

# **Developing Critical Mineral Assets**



Corporate Presentation July 2025

ASX: ADC

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# **Corporate Strategy**







### Overview





#### **Major land position**

- 2,500 km² Murray Basin
- Growing critical metals hub with advanced mineral sands and rare earth projects

# Large resource at Goschen Central Project

- · Remains open.
- Over 600Mt.
- Strong monazite and zircon assemblage.

### Rapid progress at Goschen Central Project

- Scoping studies complete.
- Bulk metallurgical testwork program complete.
- Product quality testing complete.

# **Exposure to key** critical minerals

- Titanium
- Zirconium
- · Rare earth elements

# Victorian Critical minerals roadmap.

- Goschen Central highlighted.
- Geopolitical tensions reinforce western supply chains of critical and strategic minerals.

# Downstream rare earth processing technology

 Strong ESG credentials over alternate methods.



### Critical minerals









#### Advantages of the Wimmera (WIM) style mineral sand deposits:

- Strong assemblage of zircon, and key characteristics to achieve the higher value, **premium grade**, a key feedstock for zirconium production.
- Strong assemblage of monazite and xenotime naturally occurring minerals, with concentrations of up to 60% total rare earth oxides (TREO).
- TREO contains a strong assemblage of the key light and heavy rare earths Nd, Pr, Dy and Tb
  - **Simplified processing flowsheets**, utilising physical separation via screening and gravity spirals to achieve saleable concentrates.
  - Relatively low capital expenditure vs hard rock rare earth element deposits.

#### Zirconium

Zirconium or zirconium-bearing minerals is **critical for national security, clean energy, and technological innovation** due to its role in:

- Clean energy (nuclear power)
- National defence (missiles, submarines)
- Advanced manufacturing

#### **Titanium**

Is a **critical mineral** due to its essential role in high-performance applications; aerospace, defence, and clean energy combined with potential supply risks.

#### **Rare Earth Elements**

are **critical minerals** due to their vital role in advanced technologies; clean energy, defence, and electronics and their highly concentrated global supply chain.



### Electrification and robotics to drive demand



Total global rare earth oxide consumption is anticipated to increase **five-fold by 2040** at a Compound Annual Growth Rate (CAGR) of 5.4%<sup>1</sup>.

**Permanent Magnets** are the most significant driver. Neodymium-iron-boron (NdFeB) magnets, which rely on rare earths like neodymium, praseodymium, dysprosium, and terbium, are essential for:



Wind Turbines: The increasing use of REPM direct-drive generators in wind turbines, offering significant efficiency benefits, is a key driver. A 3MW direct-drive wind turbine requires 1 to 2 tonnes of REPM<sup>3</sup>.



Electric Vehicles (EVs): The exponential increase in EV production demands more rare earth minerals for electric motors, with each EV requiring 2kg to 5kg of REPM (2 to 4x the quantity of a typical ICE vehicle).



Consumer Electronics: Laptops, smartphones, and flat-screen TVs continue to utilise rare earths for components.



Advanced Air Mobility (AAM): Drones and electric vertical-takeoff-and-landing (eVTOL) aircraft are emerging as significant demand drivers<sup>2</sup>.



Robotics: Industrial and consumer service robots are projected to become the single largest demand driver for NdFeB magnets by 2040<sup>1</sup>.

<sup>3 -</sup> https://lynasrareearths.com/products-our-products/how-are-rare-earths-used/wind-turbines/



<sup>1 -</sup> https://www.adamasintel.com/new-report-rare-earth-magnet-market-outlook-to-2040/

<sup>2 -</sup> https://www.sfa-oxford.com/knowledge-and-insights/critical-minerals-in-low-carbon-and-future-technologies/uavs-drones-and-critical-minerals/

## **Strategic Value**



• **A\$183M investment by Energy Fuels** into Astron Corp (ASX:ATR) - offtake and investment for rare earth mineral concentrate from the Donald Mineral sands project, \$183M AUD investment.

"Australian Government to underwrite the development of critical mineral projects through the establishment of a strategic reserve.."

**US Department of Defence underwrites MP Materials and establishes a price floor** commitment of \$110 per kilogram for NdPr products.

"China has imposed export controls on key medium and heavy rare earths and magnets, tightening the rare earth supply chain. This will encourage ex. China rare earth and magnet production in the

long run."









https://mpmaterials.com/news/mp-materials-announces-transformational-public-private-partnership-with-the-department-of-defense-to-accelerate-u-s-rare-earth-magnet-independence

https://www.afr.com/politics/federal/government-to-stockpile-critical-minerals-to-safeguard-supply-20250423-p5ltsg

https://www.cruxinvestor.com/posts/energy-fuels-and-astron-form-joint-venture-to-develop-donald-rare-earth-project-in-australia

https://www.crugroup.com/en/communities/thought-leadership/2025/Export-controls-on-rare-earths-supply-chain-expected-to-encourage-ex.-China-investments





## REE Projects aren't all alike

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	Mineral Sands	Hardrock	lonic Clay hosted		
Formation	Formed by the weathering and erosion of primary hardrock deposits, followed by fluvial and/or marine transport and concentration of heavy minerals (including REE-bearing ones) in ancient or modern shorelines	Primarily magmatic (e.g., carbonatites, alkaline igneous rocks, peralkaline systems) or hydrothermal processes.	Formed by intense in-situ weathering (laterization) of REE-rich parent rocks (e.g., granites, volcanic rocks) in humid, subtropical climates.		
REE Occurrence	In monazite, xenotime grains with Ti/Zr minerals	Discrete minerals (monazite, bastnaesite, xenotime)	Adsorbed onto clay particles (ion-exchangeable)		
Major REE Type	Light & Heavy REEs in monazite/xenotime	Light REEs (Nd, Pr, La)	Heavy REEs (Dy, Tb, Y)		
Grades	Low - Moderate	High	Low - Moderate		
Processing complexity (Beneficiation)	Low ACDC SS – Phase 1 – Rare Earth Mineral Conc. (REMC)	High	Low		
Processing complexity (Chemical)	High ACDC SS – Phase 2 – Mixed Rare Earth Oxide (MREO)	Very High	Low		
Recovery Rate of REE	Moderate to high	Moderate to high	Moderate		
Capital Costs	Medium	Very high	Low to Medium		
Operating Costs	Beneficiation - Low Chemical – Medium to High	High	Low to Medium		
Advantages	Beneficiation processing simple and proven Dual product revenue stream REMC is highly desirable product  ACDC SS - Revenue streams Phase 1 40% HMC / 60% REMC	Large scale High Grade	Lower capital and operating requirements  Lower waste management requirements		
Disadvantages	Waste management from chemical processing	Complex processing High Capital requirements Waste management	Low Grade, high throughput Processing flowsheet yet to be proven		

Mineral sands projects provide dual product revenue streams. A mature well understood mineral sands market, coupled with the strategic optionality of rare earths.



## Goschen Central - an advancing Project



#### Victoria's Demonstrated Critical Mineral and Strategic Material Resources



#### Last 12 months

- ✓ 1.6 Tonne Metallurgical testwork program complete.
- Key Metallurgical data obtained for further development.
- Marketing study completed.
- ✓ JORC Resource update.
- Scoping Study complete.
- Retention licence application in progress
- Identified on Victorian Government Critical Minerals Roadmap.

### **Next Steps**

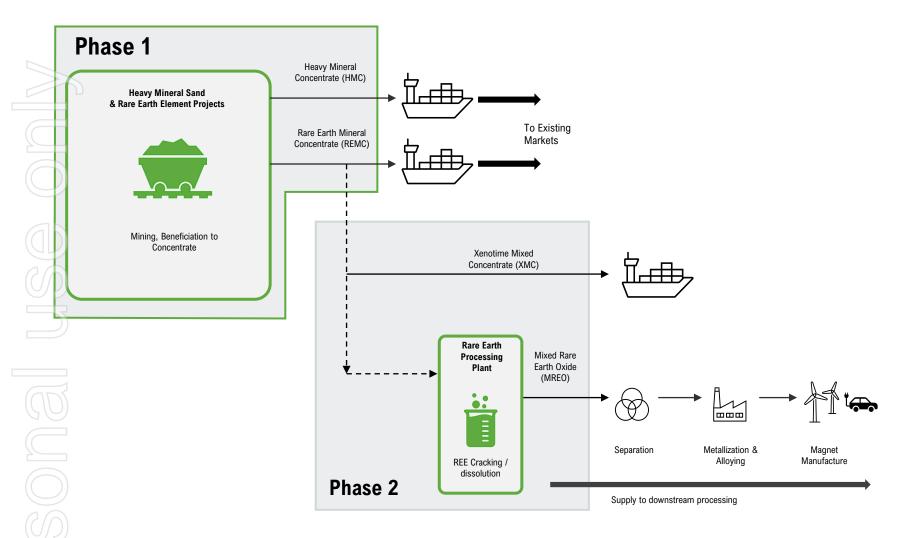
- Further resource development, Scoping Study mine plan utilises just 15% of total resource:
  - Further conversion of inferred tonnes
  - Further mineralogy to define high grade domains
  - Resource drilling in high grade zone

ASX announcement – Victorian Government supports Critical minerals projects - 13 December 2024.



### **Goschen Central Scoping Study**





#### **Potential Production**

- ~ 115,000 (dmt/a) of Heavy
   Mineral Concentrate on average for first 5 years.
- ~ 1,408,000 (dmt) of Heavy Mineral Concentrate for life of mine.
- ~ 6,800 (dmt/a) of Rare earth mineral concentrate (REMC) on average for first 5 years in Phase 1 scenario.
- Phase 2 will process REMC to produce ~3,200 dmt/a of Mixed Rare earth oxide and ~ 500 dmt/a of highly desirable Xenotime mixed concentrate (containing heavy rare earths).

ASX announcement - Outstanding Economic Potential with Goschen Central Study - 12 June 2025.





## **Goschen Central Scoping Study**

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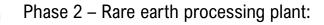
- Robust economics:
  - Phase 1: Pre-tax NPV8 A\$287M IRR 23%.
  - Phase 1 & 2: Pre-tax NPV8 A\$384M IRR 24%.
  - Breakeven NdPr price of US\$32/kg over life of Project\*.
    - Spot: US\$60-65/kg, US DoD price floor: US\$110/kg

14-year life of mine, 6 Mtpa nameplate capacity:

82% of resource in the indicated category.

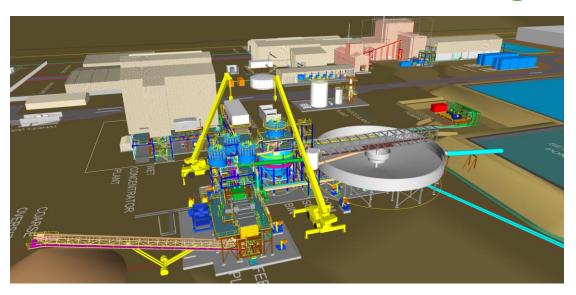
#### **CAPEX:**

- Phase 1 ~A\$310M incl. contingency of 10%.
- Phase 2 A\$119M incl. contingency of 10%.



- utilises 'caustic crack' process and is vertically integrated with mine operation.
- nameplate capacity of 7,000 tonnes per annum can support supplementary.
   monazite supply from 3<sup>rd</sup> party sources.
- Bespoke process provides strong ESG advantages over competing technologies.

\*Breakeven is NPV=0, HMC pricing remains at base case in this scenario of \$512/t ASX announcement – Outstanding Economic Potential with Goschen Central Study - 12 June 2025. ASX announcement – Met. Testwork Program completed for Goschen Central – 17 February 2025.



### Contributing consultants



















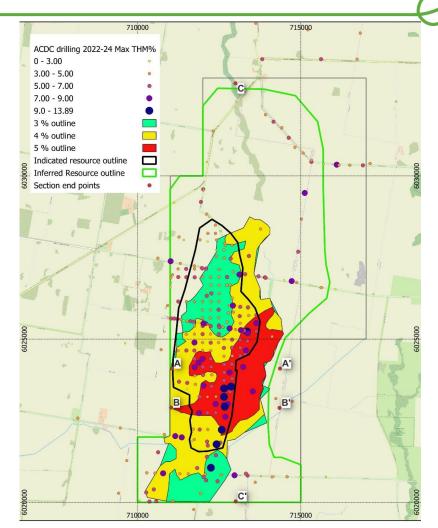
# Goschen Central Project – Mineral Resource

### **Significant Progress:**

- Significant increase in grade, heavy mineral tonnes and geological confidence of the Goschen Central resource.
- Indicated resource classification has increased significantly:
  - Tonnes have increased by over 60% from 130Mt to 210Mt.
  - Grade has **increased by 18%** to 2.3% total heavy minerals (THM).
  - In-Situ Total rare earth oxide (TREO) grade has increased by over **13%** to 684ppm.
- Mineral Resource Estimate over 600 Mt.
- **Resource remains open** to the north, south and east.

### **Next Steps:**

- Additional mineralogy underway to define assemblage within domains. Target to identify area's of higher THM may have a stronger assemblage. Currently a conservative approach has been taken for mineralogy.
- Next drilling program in planning.

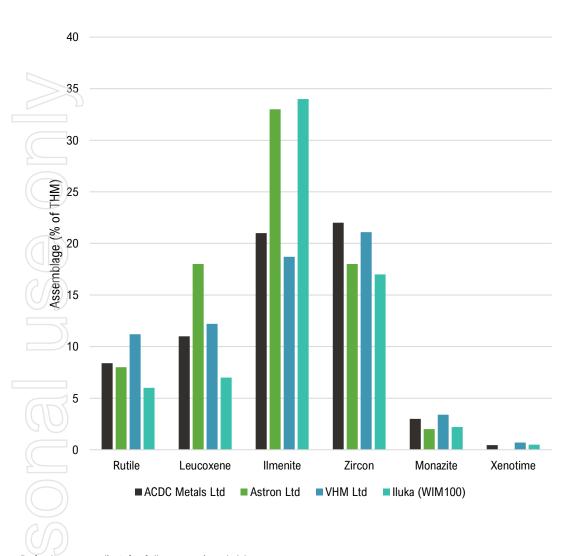


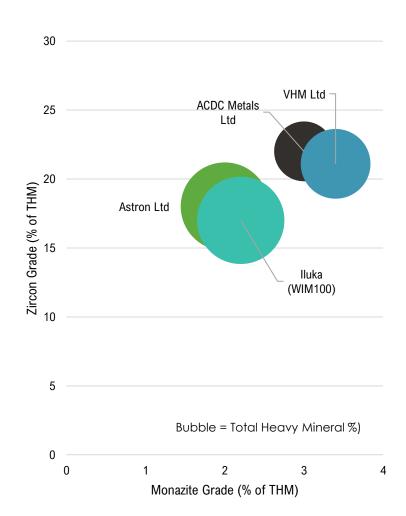


Goschen Central Resource

### Goschen Central resource compares well against peers







### **Results**

- Key minerals of focus:
  - Zircon
  - Monazite
  - Xenotime
- High assemblage of magnet rare earth oxides
  - **Pr** 4.1%
  - Nd 14.1%
  - **Dy** 2.4%
  - **Tb** 0.4%

Refer to appendix A for full comparison tables



## **Douglas Project**



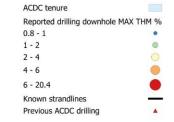
Targeting high grade strands in an active region of significant discoveries and mining.

- Tenements EL7908, EL7544 cover over 265km<sup>2</sup>
- Drilling in 2023 and 2024 totalled over 3,300 metres.
- High grades up to 20% total heavy minerals (THM) intersected.
- Mineralised thickness of up to 33m from shallow depth.
  - Comparable grades and thickness to the nearby Bondi strandline system which was mined by Iluka Resources.
- 2024 campaign consisted of 48 holes, highlights include:
  - 21.0m @ 4.73% THM from 21.0m, including 4.5m @ 11.34% THM from 21.0m and 1.5m @ 18.15% THM from 24m (24DAC012).
  - 33.0m @ 3.19% THM from 9.0m, including 7.5m @ 7.91% THM from 19.5m and 1.5m @ 15.28% THM from 24m (24DAC013).
  - 25.0m @ 2.1% HM from 17.0m, including 1m @ 20.4% HM from 17.0m (24DAC023).



Douglas strandline extension





2024 drilling results refer to ASX announcement 7 May 2024. 2024 drilling results refer to ASX announcement 26 August 2024.

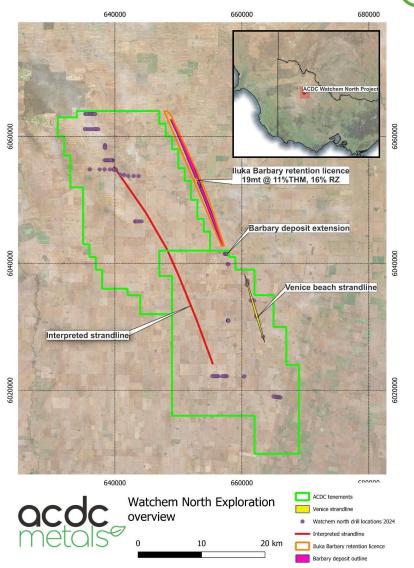


# Watchem North Project



Targeting high grade strands in an active region of significant discoveries.

- Tenements EL7685, EL7687 cover over 952km<sup>2</sup>
- Venice Beach Strandline discovered at Watchem North. Shallow, high-grade, heavy mineral sand strandline with a 9km strike length, including 6m at 37.9% Total Heavy Mineral (THM).
- A second potential strandline interpreted over a 35km strike length.
- Drilling suggests a third strandline, interpreted to be an extension of Iluka's Barbary heavy mineral sand resource.
  - Drilling highlights from the Venice Beach strandline include:
    - **6.00m** @ **37.9%** THM from 6.00m (24WN046).
    - **4.50m** @ **29.2%** THM from 6.00m (24WN026).
    - **3.00m** @ **20.3%** THM from 4.50m (24WN047).
    - **4.50m** @ **19.3%** THM from 4.50m (24WN035).



2024 drilling results refer to ASX announcement 4 June 2024. 2024 drilling results refer to ASX announcement 26 August 2024.

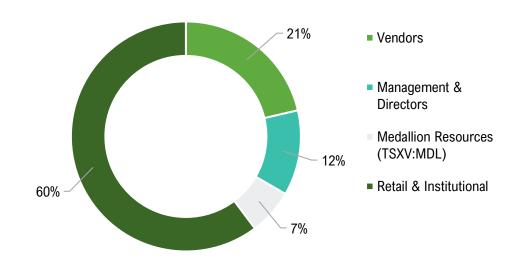


## **Corporate Structure**



Capital Structure	
Shares on issue	74,775,130
Share price (14 Jul 2025)	\$0.043
Market Capitalisation	\$3.2 M
Cash (Q1 CY2025)	\$2.29 M
Debt	Zero
EV	\$0.9 M
Options	
Other, \$0.30 expiring Jan 26	9,550,000

#### **ACDC Share Register**



- ASX listed January 2023
- ASX ticker: ADC
- Registered Office Melbourne VIC
- TOP 20 accounts for ~60% of shares on offer



### **Experienced Board & Management Team**





Tom Davidson
Chief Executive Officer
Engineer & Development



Andrew Shearer

Non-Executive Director and Chair

Geologist & Corporate



Mark Saxon

Executive Director

Geologist & Corporate



Ivan Fairhall
Non-Executive Director
Engineer & Corporate



Richard Boyce
Non-Executive Director
Finance & Governance



Kent Balas
Exploration Manager
Geologist



Adrien Wing
Corporate Secretary
Governance

# **Investment Summary**

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- ✓ Strong team with history of project development
- Cash balance of \$2.29m to execute plan
- ✓ Exposure to critical minerals
- ✓ Downstream processing optionality
- Proven exploration and project development strategy

### **Upcoming News flow**

- Goschen Central mineralogy
- Goschen Central resource development
- Retention Licence application for Goschen Central Project





# acdc metals

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### Appendix A - Peer comparison data

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#### **Mineral Assemblage**

					% of HM			
	Grade HM%	Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime	TRE0
ACDC Metals Ltd	2.2	8.4	11	21	22	3	0.45	2.7
Inferred	2.1	8.1	12	20	21	2.8	0.45	2.5
Indicated	2.3	9.1	10	22	24	3.4	0.45	2.9
Astron Ltd	4.8	8	18	33	18	2	-	_
Inferred	4.7	9	17	33	19	2	-	-
Indicated	4.6	8	18	32	18	2	-	-
Measured	5.5	9	19	31	21	2	-	-
VHM Ltd	3	11.2	12.2	18.7	21.1	3.4	0.7	2.44
Inferred	2.7	12	15.7	12.8	20.4	3.4	0.7	2.49
Indicated	3.2	10.2	8.5	24.5	20.4	3.4	0.7	2.34
Measured	5.7	10.8	9	24.7	29.9	4.3	0.8	2.72
lluka (WIM100)	4.7	6	7	34	17	2.2	0.5	-
Inferred	4.4	5	7	33	16	2.1	0.4	-
Indicated	4	6	7	33	17	2.3	0.5	-
Measured	5.3	6	7	34	17	2.1	0.5	-

B. Iluka Ltd - ASX announcement - https://www.iluka.com/media/t5nctvdr/wim100-mineral-resource-estimate-update.pdf



<sup>1.</sup> Astron Ltd - ASX announcement - https://astronlimited.com.au/wp-content/uploads/2025/01/20250131-ASX-Quarterly-Activities-Report-Q4-2024-Final.pdf

<sup>2.</sup> VHM Ltd - ASX announcement - https://wcsecure.weblink.com.au/pdf/VHM/02912571.pdf

## Appendix B – JORC Tables - Company Mineral Resource



### **620Mt Goschen Central Project Mineral Resource Estimate**

		Total HM %	Slimes %	Oversize %	% of total HM Mineral Assemblage							
Classification	Tonnes (Mt)											
					Rutile	Leucoxene	Ilmenite	Zircon	Monazite	Xenotime		
Indicated	210	2.3	21	4.3	9.1	10	22	24	3.4	0.45		
Inferred	410	2.1	21	4.2	8.1	12	20	21	2.8	0.45		
Total	620	2.2	21	4.2	8.4	11	21	22	3.0	0.45		

									% of total HM								
Classification	Rare Earth Oxides																
	Y203	La203	CeO2	Pr203	Nd203	Sm203	Eu203	Gd203	Tb203	Dy203	Ho203	Er203	Tm203	Yb203	Lu203	TRE0	TREO - CeO2
Indicated	0.50	0.48	1.0	0.12	0.42	0.077	0.0040	0.077	0.011	0.073	0.016	0.050	0.007	0.052	0.008	2.9	1.9
Inferred	0.43	0.42	0.9	0.11	0.36	0.067	0.0033	0.066	0.010	0.063	0.014	0.043	0.006	0.045	0.007	2.5	1.6
Total	0.45	0.44	0.9	0.11	0.38	0.071	0.0036	0.070	0.011	0.066	0.014	0.045	0.007	0.048	0.008	2.7	1.7

#### Notes

- Mineralisation reported above a cut-off grade of 1.0% total heavy minerals (HM).
  - The Mineral Resource has been classified and reported in accordance with the guidelines of the JORC Code (2012).
- Total HM is from within the +38 µm to 1 mm size fraction and is reported as a percentage of the total material. Slimes is the +38 µm fraction and oversize is the +1 mm fraction.
- 4. Estimates of the mineral assemblage (rutile, leucoxene, ilmenite, zircon, monazite and xenotime) and are presented as percentages of the total HM component, as determined from XRF, ICP-MS and QEMScan analysis. QEMScan data used the following breakpoints are used for definition of the titania minerals: rutile >98% TiO2, leucoxene: 70 to 98% TiO2 and ilmenite: 45 to 70% TiO2.
- 5. Rare Earth Oxides are from XRF data and are presented as percentages of the total HM component.
- 6. All tonnages and grades have been rounded to reflect the relative uncertainty of the estimate, thus sum of columns may not equal.

<sup>\*</sup>The Mineral Resource estimate was prepared and first disclosed in the ASX release dated 3 December 2024

