

Sustainably Sourced Rare Earths for the Green Transition

Mkango Resources Ltd.

Corporate Presentation April 2025



## Strategic REE Projects across the Supply Chain

### Near-term 2025 NdFeB Magnet & Alloy Production in UK & Germany



### Rare Earth Magnet Recycling & Manufacturing



- Focus on shortloop recycling in UK
- Commercial production targeted by the end of Q2 2025
- Initial production 25-30tpa recycled NdFeB scaling up to targeted 100-330tpa
- Further expansion options being evaluated



- Collaboration with Envipro in Japan & UK
- Joint marketing of recycling solutions in Japan
- Recycling trials in UK and Japan
- Analysis of scrap feed and offtake opportunities in Japan
- Potential HyProMag recycling technology development in Japan



- Focus on shortloop recycling in Germany
- Commercial production targeted for 2025
- Targeted production of 100-330tpa recycled NdFeB
- Further expansion options being evaluated



- Focus on shortloop recycling in USA
- Targeted production of 1,000tpa starting H1 2027
- NPV US\$262m, IRR 23% at current prices
- NPV US\$503m, IRR 31% at forecast prices
- Detailed
  engineering
  commencing
  shortly



- Focus on longloop recycling
- Complementary process to short-loop
- Pilot plant being commissioned in UK
- Production of Nd/Pr and Dy/Tb carbonates and oxides
- Strategic options being evaluated

#### Progressing towards 2025 NASDAQ listing



### Mining

# (数)

### Refining

#### Songwe Hill Rare Earths Project

Malawi



#### Pulawy Separation Project

**Poland** 



- Definitive Feasibility Study completed in July 2022
  - NPV of US\$559m, IRR of 31.5%
- Targeting 5,954tpa TREO in mixed rare earth carbonate (MREC)
- Environmental Assessment (ESHIA) approval received in January 2023
- Mining Development
   Agreement signed with
   Government of Malawi in July
   2024
- Significant opportunities to reduce OPEX

- Awarded Strategic Project status by European Commission
- Underpinned by sustainablysourced, mixed rare earth carbonate from Songwe and other potential sources
- Site adjacent to Grupa Azoty
  Pulawy fertiliser and chemical
  plant
- Pre-feasibility studies completed (Carester)
- CAPEX US\$120m & OPEX <US\$3/kg</li>
   TREO in MREC
- Production of 2,000 tpa Nd / Pr oxides and 50 tpa Dy / Tb oxides (in SEGH carbonate)

One of the very few advanced stage, independent, rare earth mining and separation projects globally

Recycling underpinned by patented Hydrogen Processing of Magnet Scrap (HPMS) technology developed by University of Birmingham and US\$100m R&D expenditure

# Mkango Board and Management

### Advanced REE project from exploration to DFS

#### Implemented early mover REE recycling strategy



#### William Dawes, CEO & Co-founder

- BSc in Geology, MSc in Mineral Exploration, CFA
- 30 years' experience in exploration, mining, metallurgy, recycling, business development and investment banking at Rio Tinto, Robert Fleming, Chase Manhattan and JP Morgan



#### Alexander Lemon, President & Co-founder

- BSc in Geological Sciences, MSc in Mineral Exploration
- 30 years' experience in exploration, business development and operations management at Allied Commercial, Consolidated Contractors Company



#### Robert Sewell, Chief Financial Officer

- B Comm Hons (Accounting) Chartered Accountant (SA)
- 20 years' experience in commercial accounting, debt and equity finance, and cash management at Deloitte and AfriTin Mining

### Track record of growth via partnerships

### Significant rare earth experience

#### Derek Linfield, Non-Executive Chairman

Former Managing Partner of Stikeman Elliott (London) LLP, over 18 years' experience in London with African mining and oil & gas sectors, Former Chairman of Cornish Lithium.

#### Susan Muir, NED

Over 25 years of capital markets experience in senior investor relations roles and equity research with major Canadian banks. Formerly Vice President, IR, at Barrick Gold and Arizona Mining.

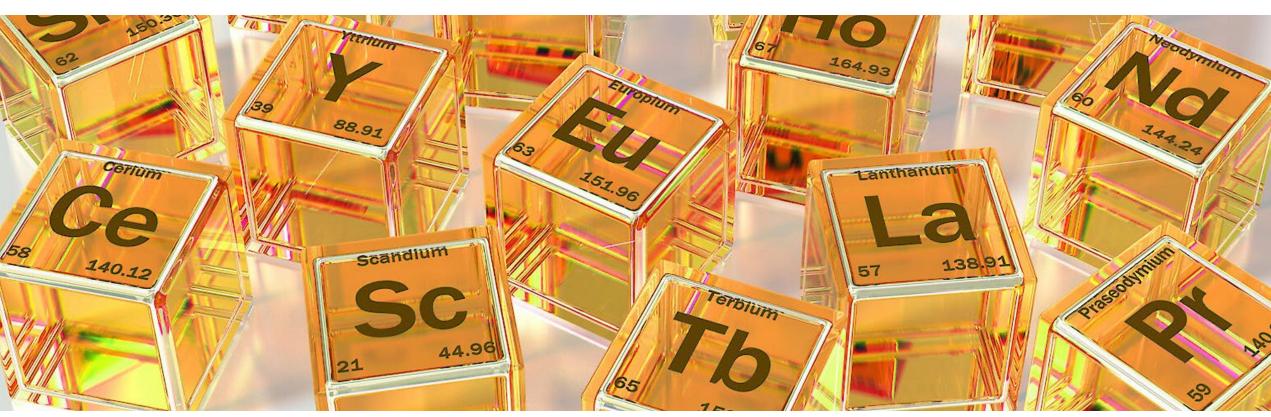
#### Shaun Treacy, NED

Strategic and Financial Adviser, 25 years' experience in corporate finance and investment banking. Former MD of J.P. Morgan, Lehman Brothers, Nomura and UBS. Associate of the Institute of Chartered Accountants.

#### Philipa Varris, NED

Head of Sustainability at Horizonte Minerals and NED of EnviroGold Global. Over 25 years' experience in ESG and H&S management globally with an MSc in Natural Resources. AusIMM Chartered Environmental Professional and UK Committee member.

## Rare Earth Magnet Recycling and Manufacturing







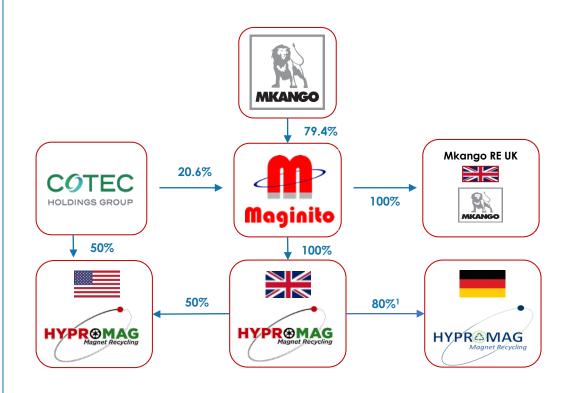




# HyProMag - Introduction

- Major opportunity for growth in recycling less than 5% of rare earth magnets are currently recycled from end-of-life products
- Key challenge is separation how do you liberate embedded NdFeB magnets for recycling in a cost effective and energy efficient way?
- HyProMag has the solution via its patented Hydrogen Processing of Magnet Scrap (HPMS) technology
- The resulting recycled NdFeB can be fed back into multiple points of the supply chain including:
  - short-loop magnet manufacturing to produce magnets with a significantly reduced carbon footprint
  - long-loop chemical processing to produce rare earth carbonates and oxides
- Commercial production for UK and Germany targeted in 2025, USA in H1 2027
- Supported by the Minerals Security Partnership and aligned with the Critical Raw Materials Act

### **Group Structure**



<sup>1</sup>Maginito's interest in HyProMag GmbH will increase to 90% once convertible loan note is converted

# Magnet Recycling Challenges

### Most end-of-life rare earth magnets are not currently recycled



- Electronic products are not often designed with end-ofuse recycling in mind
- Current recycling processes are not suitable for NdFeB magnets
- Magnets not recovered during shredding process



Hard disk drives



Shredded HDDs



Rotor from an automotive drive motor



Shredded automotive motor



<sup>&</sup>lt;sup>1</sup>University of Birmingham/HyProMag <sup>2</sup>Axion

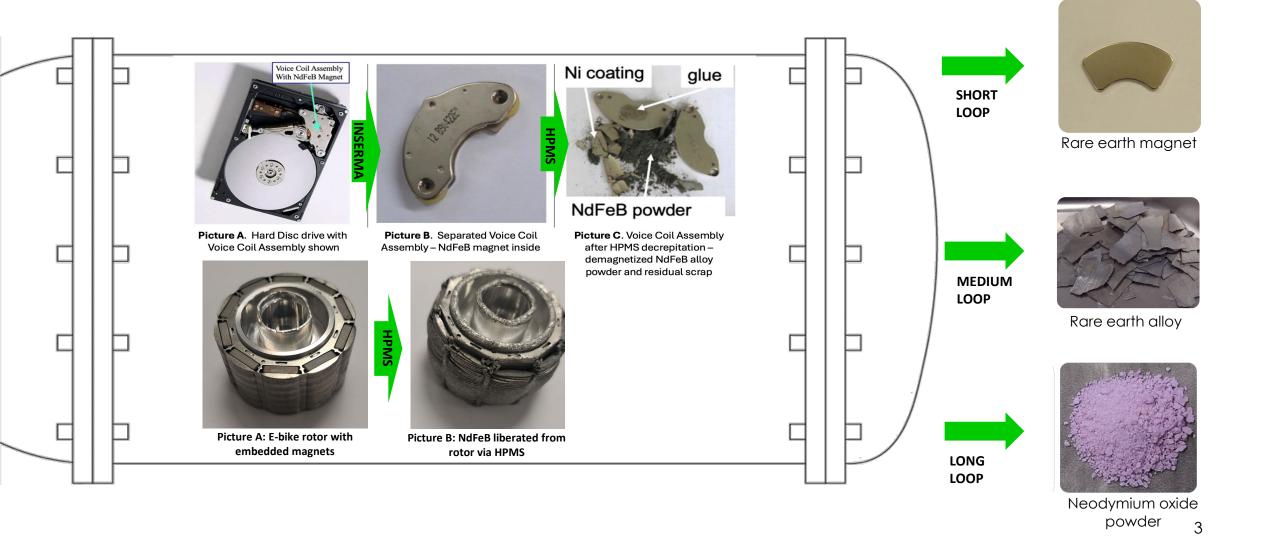
# The HPMS Solution Explained

3.



HPMS extracts & demagnetises embedded NdFeB magnets using hydrogen, enabling separation from the scrap stream prior to shredding – the resulting NdFeB powder is then fed back into the supply chain

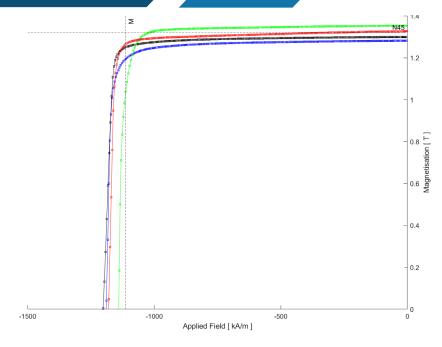
# The HPMS Solution Explained



Recycle





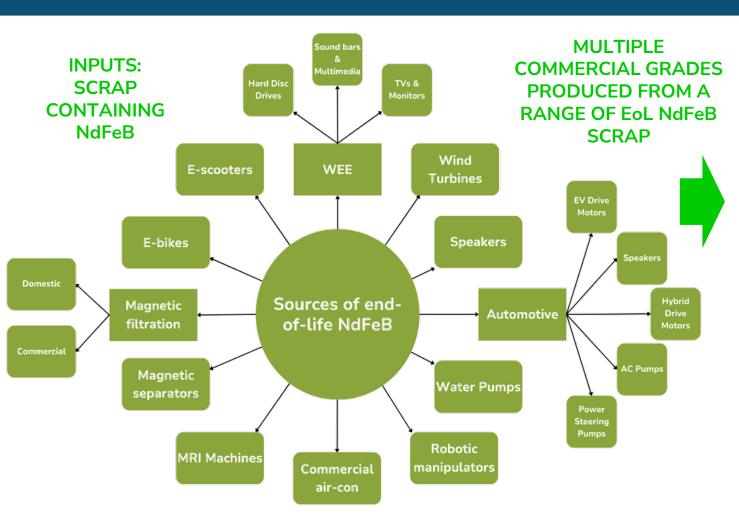




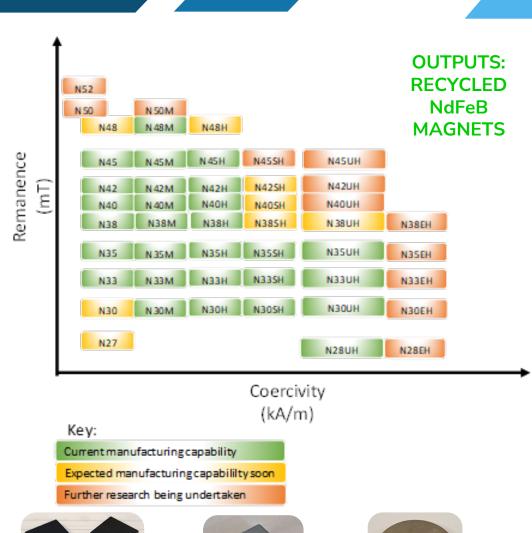
Mixed VCM Feed from HDDs

Commercial Grades N40M - N45M Magnets

## Recycled Magnets with Low CO<sub>2</sub> Footprint



Over 3,000 finished recycled magnets produced to date by HyProMag and University of Birmingham, currently being tested in multiple automotive, aerospace, electronics applications, with other applications planned



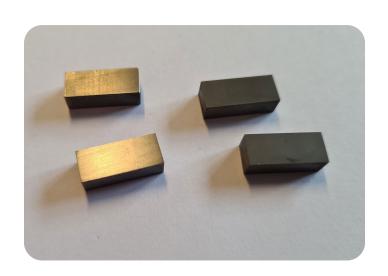
# Competitive Advantages

### Early mover advantage with strong competitive position



- Significant competitive advantages
- HPMS solves the separation issue how to liberate and demagnetise separated magnets
- Short loop recycling more energy efficient and cost effective than recycling via chemical processes
- Underpinned by c.US\$100m in research and development fundina
- Supported by the Minerals Security Partnership
- Ability to manufacture magnets with a reduced carbon footprint
- Minimal carbon footprint vs. primary mining to separation. to metal alloy, to magnet production
- Exclusive agreement with Inserma for automated preprocessing

Over 3,000 commercial grade recycled finished magnets produced from piloting and being tested in various applications

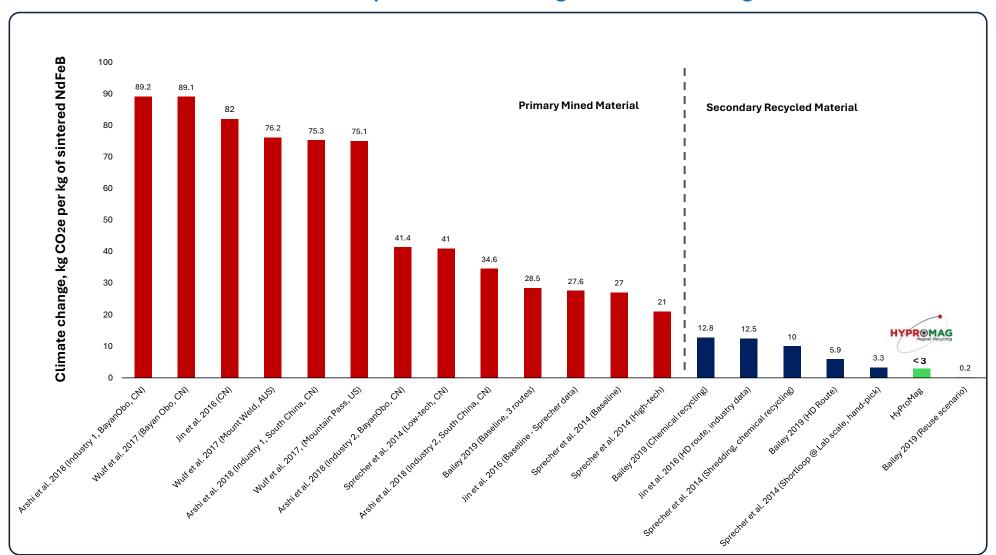




Very strong technical expertise and extensive industry experience with broad network of partnerships and excellent reputation – supported by University of Birmingham Magnetic Materials Group and University of Pforzheim, with specialists in magnet processing in UK and Germany 10

## Significantly Reduced CO2 Footprint

### **Carbon Footprint of NdFeB Magnet Manufacturing**



## Inserma Automated Pre-Processing

### Exclusive agreement with Inserma to commercialise automated preprocessing of hard disc drives, loudspeakers and electric motors



- Collaboration with Inserma on the optimisation, commercialisation and roll-out of pre-processing technologies for HyProMag in the UK, Germany and United States
- The latest mobile Inserma unit for hard disc drives (HDD) can be co-located at hyperscale data centres, shredding, recycling or HyProMag facilities
- The technology not only provides a steady pre-processed NdFeB magnet scrap feed to HyProMag, but also has major benefits for sustainable, secure and low cost recycling of HDDs
  - > Expected VCM removal in less than 3 seconds per HDD
  - Secure data destruction of the remainder of the HDD can remain on site
  - Removal of the rare earth magnet reduces costs and carbon footprint of subsequent shredding
  - Simultaneous removal of centre spindle further facilitates subsequent shredding, and reduces blade breakage, costs and carbon footprint
  - No heat treatment or dismantling required for magnet recovery
  - > Facilitates HyProMag's short loop magnet manufacturing process with minimal carbon footprint
  - Complementary technology for automated Printed Circuit Board Assembly (PCBA) removal under development



## **Commercialisation Underway**

### HyProMag – main industrial partner for scale-up and exclusive HPMS licencee

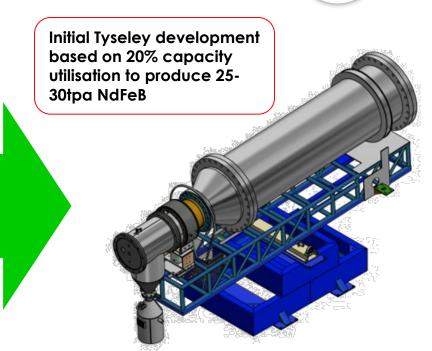


## Proposed equipment at Tyseley Energy park, UK

- HPMS reactor
- Powder processing (sieving, milling, blending)
- Pellet press
- Axial aligning press (commissioned)
- Inert sintering system
- Transverse aligning press (commissioned)
- Analytical equipment
- Chemical processing



- Pilot HPMS vessel at University of Birmingham commissioned in 2022
- 50 100kg per batch
- Over 3,000 finished magnets produced and being tested in various applications

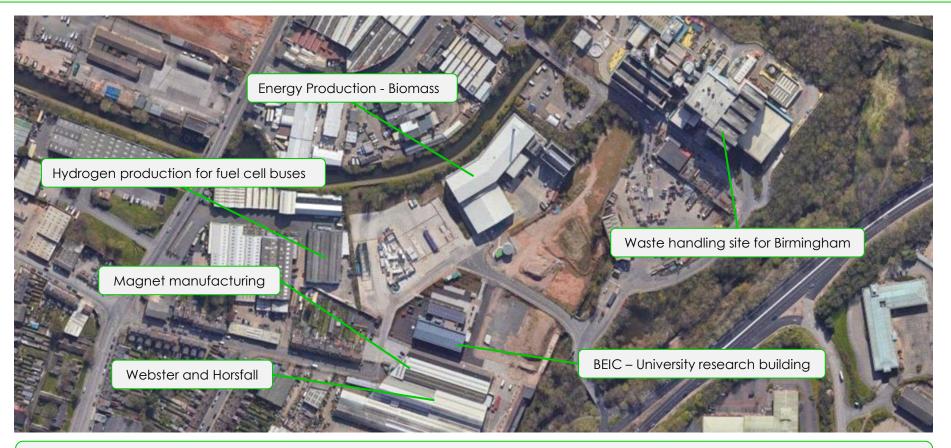


- Scaled-up HPMS vessel targeted for commissioning by end of Q2 2025
- Minimum 350kg per batch
- Presses commissioned at Tyseley with first production runs of magnets completed 13

## New UK Rare Earths Hub at Tyseley

Tyseley Energy Park - delivering low & zero-carbon power, transport, heat, waste and recycling solutions

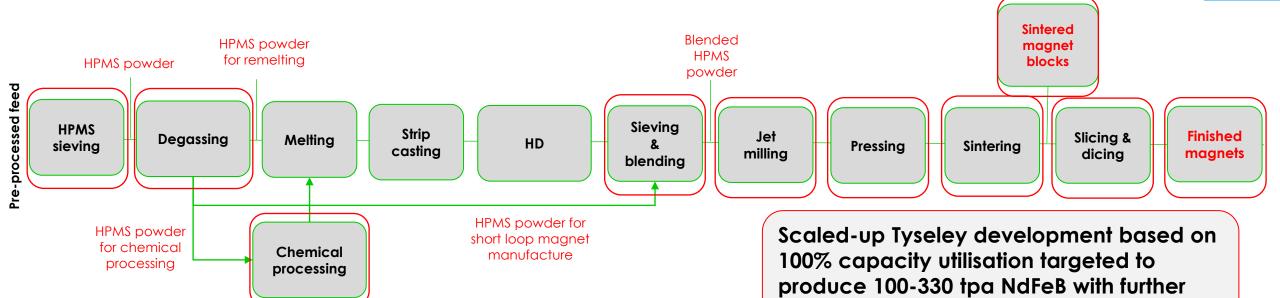


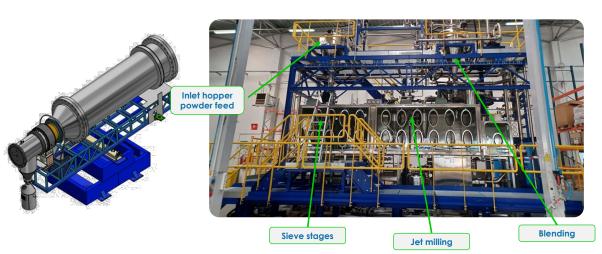


DER (UK) has provided £4.4 million of predominantly capital funding to scale up the HPMS process and magnet manufacturing

#### Recycle

## Tyseley Energy Park Scale-Up





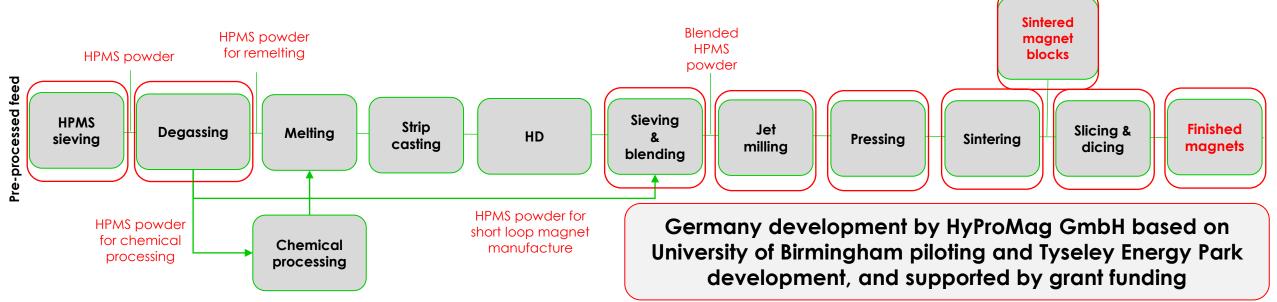




expansion being evaluated



## Germany Scaled-Up Development







Scaled-up Germany development based on 100% capacity utilisation by end 2025 targeted to produce 100-330 tpa NdFeB with further expansion being evaluated

## Short-Loop and Long-Loop Recycling

- **Primary supply:** mixed rare earth carbonate, rare earth oxides
- **Recycled supply:** NdFeB alloys & sintered magnets, rare earth oxides
- NdFeB recovery solutions from EoL products, reduced CO<sub>2</sub> footprint

HPMS process liberates end-of-life magnets in the form of a demagnetised NdFeB powder, which can be fed back into multiple points of the supply chain

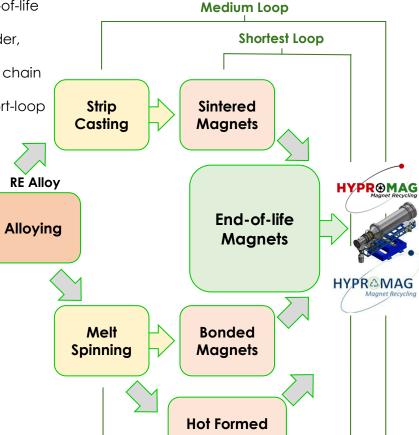
HyProMag is focused on short-loop recycling route.

**RE Metals** 

Metal

Winning

(Reduction)



Magnets

**Short Loop** 

**Beneficiations** Minina (Crushina & Concentrating)

Mineral **Decomposition** 

**RE Carbonates** 

(Roasting/leaching/ filtration/precipitation)

**RE Oxides** 

**Separation &** 

**Purification** 

(Solvent

extraction)

Long loop NdFeB magnet recycling chemical process being developed by Mkango Rare Earths UK Ltd to complement HPMS and short loop processes



**Longer Loop** 

## Pilot Plant for Long Loop Chemical Process



HPMS generates a liberated NdFeB feed for chemical processing to RE carbonates and oxides



Mkango Rare Earths UK has commissioned a pilot plant for long loop chemical processing of swarf and HPMS powder to produce rare earth carbonate and oxides at Tyseley Energy Park - complementary to the HPMS short loop recycling route being commercialised by HyProMag

# HyProMag USA Rollout



### USA Feasibility Study completed for 1,000tpa NdFeB/magnet production

- State-of-the art rare earth magnet recycling and manufacturing operation with a central Dallas Fort Worth, Texas hub supported by two pre-processing spoke sites in the eastern and western regions of the United States:
  - US\$262m NPV and 23% IRR based on current market prices
  - US\$503m NPV and 31% IRR based on forecast market Prices
  - Expansion potential with the inclusion of a third HPMS vessel
- Production of 750tpa of recycled sintered NdFeB magnets and 291tpa of associated NdFeB co-products over a 40 year operating life
- First Revenue targeted in Q1 2027 with a Notice to Proceed expected in mid-2025 following completion of Detailed Engineering Design and Value Engineering phase, which will commence shortly.
- Up-front capital cost of US\$125 million with significant opportunities to reduce
- CoTec is responsible for funding the Detailed Engineering Design, Value
   Engineering and the project development costs



# **Government Support**





### Minerals Security Partnership (MSP)











<u>Home</u> > <u>Business and industry</u> > <u>Manufacturing</u>

Press release

## UK to host Minerals Security Partnership for first time to boost investment in critical minerals

On Tuesday 10 October, the UK hosted the Principals' meeting of the Minerals Security Partnership for the first time, at the London Metals Exchange.



- HyProMag HPMS technology selected as an MSP project
- MSP (est. 2022) consists of 14 governments, including UK and USA
- MSP aims to ensure adequate supplies of minerals, such as rare earths, to meet net zero carbon goals
- MSP regards resilient supply chains to be critically important for an equitable and sustainable energy transition
- MSP aims to catalyse public and private sector investment in responsible critical mineral supply chains globally

# **Government Support**

### Past government grants

| SusmagPro Project | Sustainable recovery, reprocessing and reuse of rare earth magnets in a European circular economy | €14m project with 19 partners across the supply chain                   |
|-------------------|---|---|
| RaRE Project      | Establishing an end-to-end supply chain to incorporate recycled rare earth magnets into EVs       | £2.6m project with Bentley Motors, Unipart, AEMR, ILS                   |
| REAP Project      | Recycling rare earth magnets from speakers used in automotive and electronics applications        | £0.3m project with European Metal Recycling (EMR) – completed Sept 2021 |

### **Current government grants**

| SCREAM Project  | UK govt. grant focusing on scrap processing pilot plants, HPMS, remelting, strip casting, chemical processing and magnet production | £3.4m funding shared by Mkango Rare Earths UK, HyProMag UK, B&W, EMR, GKN, Jaguar Land Rover                       |
|---|---|--|
| REEsilience Project   | Creating a more robust supply chain integrating primary & secondary RE sources and magnet pilot plants                              | €14m project with 22 partners including HyProMag<br>GmbH, HyProMag UK and Mkango Polska across the<br>supply chain |
| Re-RE Wind Project  | Establishing UK's first circular supply chain for RE magnets used in wind turbines  | £1.5m grant is part funded by Innovate UK's CLIMATES programme   |
| Innovation Centre for Science & Economy Northern Black Forest | Development of HyProMag GmbH operations in Baden-<br>Württemberg State  | €6.1m project led by HyProMag GmbH   |

## **Expected Recycling Development Timeline**

**Early 2025** 

Initial commercial production at Tyseley



Ramping up to initial target of 25-30tpa
NdFeB

2025

Initial commercial production in Germany

Short Loop recycling Sintered magnet blocks, finished magnets and NdFeB alloys

Initial target of approx. 100-330tpa
NdFeB

2026

Scale up commercial production at Tyseley

Short Loop recycling Sintered magnet blocks, finished magnets and NdFeB alloys

Initial target of approx. 100-330tpa
NdFeB

**Early 2027** 

Commercial production in United States

Short Loop recycling Sintered magnet blocks and finished magnets

1,000pa NdFeB spoke and hub operation

Collaboration with Envipro in Japan announced June 2024

Evaluating options for further development of recycling in Canada



To discuss magnet scrap solutions and purchasing, magnet and other product sales please contact magnets@hypromag.com

To discuss collaboration and consultation please contact **technical@hypromag.com** 

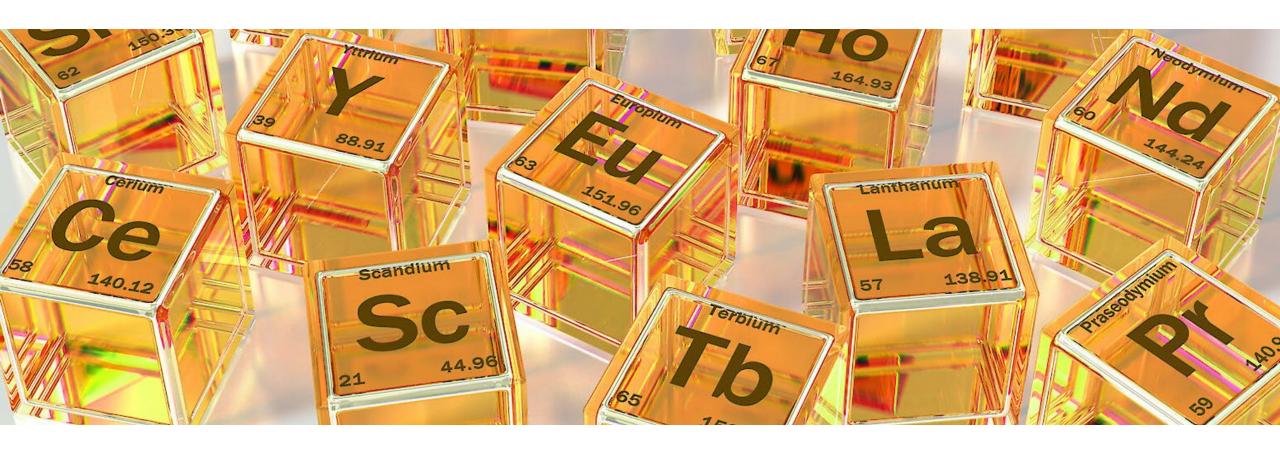








## Rare Earth Mining and Separation Development Projects



# Songwe Hill Rare Earths Deposit

### One of very few independent rare earth projects globally with a Definitive Feasibility Study





- Initial Mkango drilling programmes carried out in 2011 and 2012
  - First resource report prepared in compliance with NI 43-101
- Pre-Feasibility Study (PFS) completed in 2015
- 2019 in-fill and step-out drilling programme
  - 60% increase in Measured and Indicated Resources
- Definitive Feasibility Study (DFS) completed in July 2022, with lead engineers SENET (a DRA Global Group Company)
- ESHIA completed and approved by Malawi Government in January 2023 (in compliance with IFC Performance Standards)
- Mining Development Agreement (MDA) signed July 2024

# Malawi - A Favourable Jurisdiction

### Longstanding, supportive relationships with government and local communities

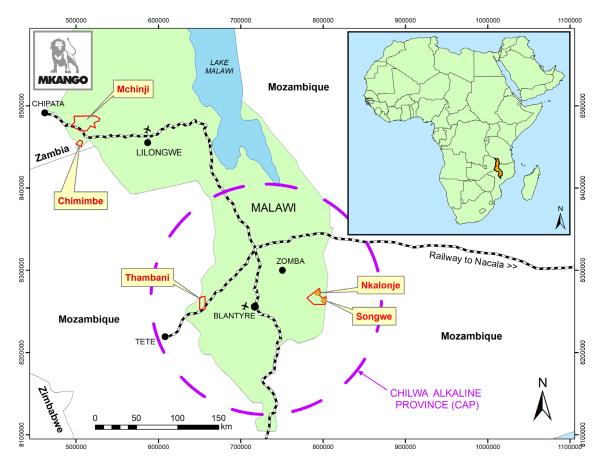
- Premier African rare earths mineral province
- Blantyre, a major commercial centre with rail head and international airport, is located two hours from site by car
- Beneficiation, hydrometallurgical and acid plants to be located in Malawi
- Power co-generated from sulphuric acid plant and supplemented with grid and solar



Minister of Mines visit, 2023



USA/UK govt visit, 2021



# Songwe Hill Feasibility Study

### A new sustainable source of rare earth production

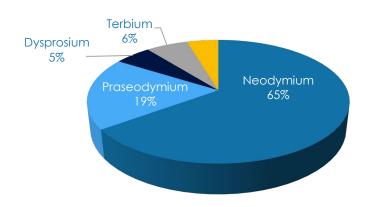


| Compelling project economics |                                   |  |
|------------------------------|-----------------------------------|--|
| Capital<br>Cost              | US\$311M<br>(US\$34M contingency) |  |
| IRR                          | 31.5%                             |  |
| NPV                          | US\$559M*                         |  |

<sup>\*</sup>Excludes Pulawy Separation project, recycling businesses and Malawi exploration

- One of the few rare earths projects globally to have reached FS stage
- LOM: 18 years producing mixed rare earth carbonate (MREC) grading 55% total rare earth oxides (TREO)
- US\$215M per year EBITDA averaging 5,954 tpa TREO in MREC
  - 1,953 tpa NdPr, and 56 tpa of Dy & Tb oxide

Songwe Hill mixed rare earth carbonate split by value



The recent signing of the Songwe MDA confirms the fiscal terms applicable to the project and enhances the options to create value for shareholders in the context of the ongoing strategic review and engagement with potential strategic investors, development and commercial banks, and offtakers

# Songwe Hill Feasibility Study

### **Extensive Processing Flow Sheet Development and Piloting**



Feasibility study is a culmination of significant mineralogy, bench scale test work and piloting completed since project inception in 2010

CIRCUIT 1 **CAMPAIGN 1A** Flotation Concentrate H<sub>2</sub>SO<sub>4</sub> Gangue Leach CaCl 80°C, pH 4 Ca(OH)<sub>2</sub> HCI Regeneration Neutralisation **Caustic Conversion CAMPAIGN 1B NaOH Liquor** and 2B Dilute (14% NaOH) Na<sub>2</sub>CO<sub>3</sub> / NaF CaCO, CaF, (Waste) **Caustic Conversion** Repulp Wash 2 (Ce Oxid'n)

Flotation piloting completed

- March 2021

Hydrometallurgy piloting completed

- March 2022

Piloting produced a carbonate grading 55% TREO with NdPr oxides comprising 31%

Carester has assessed the carbonate quality for the purposes of separation

Significant opportunities for optimisation of processing flowsheet to reduce OPEX







Hydrometallurgical flow sheet developed and piloted (6 campaigns)

## Mkango in the Community

### Strong Track Record in Corporate Social Responsibility



#### boNGO Worldwide Partnership

- Happy Classroom Project
- Enhancing 3 local primary schools
- 18 classrooms painted with school syllabus

#### Scholarships

 Secondary education fees paid for the top 12 students from 3 local primary schools – 58 students to date

#### Local community infrastructure projects

- 8 water boreholes & pumps installed. 14 maintained quarterly in the local area
- Bridge construction & extensive road refurbishment









- 1.Before an unhappy classroom
- 2.After a Happy Classroom after renovation
- 3.Water Pump in Mphembezu
- 4. New Bridge Constructed

# Rare Earth Separation

### Pulawy Separation Project, Poland – Awarded EC Strategic Project Status



- European rare earths hub underpinned by sustainably sourced, mixed rare earth carbonate from Mkango's project in Malawi
- Site adjacent to a largescale fertiliser and chemicals plant owned by Grupa Azoty Pulawy, the EU's second largest manufacturer of nitrogen fertilisers
- Competitive advantage
  - Established infrastructure
  - Reagents and utilities on-site
  - Located in Special Economic Zone

| Production based on studies to date                 |           |  |
|---|-----------|--|
| Nd <sub>2</sub> O <sub>3</sub>                      | 805 t/y   |  |
| Pr <sub>6</sub> O <sub>11</sub>                     | 212 t/y   |  |
| $Pr_6O_{11} + Nd_2O_3$                              | 1,018 t/y |  |
| (SEGH) <sub>2</sub> (CO <sub>3</sub> ) <sub>3</sub> | 930t/y    |  |
| LaCe(CO <sub>3</sub> ) <sub>3</sub>                 | 9,670t/y  |  |



#### Jun 2020

Initial scoping study completed by Carester

**Jan 2021**Updated scoping study

Jun 2021 Lease option agreement signed

#### Jan 2020

Site visit & initial due diligence

#### Jul 2020

MoU & exclusivity signed with Grupa Azoty Pulawy

#### Mar 2021

Confirmatory due diligence completed

#### Next steps

Completion of Feasibility Study

# Proposed Site for Separation Plant

- 8-hectare site located next to Pulawy Fertiliser and Chemicals Plant with access to road, rail, reagents, by-product customer and utilities
- Subject to Pulawy DFS, targeting capex of US\$120m and opex <US\$3/kg TREO in MREC (based on Songwe Hill production mix)

### Access to infrastructure

- High, medium and low voltage power network, natural gas and process steam network
- Water supply system, sewerage and wastewater treatment plants
- Internal railway of 60km enables fast transportation of raw materials and products
- Electronic weighbridge for trucks and trains
- Easy connections with the national road network



Existing Pulawy Fertiliser and Chemicals Plant

Proposed site

### **THANK YOU**

William Dawes, Chief Executive Officer – will@mkango.ca Alexander Lemon, President – alex@mkango.ca Robert Sewell, Chief Financial Officer – rob@mkango.ca



# Mkango Capital Structure

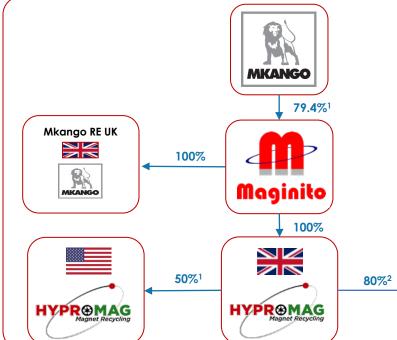
| Mkango Resources   | AIM/TSXV: MKA      |
|--------------------|--------------------|
| Share Price        | GBP0.1625 /C\$0.31 |
| Shares Outstanding | 327.1m             |
| Market Cap.        | £53.2m / C\$101.4m |

| Major Shareholders       |         |
|--------------------------|---------|
| Talaxis                  | 21.24 % |
| Stewart Newton           | 3.62 %  |
| Michael Geoghegan        | 2.96 %  |
| Leo Mining & Exploration | 2.61 %  |
| Derek Linfield           | 2.46 %  |



## Recycling – Structure and Team

- Founded in 2018 by leading experts in magnetic materials, recycling and hydrogen technologies
- Highly-experienced team
  - Directors with extensive experience in rare earths, alloys and magnets
- HyProMag GmbH was established in 2021 to commercialise in Germany
- HyProMag USA joint venture formed to commercialise HPMS in USA fully funded by CoTec



- First HyProMag investment 2020, acquired in 2023
- HyProMag focused on Short Loop magnet recycling
- Mkango Rare Earths UK focused on Long Loop magnet recycling
- Initial focus on scale-up of recycling in UK, Germany & United States
- Evaluating opportunities to roll-out recycling into Canada and Japan

<sup>1</sup>Balance held by CoTec Holdings

<sup>2</sup>Maginito's interest in HyProMag GmbH will increase to 90% once convertible loan note is converted



Will Dawes
Director
HyProMag Ltd, Mkango



Prof. Allan Walton Director HyProMag Ltd



Dr. John Speight
Director
HyProMag Ltd



David Kennedy
Director
HyProMag Ltd



**HYPRAMAG** 

Prof. Carlo Burkhardt
Director
HyProMag GmbH



Nick Mann Managing Director HyProMag Ltd



**Nelson Brito** Managing Director HyProMag GmbH

## Disclaimer

NOT FOR RELEASE, DISTRIBUTION OR PUBLICATION, IN WHOLE OR IN PART, DIRECTLY OR INDIRECTLY, IN OR INTO THE UNITED STATES, AUSTRALIA, JAPAN, SOUTH AFRICA OR ANY OTHER JURISDICTION WHERE TO DO SO WOULD CONSTITUTE A VIOLATION OF THE RELEVANT LAWS OR REGULATIONS OF SUCH JURISDICTION

This presentation (and any accompanying verbal presentation) (the "Presentation") has been prepared by Mkango Resources Ltd. (the "Company" or "Mkango") solely for its use at informational meetings relating to it. It does not comprise an admission document, listing particulars or a prospectus relating to the Company and the information contained in, and communicated to you during, this Presentation does not constitute or form part of any offer for sale or solicitation of any offer to buy or subscribe for any securities nor shall it or any part of it form the basis of or be relied on in connection with, or act as any inducement to enter into, any contract or commitment whatsoever. This Presentation is not, and under no circumstances is to be construed as, an advertisement or a public offering of the securities referred to in this document. This Presentation is for informational purposes only and may not be used for any other purposes.

This Presentation and its contents are confidential and proprietary to the Company, and no part of it or its subject matter may be reproduced, redistributed, passed on or the contents otherwise divulged, directly or indirectly, to any other person (excluding the relevant person's professional advisers) or published in whole or in part for any purpose without the prior written consent of the Company. If this Presentation has been received in error it must be returned immediately to the Company.

No representation or warranty, express or implied, is made or given by or on behalf of the Company nor its shareholders, directors, officers, agents, advisors or employees of any such entities as to the completeness, accuracy, reliability or fairness of the information or opinions contained in this Presentation and to the extent permitted by law no responsibility or liability is accepted by any person for any loss howsoever arising, directly or indirectly, from any use of this Presentation or such information or opinions contained herein or any revision thereof, or otherwise arising in connection herewith. Certain figures contained in this Presentation, including financial information, have been subject to rounding adjustments.

The information set out herein may be subject to updating, completion, revision and amendment and such information may change materially. In furnishing this Presentation, the Company does not undertake or agree to any obligation to provide the attendees with access to any additional information or to update this Presentation or to correct any inaccuracies in, or omissions from, this Presentation that may become apparent. This Presentation has not been independently verified and some of the information is still in preliminary or draft form. The information and opinions contained in this Presentation are provided as at the date of this Presentation. The contents of this Presentation are not to be construed as legal, financial or tax advice and this Presentation does not constitute a recommendation regarding the securities of the Company. Each prospective investor should contact his, her or its own legal adviser, independent financial adviser or tax adviser for legal, financial or tax advice. Past performance of the Company or its shares cannot be relied on as a guide to future performance.

Scientific and technical information contained in this Presentation including sampling, analytical, and test data underlying the information has been approved and verified by Dr. Scott Swinden PGeo of Swinden Geoscience Consultants Ltd who is a "Qualified Person" in accordance with National Instrument 43-101- Standards of Disclosure for Mineral Projects ("NI 43-101"). Scientific and technical information contained in this presentation relating to the mineral resource estimate has been approved and verified by Jeremy Witley Pr. Sci Nat of The MSA Group Pty Ltd, who is a "Qualified Person" in accordance with NI 43-101. The Qualified Persons refer red to above are independent of the Company. An NI 43-101 Technical Report supporting the results of the definitive feasibility study for the Songwe Hill Rare Earths Project ("Songwe" or the "Project") in Malawi has been prepared by SENET, a DRA global company, under the guidance of Mr. Nick Dempers, who is a "Qualified Person" in accordance with NI 43-101, and was filed on the Company's profile on SEDAR+ on August 19, 2022.

### Disclaimer

Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements or forward-looking information (within the meaning of Canadian securities legislation and, collectively, "forward-looking statements"). Forward-looking statements are often, but not always, identified by the use of words such as "anticipate", "believes", "budget", "continue", "could", "estimate", "forecast", "intends", "may", "plan", "predicts", "projects", "should", "will" and other similar expressions. All estimates and statements that describe the Company's future, goals, or objectives, including management's assessment of future plans and operations, including without limitation statements related to significant potential to unlock additional value via integration with Pulawy separation project in Poland; the highlights of the Songwe feasibility study; potential rise in EV sales; increase demand for rare earths used in EV traction motors; future global magnet rare earth oxide consumption; expected annual NdFeB and Nd Pr Oxide shortages; future production; constitute forward-looking statements.

By their nature, forward-looking statements are subject to numerous risks and uncertainties that contribute to the possibility that predictions, forecasts and projections and other forward-looking statements will not occur, some of which are beyond Mkango's control, including the successful conclusion of the MDA, the availability of (or delays in obtaining) financing to develop Songwe Hill, the impact of COVID-19, general economic conditions, industry conditions, volatility of commodity prices, currency fluctuations, imprecision of reserve estimates, environmental risks, changes in environmental, tax and royalty legislation, competition from other industry participants, the lack of availability of qualified personnel or management, stock market volatility, and ability to access sufficient capital from internal and external sources and those risk factors identified in the Company's publicly filed disclosure documents available at <a href="https://www.sedarplus.ca/landingpage">www.sedarplus.ca/landingpage</a>.

Readers are cautioned that the assumptions used in the preparation of such information, although considered reasonable at the time of preparation, may prove to be imprecise and, as such, undue reliance should not be placed on forward-looking statements. Mkango's actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements. Mkango disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Nothing in this Presentation or in documents referred to in it is intended to be, nor should it be construed as, a profit forecast or profit estimate and Mkango's forward-looking statements are expressly qualified in their entirety by this cautionary statement.

To the extent any forward-looking statements in this document constitutes "future-oriented financial information" or "financial outlooks" within the meaning of applicable securities laws (collectively, "FOFI"), such information is being provided to demonstrate the Company's internal projections and the reader is cautioned that this information may not be appropriate for any other purpose and the reader should not place undue reliance on such FOFI. FOFI, as with forward-looking statements generally, are, without limitation, based on the assumptions and subject to the risks set out above. The Company's actual financial position and results of operations may differ materially from management's current expectations and, as a result, the Company's revenue and profitability may differ materially from the revenue and profitability profiles provided in this Presentation. Such information is presented for illustrative purposes only and may not be an indication of the Company's actual financial position or results of operations.

Certain information contained in the Presentation includes market and industry data that has been obtained from or is based upon estimates derived from third party sources, including industry publications, reports and websites. Third party sources may state that the information contained therein has been obtained from sources believed to be reliable, but there is no assurance or guarantee as to the accuracy or completeness of included data. Although the data is believed to be reliable, neither the Company nor its agents have independently verified the accuracy, currency, reliability or completeness of any of the information from third party sources referred to in this Presentation or ascertained from the underlying economic assumptions relied upon by such sources. The Company and its agents hereby disclaim any responsibility or liability whatsoever in respect of any third-party sources of market and industry data or information.

## Disclaimer

The delivery or distribution of this Presentation in or to persons in certain jurisdictions may be restricted by law and persons into whose possession this Presentation comes should inform themselves about, and observe, any such restrictions. Any failure to comply with these restrictions may constitute a violation of the laws of the re levant jurisdiction. The content of this Presentation has not been approved by an authorised person within the meaning of the United Kingdom Financial Services and Markets Act 2000 ("FSMA") and accordingly it is being delivered in the United Kingdom only to persons to whom this Presentation may be delivered without contravening the financial promotion prohibition in Section 21 of the FSMA. Those persons are described in the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 ("Order") and include persons who: (i) have professional experience in matters relating to investments and who fall within the category of person set out in the Artic le 19 (investment professionals) of the Order; (ii) are high net worth bodies corporate, unincorporated associations or partnerships and trustees of high net worth trusts as described in Article 49(2)(a) to (d) (high net worth companies, unincorporated associations, etc.) of the Order; or (iii) are other persons to whom this Presentation may otherwise be lawfully communicated (an "Exempt Person"). Any investment, investment activity or controlled activity to which this Presentation relates is only available to, and will only be engaged with, such Exempt Persons and this Presentation should not be acted or relied upon by persons of any other description. By either accepting the Presentation and not immediately returning it or attending the accompanying verbal presentation, you are deemed to represent, warrant and undertake that: (i) you are an Exempt Person (as defined above); (ii) you have read and agree to comply with the contents of this disclaimer; (iii) you are able to receive this Presentation without contravention of any applicable legal or regulatory restrictions; and (iv) you will not at any time have any discussion, correspondence or contact concerning the information in the Presentation with any of the directors or employees of the Company or its subsidiaries or with any of its suppliers, customers, sub-contractors or any governmental or regulatory body without the prior written consent of the Company. This Presentation may not be published, distributed or transmitted by any means or media, directly or indirectly, in whole or in part, in or into the United States. This Presentation does not constitute an offer to sell, or a solicitation of an offer to buy, securities in the United States. Securities may not be offered or sold within the United States absent (i) registration under the US Securities Act of 1933, as amended (the "Securities Act"); or (ii) an available exemption from registration under the Securities Act. The Company's securities have not been, and will not be, registered under the Securities Act and will not be offered to the public in the United States. The Presentation should not be distributed directly or indirectly to persons with an address in United States, Australia, Japan, or in any other country outside the United Kingdom where such distribution may lead to a breach of any legal or regulatory requirement. In Canada, this Presentation is only addressed to and directed at (i) "permitted clients" as defined in Section 1.1 of National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Relationships and (B) "accredited investors" as defined in Section 73.3(1) of the Securities Act (Ontario) and Section 1.1 of National Instrument 45-106 Prospectus and Registration Exemptions. You understand and acknowledge that no prospectus has been prepared or filed with any securities commission or similar regulatory authority in Canada in connection with the Placing, no securities commission or similar regulatory authority in Canada has made any finding or determination as to the merit for investment in, or made any recommendation or endorsement with respect to, the Placing and that any securities offered in connection with the Placing may not be offered or sold, directly or indirectly, in the Canada, other than in accordance with an exemption from the prospectus requirement under applicable Canadian securities laws. This Presentation contains inside information and may contain information which is not generally available, but which, if available, would be likely to be regarded as relevant when deciding the terms on which transactions in the securities of the Company should be effected. By accepting this document and attending the Presentation you agree not to use all or any of the information contained herein (except to the extent it has lawfully been made public) to deal, advise or otherwise require or encourage another person to deal in the securities of the Company or engage in any other behaviour which amounts to the criminal offence of insider dealing under the Criminal Justice Act 1993 or the civil offence of market abuse under Regulation (EU) No 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse, as it forms part of United Kingdom law by virtue of the European Union (Withdrawal) Act 2018, as amended ("UK MAR") or which may constitute a violation of other applicable securities laws.