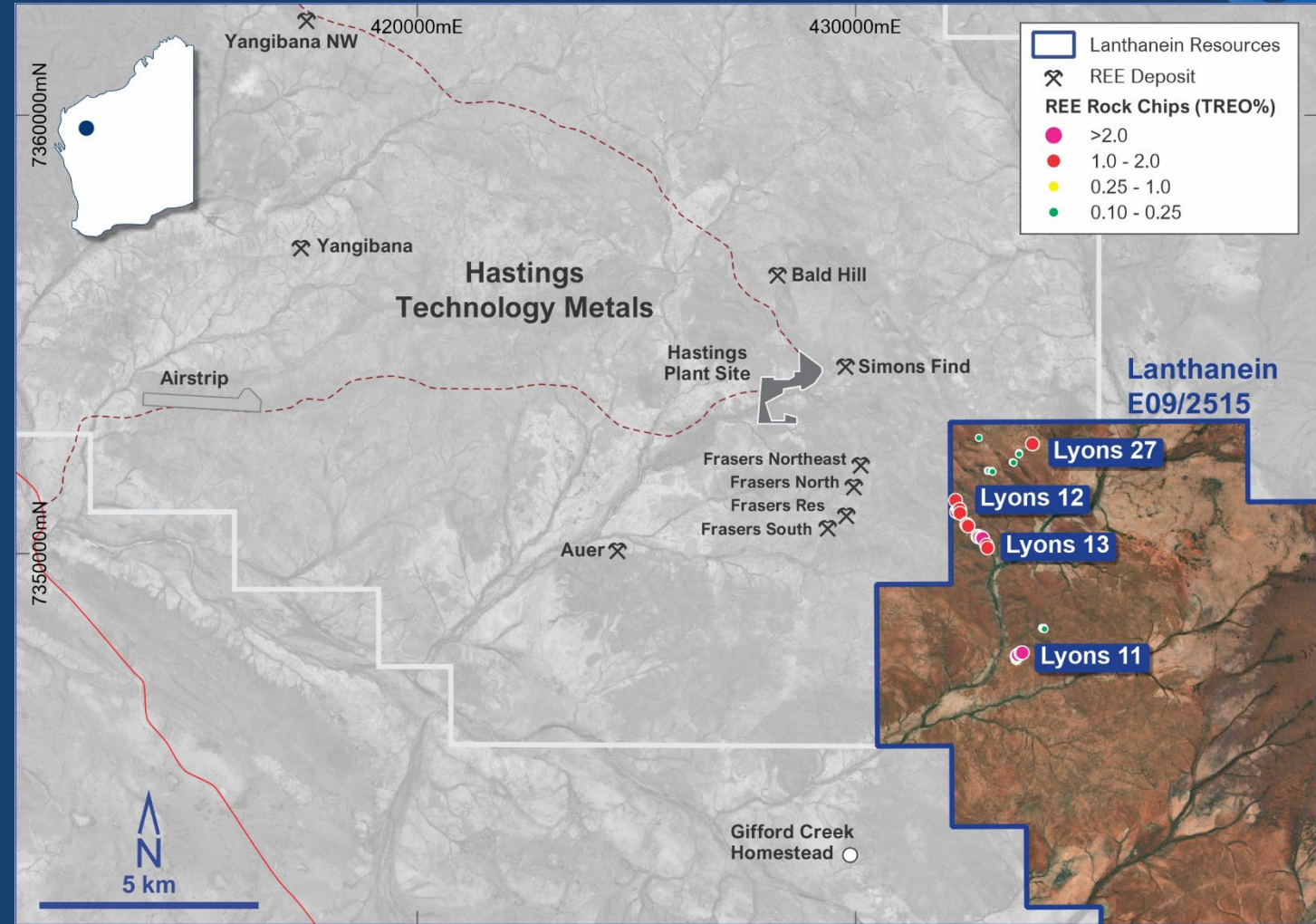
Gascoyne REE Project

- Lyons Prospects are immediately adjacent to Hastings Technology Metals (ASX:HAS) world class Yangibana REE Project
- Hastings REE's hosted in the same ironstones derived from Gifford Creek Ferrocarbonatites present in the Durlacher Supersuite rocks that host the Lyons Prospects
- Mineralogy and metallurgical characteristics of REE's hosted in Lyons ironstones identical to Hastings

Yangibana Project – Total JORC Mineral Resources ⁽¹⁾

AS AT 30 JUNE 2021

Category	Million Tonnes	%TREO	%Nd ₂ O ₃ +Pr ₆ O ₁₁	TREO Tonnes
Measured	4.9	1.01	0.38	49,442
Indicated	16.24	0.95	0.33	154,750
Sub-total	21.14	0.97	0.34	204,192
Inferred	6.27	0.99	0.31	62,225
TOTAL	27.42	0.97	0.33	266,417



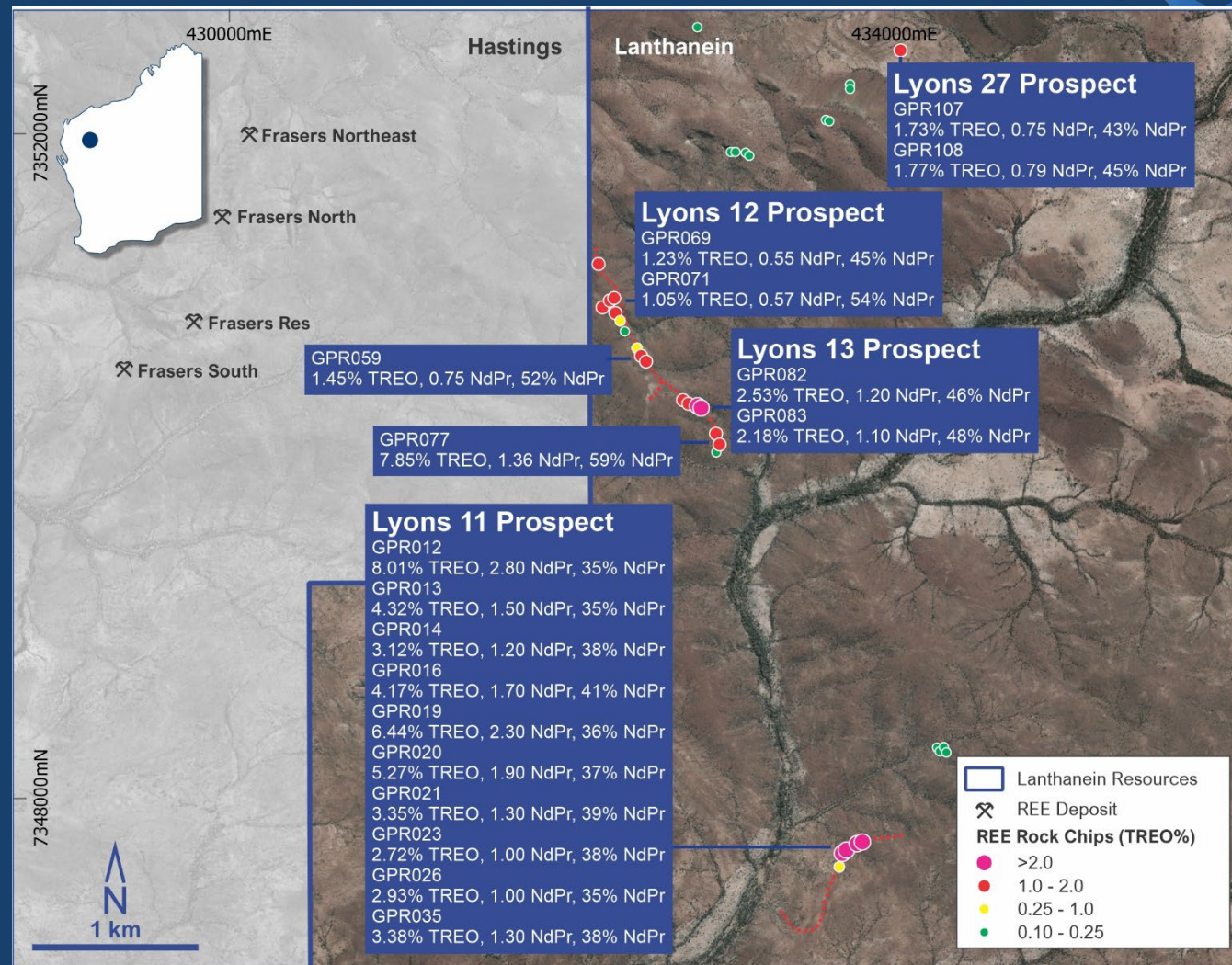
Gascoyne REE Project

Multiple high priority outcropping ironstone prospects and carbonatite large tonnage targets to be drilled Q3, 2022

High grade rare earth discoveries confirmed with exceptional results from rock chips across multiple targets on the Lyons Project Area.

Significant results include:

- 8.01% TREO (2.8% Nd₂O₃+Pr₆O₁₁) Lyons 11 (GPR012)
- 6.44% TREO (2.3% Nd₂O₃+Pr₆O₁₁) Lyons 11 (GPR019)
- 5.27% TREO (1.9% Nd₂O₃+Pr₆O₁₁) Lyons 11 (GPR020)
- 4.32% TREO (1.53% Nd₂O₃+Pr₆O₁₁) Lyons 11 (GPR013)
- 4.17% TREO (1.69% Nd₂O₃+Pr₆O₁₁) Lyons 11 (GPR013)
- 3.38% TREO (1.3% Nd₂O₃+Pr₆O₁₁) Lyons 11 (GPR035)
- 2.53% TREO (1.15% Nd₂O₃+Pr₆O₁₁) Lyons 13 (GPR082)
- 1.23% TREO (0.55% Nd₂O₃+Pr₆O₁₁) Lyons 12 (GPR069)
- 1.77% TREO (0.79% Nd₂O₃+Pr₆O₁₁) Lyons 27 (GPR108)



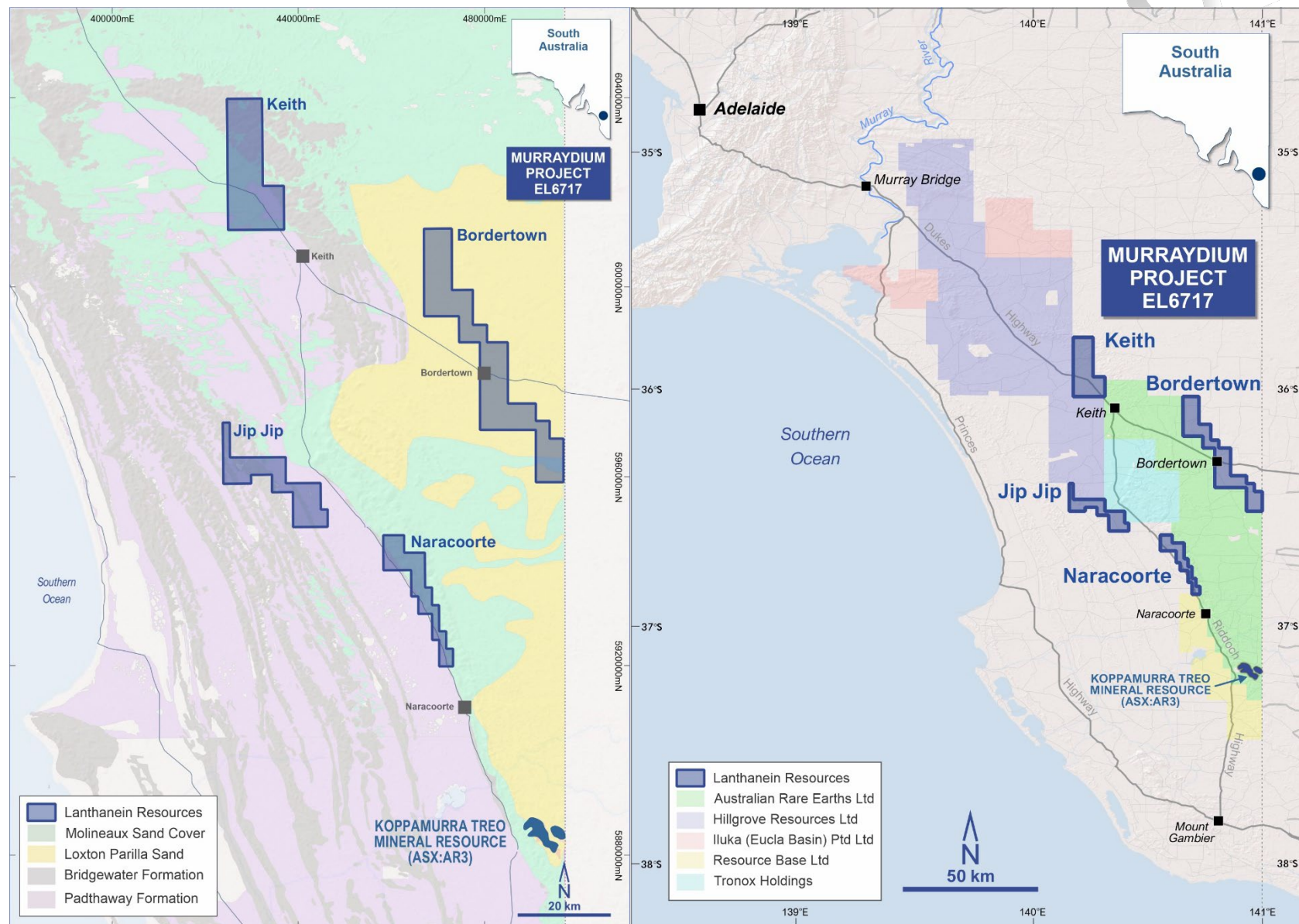
Murraydium REE Project

- Targeting Ionic Clay hosted REE's
- Australian Rare Earths (ASX : AR3) have REE Resource at Koppamurra on neighbouring tenement
- Koppamurra Resource and new AR3 prospect Frances hosted in the same Loxton Parilla Sands as present on Bordertown Block

Koppamurra Mineral Resource Estimate – July 2022										
JORC Category	Tonnes Mt	TREO ppm	Magnet Rare Earths							
			Pr ₆ O ₁₁		Nd ₂ O ₃		Tb ₄ O ₇		Dy ₂ O ₃	
			ppm	% TREO	ppm	% TREO	ppm	% TREO	ppm	% TREO
Indicated	45	835	37	4.4	142	17	4	0.5	22	2.6
Inferred	36	721	32	4.4	122	17	3	0.5	19	2.6
Total	81	785	34	4.4	133	17	4	0.5	21	2.6
Exploration Target¹	90-220	629-849	29-41	4.6-4.8	110-150	17-18	3-4	0.5-0.5	16-22	2.5-2.6
April 2021 Initial Resource										
Inferred	39.9	725	32	4.4	124.6	17.2	3.5	0.5	19.2	2.6

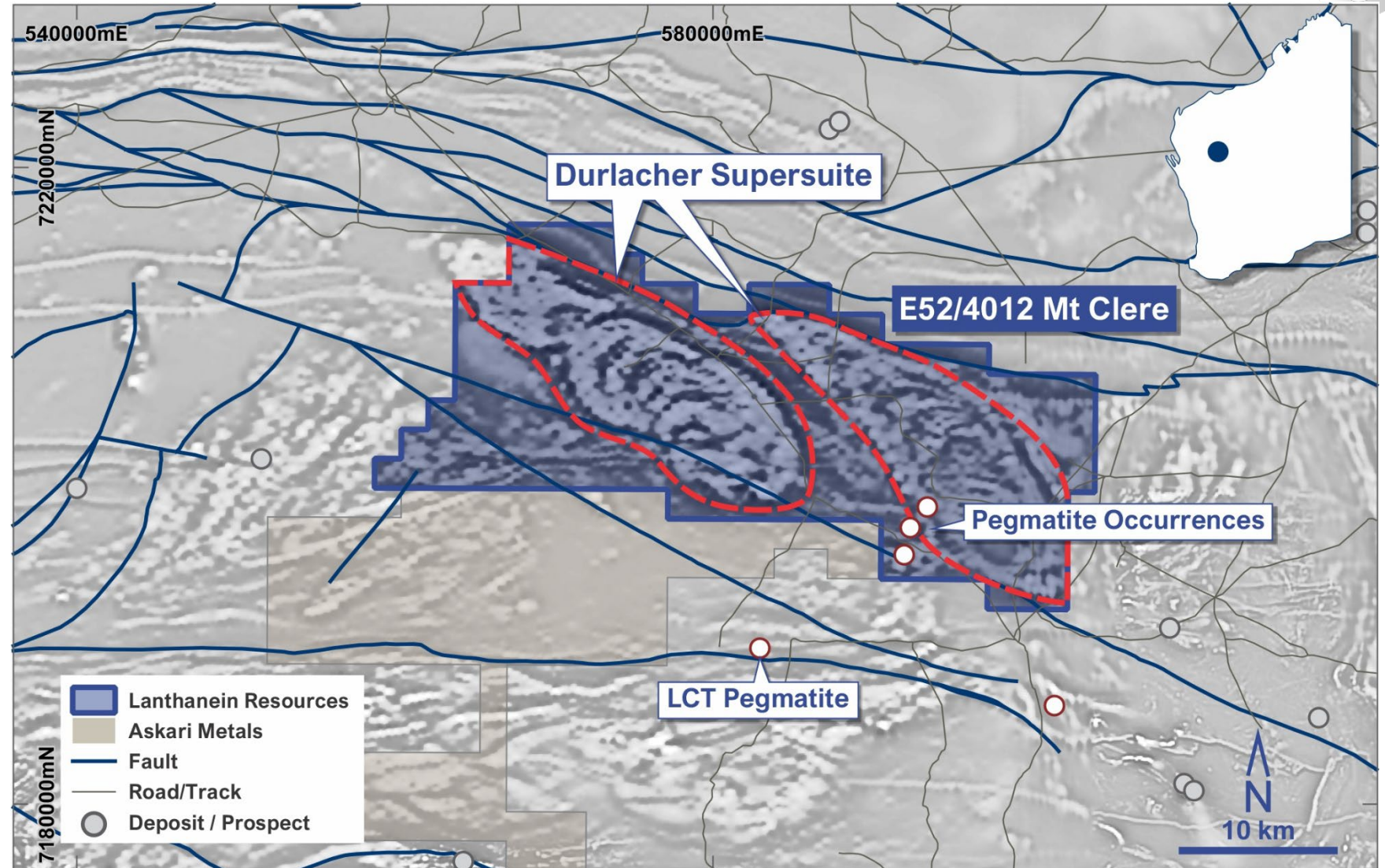
Mineral Resources reported at a cut-off grade of 325 ppm TREO-CeO₂, consistent with the previous MRE.

1 - The potential quantity and grade of the Exploration Target is conceptual in nature. Further exploration is required to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



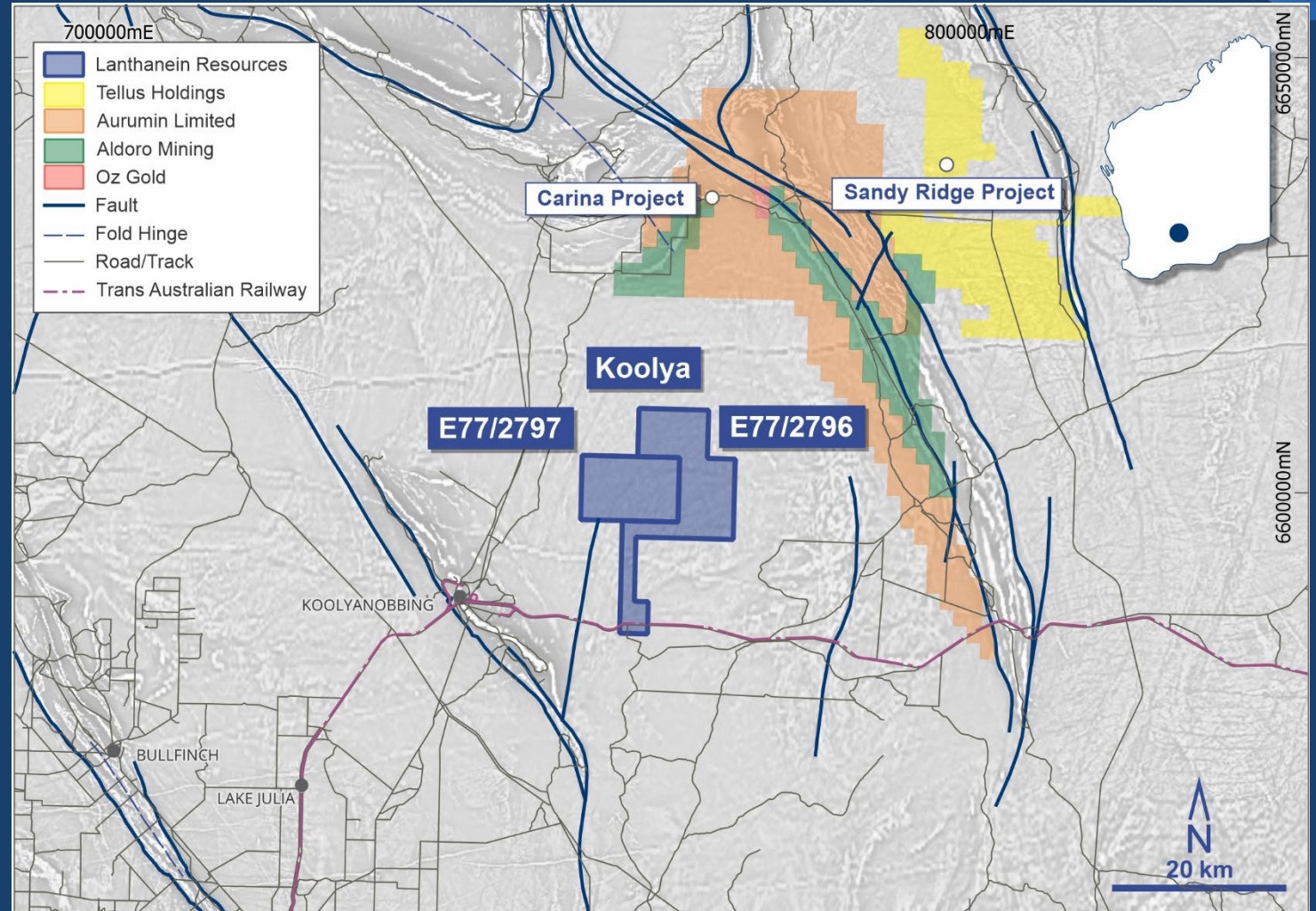
Mt Clere REE and Lithium Project

- Targeting Rare Earth Elements in Durlacher Supersuite sequence of rocks, the same host rocks as Yangibana
- Lithium potential in LCT Pegmatites in the southeast of the tenement
- Field reconnaissance trip completed Q2, 2022 with additional geochemistry sampling and drill programs planned
- Emerging rare earth province highlighted by ASX: KTA discovering Ion adsorption clays enriched in REE's



Koolya Kaolin Project

- 240km² of kaolinised granite prospective for bright white kaolin clay and high purity alumina (HPA) feedstock
- Tenure supportive for large scale development
- No competing land ownership, pastoral lease or freehold farmland
- Excellent infrastructure with Trans Australian Railway allowing bulk transport up to 5,000t per train
- HPA market growth due to investment in EV and battery market



The Opportunity / Investment Thesis

- **An emerging Rare Earth Explorer**
- **Gascoyne Project adjacent to Hastings Technology Metals already established resources and reserves at Yangibana**
- **Same rocks with same mineralogy with same metallurgical characteristics**
- **Murraydium Project adjacent to Australian Rare Earth's already established Koppamurra resource**
- **Diversity of REE source, both primary Ferrocarnatite sourced (Gascoyne) and Ionic Clay Hosted (Murraydium)**
- **Highly prospective Kaolin source near established infrastructure at Koolya**



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