

## Lithium-ion Battery Recycling in the Nordics

- **Hannans signs Memorandum of Understanding (MoU) to commercialise lithium-ion battery recycling technology in Norway, Sweden, Denmark, and Finland**
- **Nordic region has the highest electric vehicle (EV) penetration rates in the world**

Hannans Ltd (ASX: HNR) has secured a significant opportunity to recover high purity metals from scrap and spent lithium-ion batteries (**LiB**) in Norway, Sweden, Denmark, and Finland (**Nordics**) – the region with the highest EV penetration rates in the world.

### LiB Recycling Technology

Hannans has signed an MoU with unlisted Australian registered company Critical Metals Ltd that provides Hannans with rights to recover high purity metals from scrap and spent LiB using a LiB recycling technology that is safe, sustainable, low energy and low CO<sub>2</sub> when compared to incumbent technologies. The MoU with Critical Metals will take the form of a joint venture enabling Hannans to earn its interest by funding and managing certain tasks and activities.<sup>1</sup>

The LiB recycling technology the subject of the MoU has undergone comprehensive pilot plant and validation test work programs and has been substantially derisked. Hannans shareholders are poised to benefit from both the long term R&D investment into the technology and the high quality strategic partnerships entered into by the technology owners<sup>2</sup>.

Hannans believes these attributes significantly increase the potential for the commercialisation strategy to be successfully executed.

### Growth in EV and Stationary Energy Storage in Europe

Electrification in Europe is creating enormous demand for LiB for EV and stationary energy storage and Europe does not produce enough metals to meet its massive growth ambitions.

The recovery of metals from scrap and spent LiB is imperative because the volumes of flammable toxic scrap and spent LiB are forecast to grow exponentially because of government policies to encourage the uptake of LiB and the unstoppable trend towards electrification. European LiB and EV manufacturers also need to reuse metals recovered from scrap and spent LiB within their own ecosystems to meet their legal, social, environmental, and financial obligations.

Importantly the growing volumes of scrap and spent LiB contain significant nickel, cobalt, lithium and manganese and the LiB recycling technology to be commercialised by Hannans in the Nordics unlocks that embedded value.

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<sup>1</sup> Refer Appendix A for transaction details.

<sup>2</sup> Refer Appendix A for technology owner details.



Environmental, Social and Governance (ESG)

Hannans believes it can make a positive difference to society by successfully commercialising the LiB recycling technology in the Nordics.

The pursuit of sustainable methods to produce metals for consumption – in this case via exploration discovery and the recovery of metals from scrap and spent LiB – will ensure Hannans exceeds the increasingly high ESG expectations society has set for the resources industry.

No Change in Scale and Nature of Activities

Hannans has advised ASX that it proposes to carry out LiB recycling business development activities and undertake permitting processes at an estimated cost of \$1.5 Million (**Feasibility Stage**).

ASX has confirmed that undertaking the Feasibility Stage of the LiB recycling project does not constitute a change in the nature and scale of Hannans activities in terms of Listing Rule 11.1 subject to the following conditions:

- a) Hannans must continue to spend funds on its existing exploration projects in accordance with the proposed expenditure table prepared by Hannans and provided to ASX as part of its submission regarding the application of Chapter 11 to this transaction on 27 August 2021<sup>3</sup>;
- b) Hannans must disclose in each quarterly activities report until 31 March 2024, the proportion of expenditure incurred in relation to exploration and evaluation on its exploration projects and LiB recycling project; and
- c) Hannans must disclose as separate line items in each quarterly cashflow report until 31 March 2024, expenditure incurred in relation to the exploration and evaluation expenditure on its existing exploration assets and the LiB recycling project.

ASX have confirmed its present position that if Hannans proceeds beyond the Feasibility Stage of the LiB recycling project (or incurs expenditure more than the \$1.5 Million budgeted in relation to the Feasibility Stage) it will constitute a change in the nature and scale of Hannans activities in terms of Listing Rule 11.1. If that occurs, Hannans will be required under Listing Rule 11.1.3 to comply with all the requirements of Chapters 1 and 2 of the Listing Rules before it proceeds beyond the Feasibility Stage or incurs expenditure more than the \$1.5 Million budgeted on the Feasibility Stage of the LiB recycling project.

This announcement has been authorised for release by the Hannans Board of Directors.

Best regards,



Damian Hicks  
Executive Director

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<sup>3</sup> Refer Appendix B for table.

## Appendix A

### Transaction Details

- A. Hannans Ltd is an ASX listed company.
- B. LiB Recycling Pty Ltd (**LiB Recycling**) is a subsidiary of unlisted Australian registered company Critical Metals Ltd (**Critical Metals**).
- C. ACN 630 589 507 Pty Ltd (**ACN630**) has developed a proprietary technology to safely recover several metals from spent and off-specification lithium-ion batteries (**Technology**). ACN630 is a wholly owned subsidiary of ASX listed Neometals Ltd (**Neometals**).
- D. ACN630 granted LiB Recycling an exclusive right to commercialise the Technology in Sweden, Norway, Denmark, and Finland (**Territory**) via a Technology Licence Agreement on 8 March 2019 (**Licence**).
- E. Hannans and LiB Recycling have entered a Memorandum of Understanding (**MoU**), which sets out the terms upon which the parties agree to work together on an exclusive basis to maximise the value of the Licence for both parties (**Purpose**), initially, via an unincorporated joint venture. Under this arrangement, LiB will also grant Hannans a co-right to utilise its rights to the Technology under the Licence, for the Purpose (most likely via a sub-licence arrangement).
- F. Hannans will manage and fund all tasks and activities in the Territory through to a final investment decision (**FID**) with respect to the construction of each plant for the processing or recycling of feedstock batteries using the Technology (refer to appendix A for the proposed budget for these 'Feasibility Stage' activities). A plant may comprise a shredding and beneficiation plant (Stage 1) or a refining plant (Stage 2) (each, a **Plant**).
- G. Subject to Hannans re-complying with Chapters 1 and 2 of the ASX Listing Rules (assuming the current ASX position remains unchanged), if Hannans makes a FID and enters a binding engineering, procurement, and construction agreement for a Plant, LiB Recycling will be required to either (1) co-contribute to all future construction costs of the new Plant (capital and operating costs), in which case, each party would have a 50% equity interest in the Plant, or (2) its equity interest in the Plant will be diluted pro-rata to its relative funding contribution.
- H. To be able to make an FID, Hannans will need to have secured enough feedstock to justify the economics of a Plant and obtained the required permits to operate the Plant. Under the proposed joint venture arrangement, the costs of permitting and sourcing and marketing the business in the Territory will always be borne by Hannans (i.e. Hannans will fund all activities up to each FID for a given Plant, at which point, LiB will have the option to contribute or dilute).
- I. LiB Recycling has been actively seeking to establish relationships with potential providers of battery feedstock and engineering, procurement, and construction firms. LiB will pass to Hannans the benefit of these relationships, discussions and initiatives and responsibility for the carriage of these matters will be the sole responsibility of Hannans.
- J. The MoU and entry into further substantive agreement (to be consistent with the above terms) (**Substantive Agreement**) is conditional on receipt of shareholder approval to the transaction for both Critical Metals and Hannans and completion of a capital raising of not less than \$5 Million by Hannans prior to 31 December 2021.
- K. The MoU will terminate if (1) a Substantive Agreement is not executed by 31 October 2021, (2) Hannans has not made a positive FID by 30 June 2023 or (3) the Licence is terminated for whatever reason.

**Appendix B**Extract from submission by Hannans to ASX on 27 August 2021**9.1 Budget**

It is proposed that the budget for the 24 months following completion of the Transaction will be as follows (assuming successful completion of the Capital Raising):

Item	Year 1 (\$M)	Year 2 (\$M)
Existing projects <sup>1</sup>	1.25	1.25
Funding of Transaction <sup>2</sup>	0.75	0.75
General administration and ongoing working capital	0.75	0.75
<b>TOTAL</b>	<b>2.75</b>	<b>2.75</b>

## Notes:

- Existing projects include Forrestania, Fraser Range and Moogie. Activities include geophysics (airborne, surface, and downhole), geology (mapping and drilling) and geochemistry (surface sampling and drilling be it aircore, reverse circulation or diamond drilling). Airborne geophysics is planned for Moogie in September, ground geophysics is planned for Fraser Range and Moogie late 2021 and downhole geophysics is planned for Forrestania early 2022. RC / diamond drilling is planned for Moogie late 2021. Existing projects also covers business development activities to source new nickel projects in Western Australia either via staking new ground, joint venture, or acquisition.
- Transaction costs include business development costs to secure battery feedstock, location studies, environmental and social impact assessments for each Plant and permitting processes for each Plant.

The above table is a statement of current intentions at the date of this letter. Intervening events may alter the way funds are ultimately applied by the Company. Hannans expects that its existing cash on hand will continue to be spent in a manner consistent with its previously stated objectives.