



HANNANS

**Emerging sustainable
battery recycler and battery
material supplier to the
European market**

ASX: HNR



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Who we are?

Hannans is licencing recognised battery recycling technology ("**Technology**") across the UK, the Nordics, Southern and Eastern Europe

Technology has been developed by Primobius, an entity 50% owned by Hannans major shareholder, Neometals Ltd (ASX: NMT) and 50% owned by German engineering house SMS

The safe recycling Technology looks to eliminate lithium-ion battery (**LiB**) waste and "closes the loop" by recovering high-value battery materials such as lithium, nickel, copper and anode materials from core chemistries*

Hannans aims to be a major battery recycler across its licenced jurisdictions servicing populations of > 225m**

EU strongly incentivising with regulation and funding, recycling technologies as Europe's auto industry rapidly electrifies

* NMC, LMC, NCA, LCO (excludes LFP)

** The territory within Hannans' license area covers Albania, Bosnia, Bulgaria, Croatia, Denmark, Finland, Greece, Ireland, Italy, Norway, Romania, Serbia, Slovakia, Slovenia, Sweden and the UK

Corporate Dashboard

ASX: HNR

Shares on issue¹	million	3,378
Share price	A\$	0.007
Market capitalisation	A\$ million	23.6
Cash (30 Sep 2023)	A\$ million	2.9
Debt (30 Sep 2023)	A\$ million	Nil

Major Shareholders

Neometals Investments Pty Ltd	26.09%
Greenhouse Investments Limited	19.20%
Top 20 holders	63.94%
No of shareholders	~4,251

¹ Excludes 18.75 million performance rights on issue.

Chart generated on 15/11/2023 at 9:40 am



Board and Chief Executive Officer



Jonathan Murray
Non-Executive Chairman
• Significant legal experience
• Partner at Steinepreis Paganin



Andrew Umbers
Non-Executive Director
• Significant investment banking experience
• Responsible for advising on listing & financing of approx. 100 companies on European stock markets



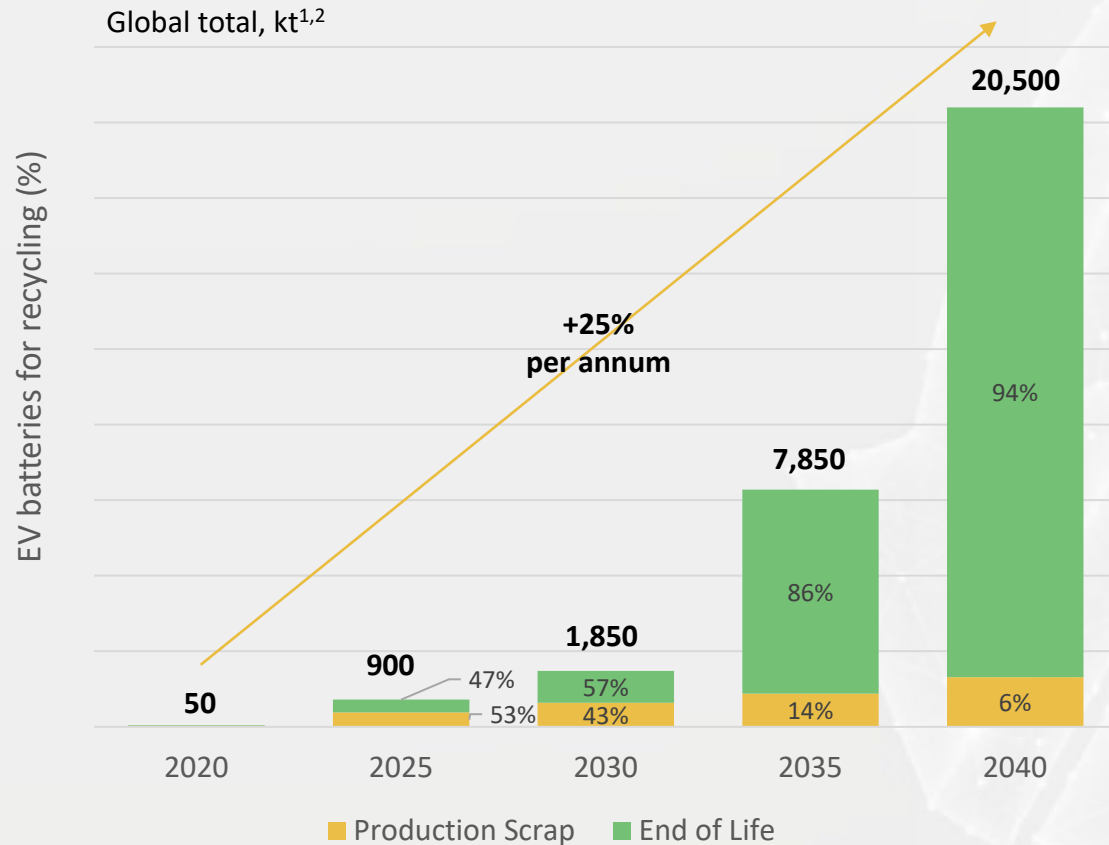
Mark Sumich
Non-Executive Director
• Significant corporate and commercial experience
• Held Director roles in ASX-listed companies in IT, technology, and resource sectors.



Brett Salt
Chief Executive Officer
• Significant resource strategic, corporate experience
• Held senior executive positions across Asia-Pacific, North America, Europe and Australia

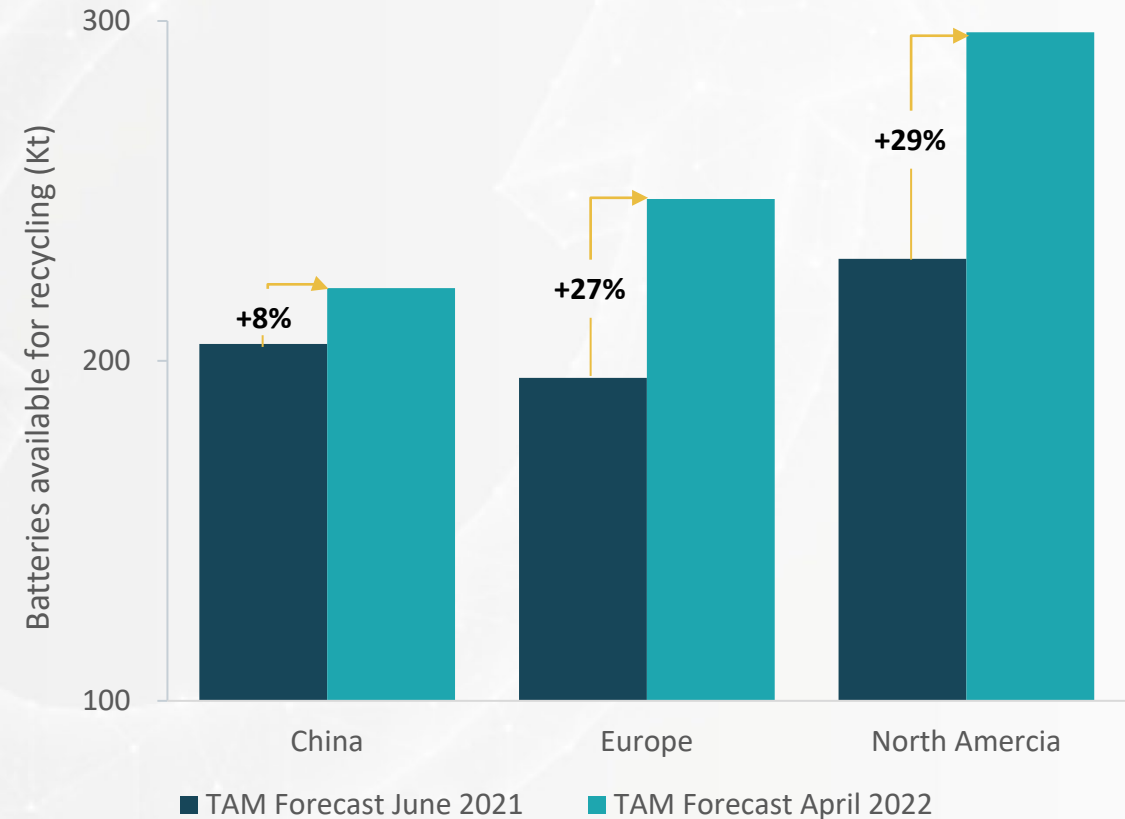
Global EV adoption is driving exponential growth in batteries and increasing need for recycling solutions.

Global supply of EV batteries for recycling is increasing



Source: McKinsey Battery Insights (2023) ¹ Numbers are rounded. ² 2023 Q1

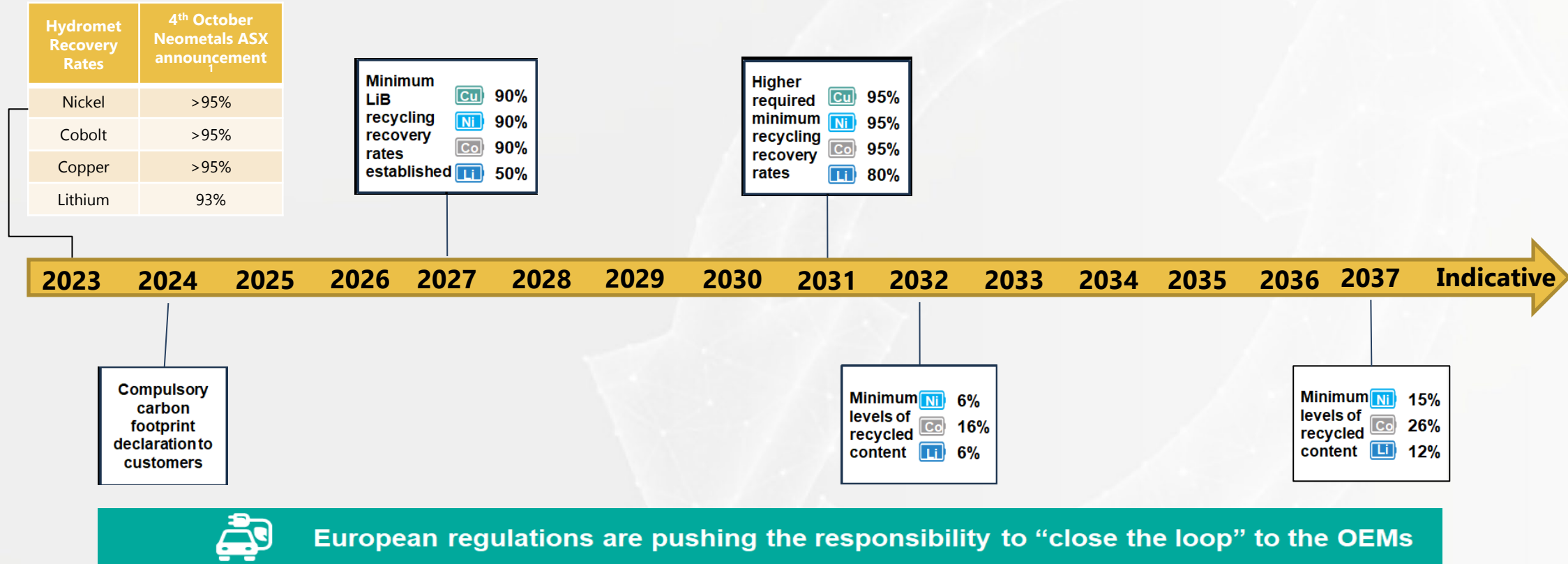
LiB availability for recycling by region in 2026



Source: Benchmark Mineral Intelligence (Gigafactory cell capacity, June 2021 & Apr 2022)

EU Regulations Driving Automakers to “Close the Loop”.

Primobius and Mercedes have demonstrated that our licensed technology exceeds minimum recycling recovery rates and enables minimum recycled content to be met today.



Terminology: Electric Vehicle (EV) Light Means of Transport (LMT) batteries providing power for the traction to wheeled vehicles such as electric scooters and bikes, with a capacity above 2 kWh Portable (Consumers can easily remove and replace batteries themselves).

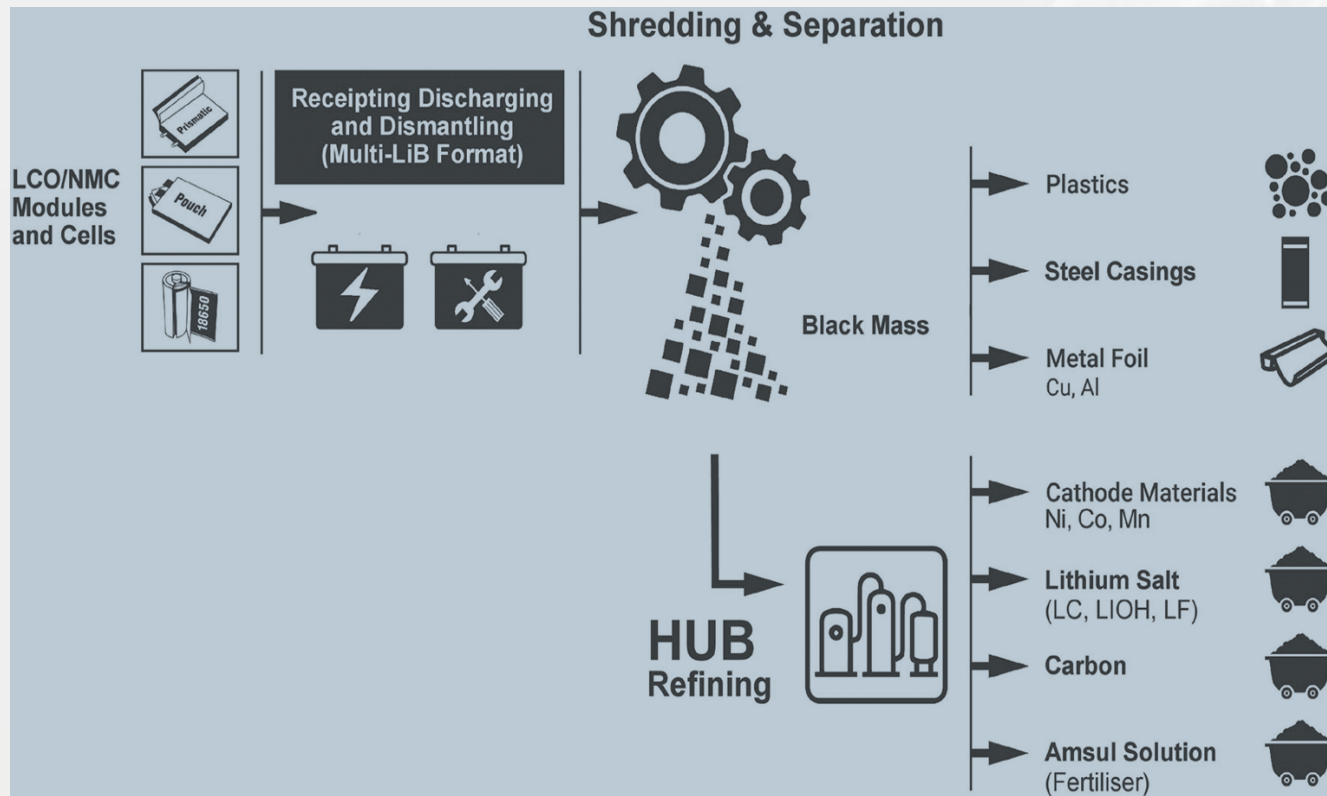
Source: European Commission, FCAB

¹ Neometals ASX Announcement “Primobius - Outstanding New Lithium Flowsheet Results”, October 4 2023.

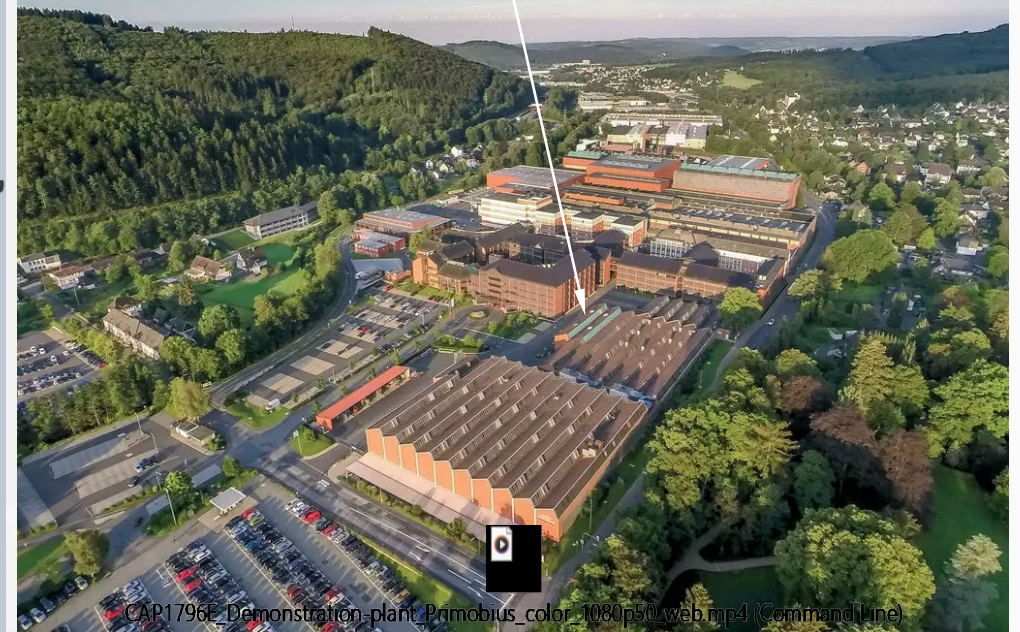
Our licensed best-in-class technology at the Primobius Commercial Spoke and Demonstration Scale Hub in Germany.

Equipment solutions backed by leading German plant builder SMS Group with 150 years experience

Safe, environmentally-friendly process producing high purity, low carbon battery materials at the lowest recycling cost



The SMS group Hilchenbach 40,000m² manufacturing facility houses a dedicated 2,000m² facility for the Primobius recycling plant.



CAP1796E-Demonstration-plant-Primobius_color_1080p50_web.mp4 (Command Line)

What have we been doing?

Acquired Greenhouse technology commercialization rights and expanded our territories to Albania, Bosnia, Bulgaria, Croatia, Greece, Ireland, Italy, Romania, Serbia, Slovakia, Slovenia and the UK

Announced the agreement with GPBR for the supply of LiB feedstock to a proposed Hannans' battery recycling operation in the UK

Announced the sale of Forrester Project marking the final step of transitioning to an EU recycling business

Engineering consultants appointed and UK study commenced

Announced EU Grant funding

Q3 22

Q4 22

Q2 23

Q3 23

Oct 23

Nov 23

Formed a European team to implement our battery recycling strategy

Appointed a new CEO

Announced the agreement with Metalfer for the supply of LiB feedstock to a proposed Hannans' battery recycling operation in Serbia.

We are capitalizing on our licensed technology to create long term value from hub and spoke plants tied to high quality partners.

Exclusive Territories

Nordics

Norway, Sweden, Denmark, Finland

Italy

Slovakia

South East Europe

Albania, Bulgaria, Bosnia
Herzegovina, Croatia, Greece,
Romania, Serbia, Slovenia

Non-Exclusive Territories

UK & Ireland



UK
Market development agreement for UK Lithium-ion
Battery Recycling operation

Primobius

Hilchenbach, Germany
Operating 10tpd commercial
Lithium-ion Battery Recycling plant



Mercedes-Benz

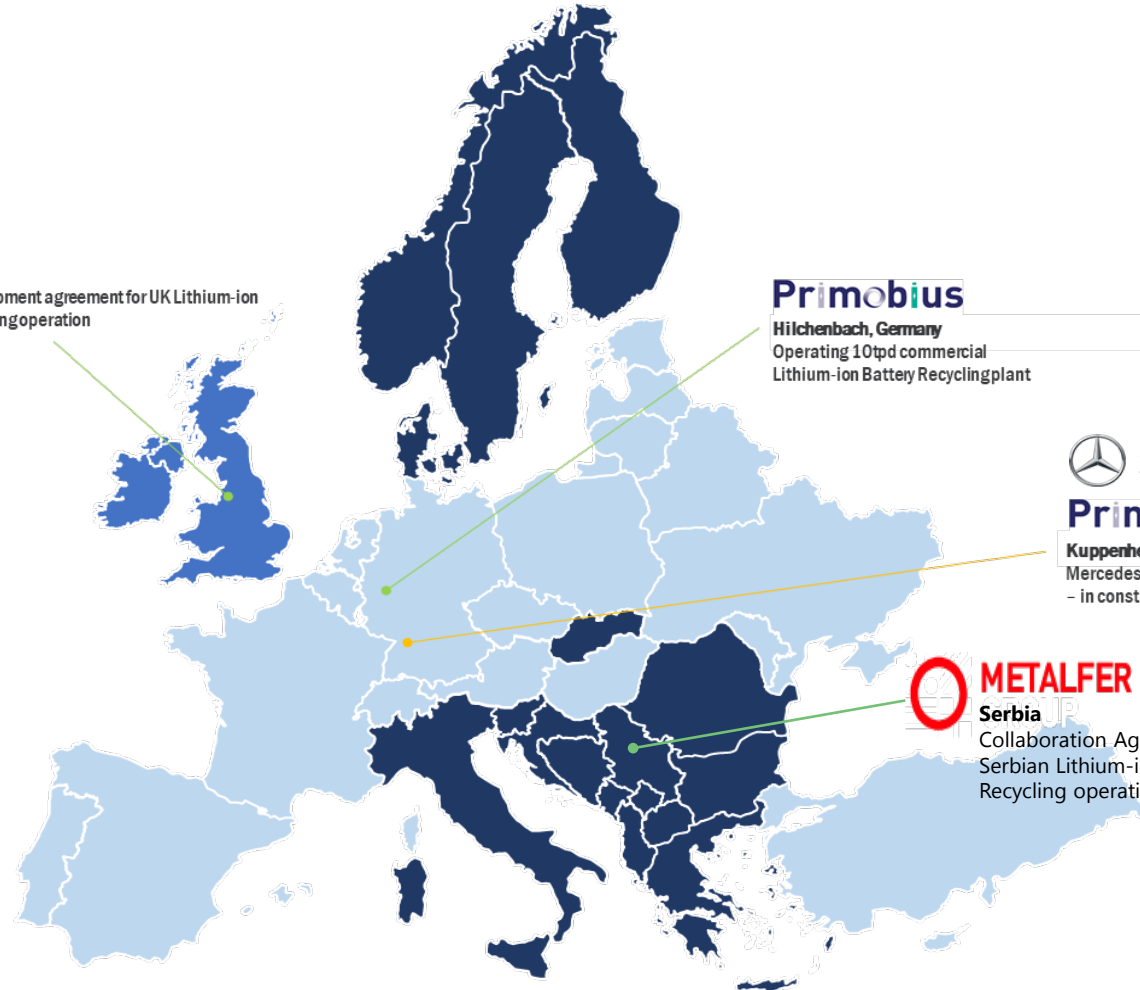
Primobius

Kuppenheim, Germany
Mercedes-Benz Lithium-ion Battery Recycling plant
- in construction



Serbia

Collaboration Agreement for
Serbian Lithium-ion Battery
Recycling operation



Scalable plants and customer driven business models.

Recycling plants sized to meet the volume requirement of our customers and able to transition from a recycling service to plant supply under a JV depending on their needs.



United Kingdom¹

Feedstock

Feasibility study

10 tpd "Spoke" plant

South East Europe²

Feedstock

Feasibility study

10 tpd "Spoke" plant

Building Feedstock

In the UK, 16,800 tonnes over 4 years³

In Serbia, annual volume of no less than 4,000 tonnes⁴

Scalable Pipeline

Targeted deals follow same principles

Market updated on execution of binding deals

¹ Hannans ASX Announcement "Hannans market development agreement for proposed UK lithium battery recycling operation", April 19 2023

² Hannans ASX Announcement "Australian Hannans and Serbia's Metalfer group join forces in proposed lithium battery recycling partnership", November 14 2023

³ The agreement between Hannans and GPBR contemplates a four-year undertaking by GPBR to deliver 16,800 tonnes of qualifying LiB feedstock (subject to entry into a formal feedstock supply agreement)

⁴ Hannans and Metalfer have agreed to work together to prepare a feedstock business plan based on an annual lithium-ion battery volume of no less than 4,000 tonnes comprising NMC, LMC, LCO and NCA chemistries

We have already benefited from the significant funding and support EU policies and regulations have created.

HANNANS

27 November 2023

ASX Announcement

**EUROPEAN GRANT
FOR LITHIUM-ION PHOSPHATE BATTERY RECYCLING PROJECT**

- Hannans' project consultant, Greenhouse, secures European grant for lithium-ion phosphate battery recycling technology through its participation in the ReLiFe Project, aimed at establishing a pilot plant for LFP battery recycling.
- Diversifying towards LFP battery recycling supplements Hannans' existing LIB recycling technology and provides potential exposure to a growing market.
- Participation in the ReLiFe Project aligns with EU targets for critical raw materials, sustainability, energy transition, and the circular economy.

Hannans Ltd (ASX: HNR) (Hannans or the Company) is pleased to report the successful award of a grant to lithium ferrous phosphate (LFP) battery recycling project, ReLiFe¹ (the Project). The Project's lead partner is Sunlight Group Energy Storage Systems (Sunlight) and Hannans is presently represented in the Project by its consultant Greenhouse Investment Group Limited (Greenhouse). Sunlight, Greenhouse, Hatch Küttner GmbH, Helmholtz-Zentrum Dresden-Rossendorf e.V., Monolithos Ltd, SE&C IKE, Technische Universität Bergakademie Freiberg (the Project Participants) have joined together to assess the Project which aims to establish a pilot recycling plant for recovering lithium carbonate, iron phosphate and graphite from end-of-life and scrap LFP batteries.

According to the International Energy Agency, LFP batteries are estimated to be among the leading battery chemistries in the global market, accounting for an estimated 30 per cent of batteries used in electric vehicles around the world. This figure is expected to grow over the next ten years due to increased demand for battery powered vehicles and other technologies².

The European Institute of Innovation and Technology (EIT) RawMaterials GmbH, a European Union-funded community of companies and research institutions with the stated goal of supporting the development of critical raw materials supply in Europe, awarded the grant to the Project Participants. Total funding awarded by EIT RawMaterials GmbH to the Project is EUR€3.4 million expected to be allocated in apportionments³ during 2023, 2024 and 2025. Hannans apportioned total share is estimated at approximately EUR€235,000 with a EUR€41,000 payment made in November 2023 and the final instalment currently expected to be paid in March-April 2026.

A successful implementation of the Project is expected to meet a series of core EU targets regarding Critical Raw Materials (CRMs), sustainability, energy transition, and the circular economy, by facilitating the recovery of lithium, iron phosphate and graphite.

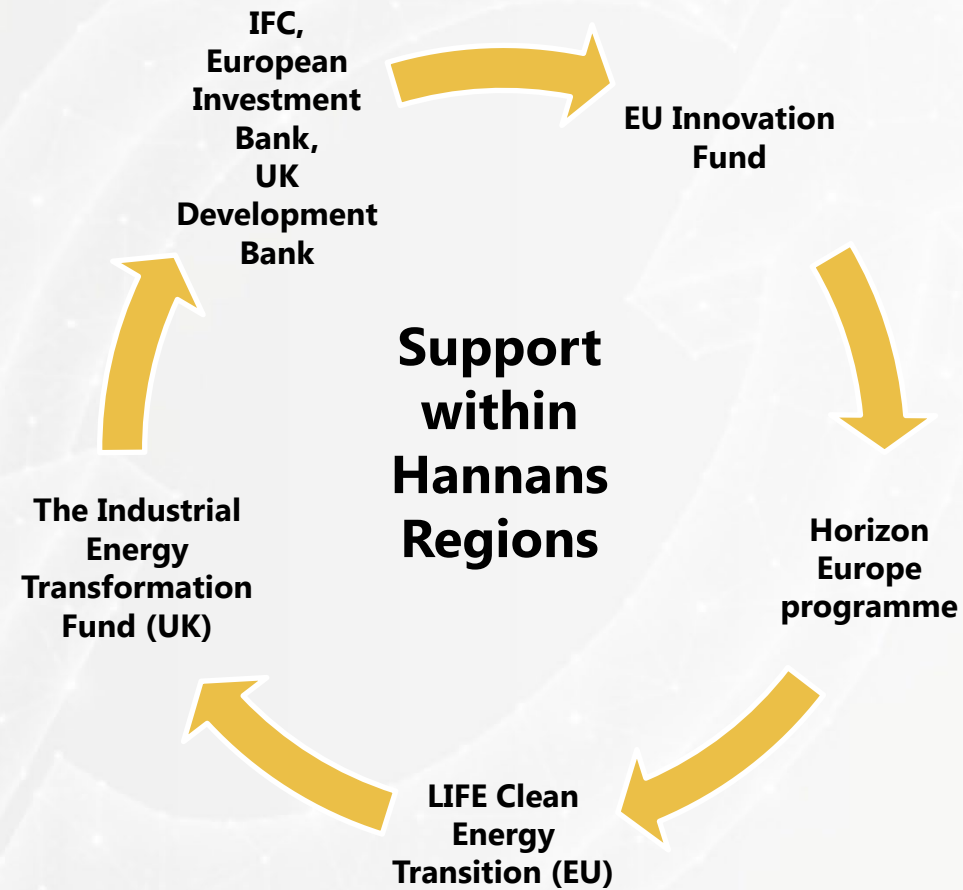
¹ Refer to ReLiFe website: <https://reliifeproject.eu/>

² Refer to <https://www.iea.org/reports/global-ev-outlook-2023/trends-in-batteries>

³ 60 per cent of the estimated annual apportionment is expected to be paid in the year of apportionment and the remaining 40 per cent is expected to be paid in March-April of the following year.

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We have three core targets in the proposed rebranding

1. Distinguish the business from its past as a junior precious metals explorer in Western Australia
2. Let investors and the broader market know that the current business is on a new and different path
3. Position the business as a dynamic, technology-driven organisation at the forefront of the renewables revolution

The logo for Redivium, featuring the word "REDIVIVUM" in a stylized, sans-serif font. The letters "RE" are blue, and "DIVIVUM" is green. The letters are spaced out and have a modern, geometric feel.

REDIVIVUM combines two Latin words:

1. **'Redivivus' meaning 'recycle'**
2. **'Altilium' meaning 'battery'**

Key Takeaways



Hannans is ideally placed to in the heart of Europe's auto industry and LiB chain as an early mover battery recycler with access to leading edge, proven technology



Huge wave of EV demand to underpin long term LiB recycling demand



Hannans' team is delivering valuable partnering opportunities focused on committing feedstock to enable the rolling-out "hub and spoke" shredding and battery material recovery plants across its licensed territories



Mandated policy and funding support for localised supply chains in EU with emphasis on "closing the loop" via recycling



Multiple future income streams with participation in supply of high-value battery chemicals and metals

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