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## **About** Jubilee



A leading metals recovery group unlocking value from overlooked resources



**Diversified exposure** to future facing commodities



**Innovative low-capital modular** approach for high growth



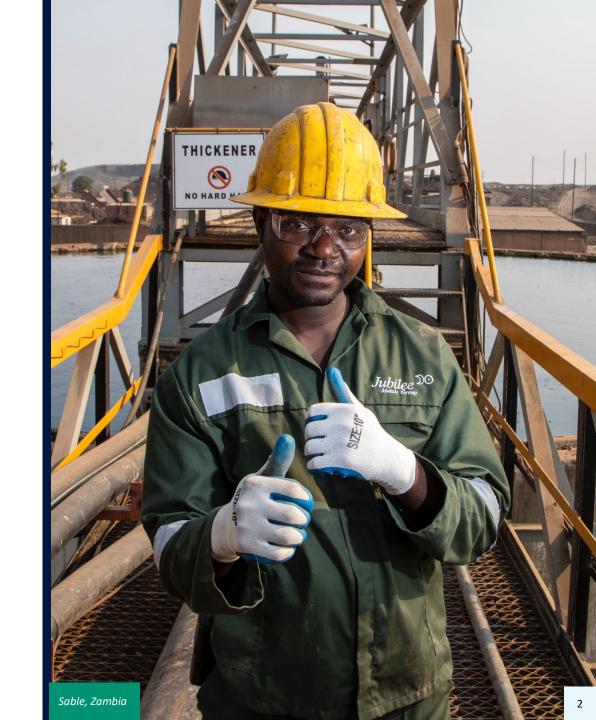
Wealth of waste deposits provides significant growth opportunity



In-house developed **processing technology** 



Highly experienced management team







### Jubilee **Overview**

- Founded over 20 years ago and listed on LSE's AIM:JLP and JSE's AltX:JBL
- **Diversified** and **low-cost metals** producer
- Unlocking value through processing historical waste and Run-of-Mine material
- The Jubilee Way Constantly striving to better operational efficiencies by challenging industry norms
- Three pillars of the business:
  - South African Chrome production
  - South African PGM production
  - Zambian Copper production



### **South Africa: PGMs & Chrome**

- FY23: 1 289 890 tonnes chrome concentrates produced
- FY23: 42 433 ounces PGMs produced and sold
- Chrome capacity exceeding 1 450 000 tonnes per annum of chrome concentrates
- Inyoni PGM capacity of 44 000 ounces
- Guidance FY24: 1 450 000 tonnes of chrome concentrates; 42 000 ounces PGMs



### **Zambia: Copper**

- FY23: 2 923 tonnes copper produced
- 14 000 tonnes installed copper cathode capacity at Sable per annum
- Guidance FY24: 5 850 tonnes copper

## **Key Metrics FY23**

£141.9m

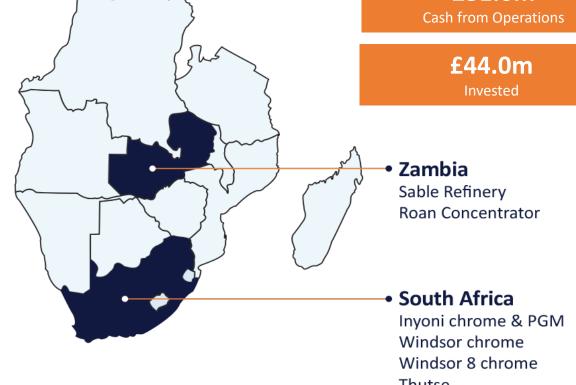
Revenue

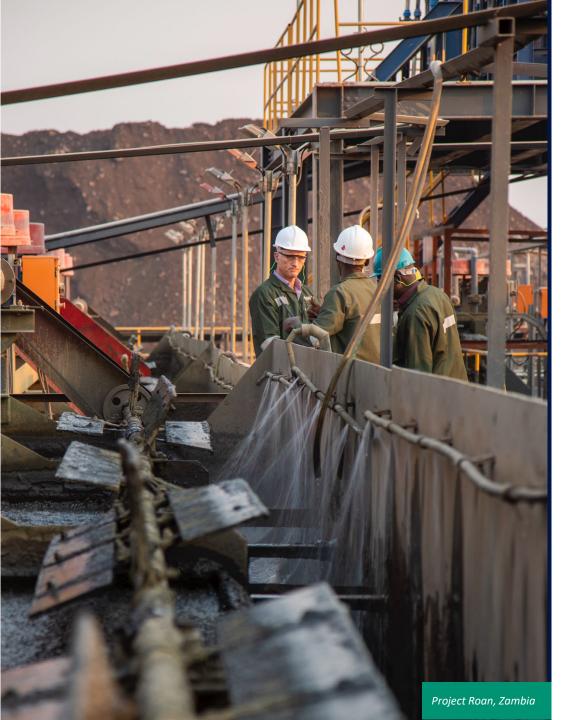
£24.8m

**EBITDA** 

£31.0m

Windsor chrome Windsor 8 chrome Thutse





## Years in the **making**



Record production in FY23 across all commodities

- 5 years since first chrome processing module was installed in South Africa
- Today we have 8 individual chrome modules operating in South Africa, making Jubilee one of the world's largest chrome concentrate producers
- Plans to expand chrome capacity to 2 million tonnes per annum by adding two additional 50ktpm chrome processing modules
- Downstream capability to produce 44 000 ounces of PGMs
   (following chrome extraction) at Inyoni facility in South Africa
- Sable Refinery and Roan concentrator operating in Zambia
   Expansion of the front end of the Roan concentrator and plans for a second at Project M which will feed Sable Refinery
- Ability to feed high-grade copper concentrate into Jubilee's Sable Refinery to produce up to 14 000 tonnes per annum of copper cathode once at full capacity concentrate feed
- Jubilee can sell excess high-grade concentrates to the Sable cathode production capacity

## **Innovative** Modular Technology

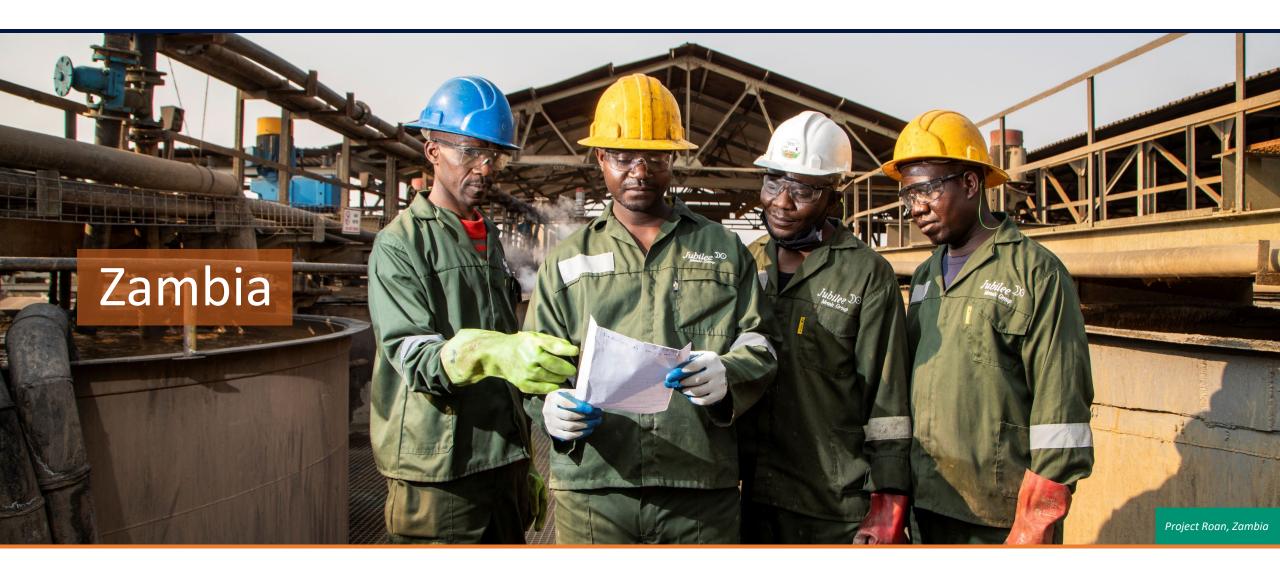


### Low-cost, near-term production growth

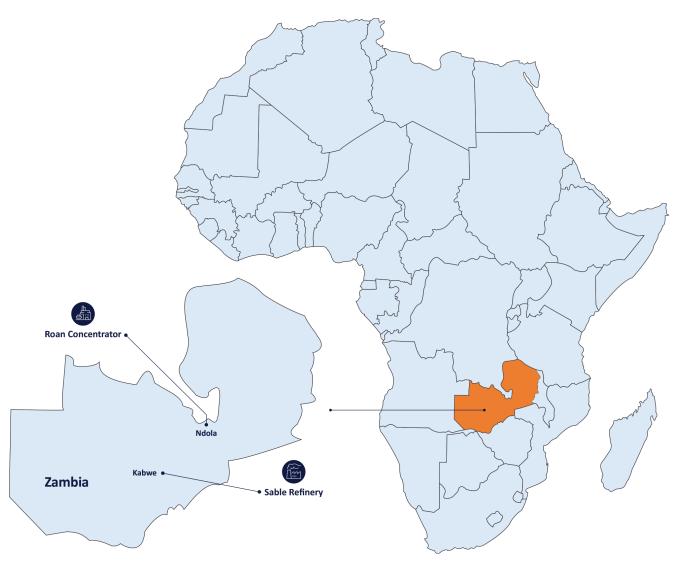
- Designed at Jubilee's Technical Development Centre in South Africa
- Low capex and 8-month construction and commissioning allows for rapid deployment of copper processing modules ranging from 20 000 to 50 000 tonnes per month through-put (Capex of US\$6.5 million for the larger 50 000 tonnes per month modular unit)
- Ability to produce metal from historical unprocessed waste rock
- Rolled out across chrome operations, delivering industry leading metal recovery rates
- Launching in Zambia in FY24 across the copper portfolio at the Roan concentrator and Project M

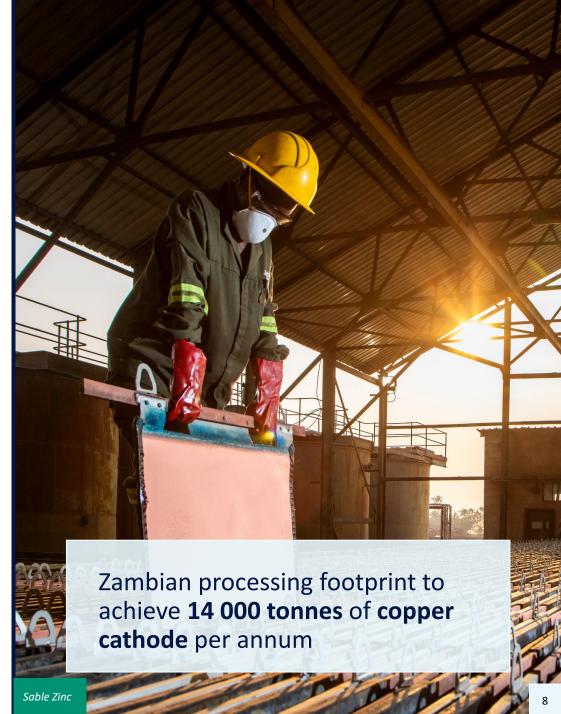






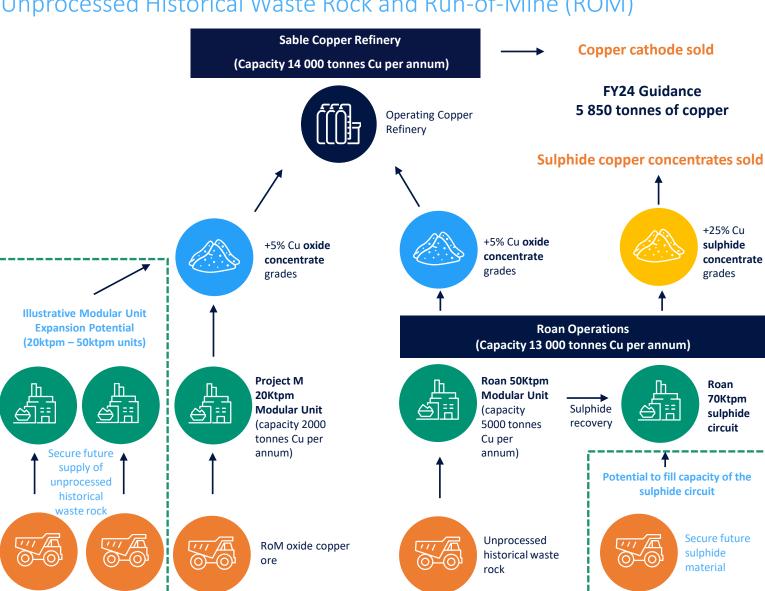
# Zambia Footprint





## **Zambian Business**

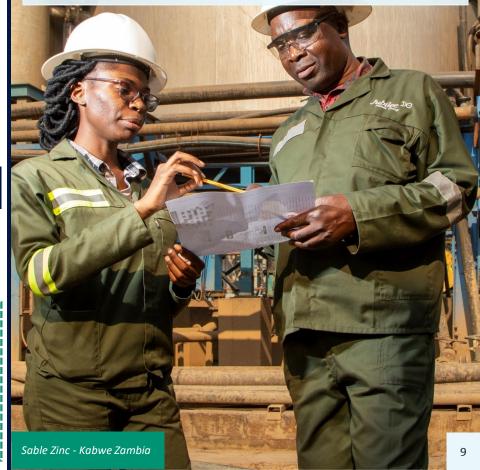
Unprocessed Historical Waste Rock and Run-of-Mine (ROM)



#### **Key Metrics**

#### Zambia

- Innovative Modular Technology 2 000 tonnes per annum of copper per 20 000 tonnes per month copper processing module (assuming feed of 1.5% copper grade), as depicted in the diagram for Project M.
- Copper unit cost per tonne US\$5 281 in FY23
- Estimated capital for 50 000 tonnes per month copper processing module = US\$6.5 million. The estimated capital for a 20 000 tonnes per month copper processing module would be approximately US\$3 million
- Modules targeted as part of Roan upgrade with additional modules considered under current long-term ROM agreements





## **Zambian Tailings**



Testing underway



### **Current Strategy**

- Tailings processing solution currently under research and development. Copper extraction technique targeted that lowers the consumption of harmful chemicals. The Tailings processing is currently being subjected to technical trials by Jubilee Technical Services
- The tailings processing is independent of the modular roll-out for the unprocessed historical waste rock strategy
- A new opportunity in terms of the Mopani slag announced on 17 October 2023, is pending commercial negotiations and conclusion of the sale of Mopani to its final bidder
- The **cobalt hydroxide** in the tailings/slag would be a further source of revenue in addition to the copper



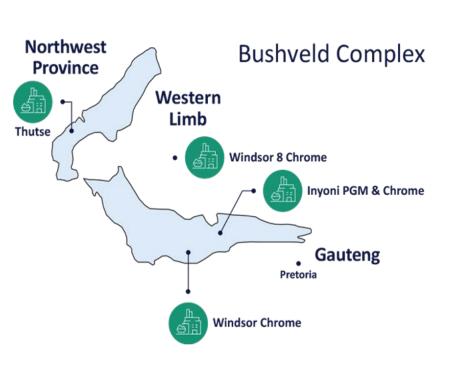
#### **Salient Features**

- Zambian tailings at 0.3% copper grade
- Mopani slag 0.7% copper grade and 0.3% cobalt grade
- Mopani slag has **13 million tonnes** estimated to contain **89 000 tonnes** of copper and **44 000 tonnes** of cobalt

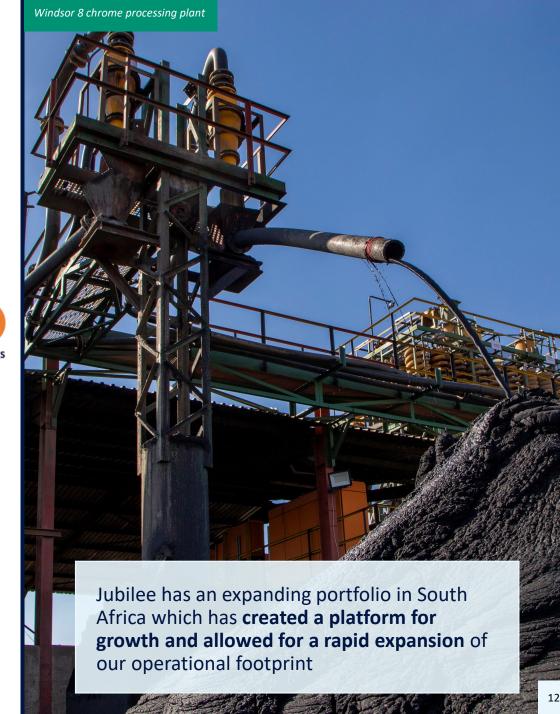




# South African Footprint







## South African Business

Flow sheet of footprint - Chrome and PGM

#### **CHROME FEEDSTOCK**

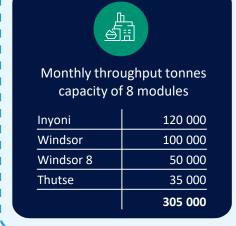


Remaining non-chrome concentrate sent to Inyoni PGM Processing plant

PGM 6E

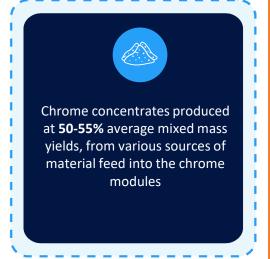
Inyoni

#### **FEEDS INTO**





#### **MATERIAL PRODUCED**





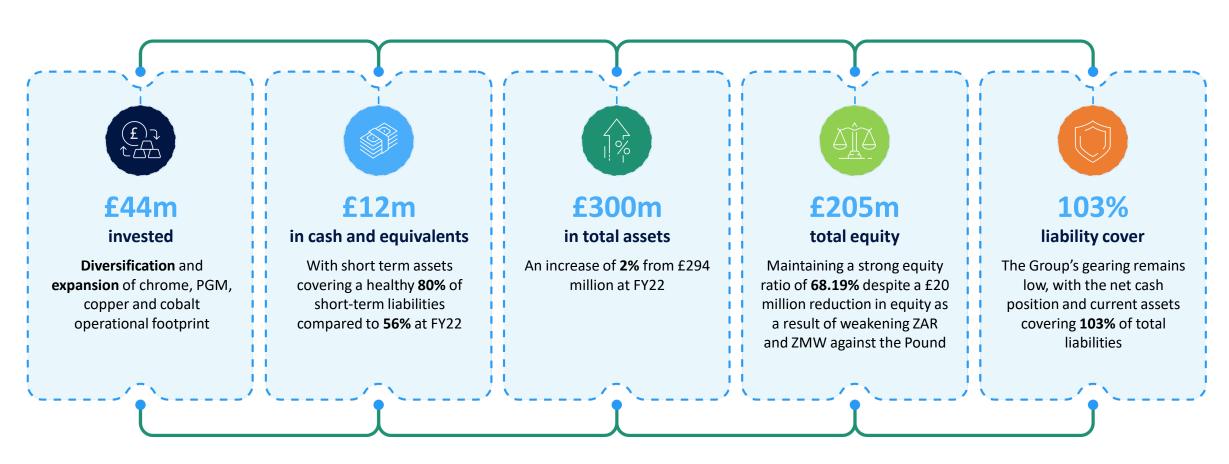
### **Key Metrics**

- Chrome production guidance of 1.45 million tonnes per annum FY24 comprises of approximately:
  - 67% tolling chrome concentrates (fixed pricing per tonne)
  - 33% own sourced chrome concentrates
- **Average mass yields** of approximately **50-55%** of material processed into chrome concentrates
- Targeting 2 million tonnes of chrome concentrates per annum in the future and this would comprise of approximately:
  - 58% tolling chrome concentrates (fixed pricing per tonne)
  - 42% own sourced chrome concentrates
- The Chrome business continues to be cash generative with a collective margin of US\$9 per tonne in FY23. Expansion into higher margin, own sourced chrome feed.
- PGM 6E production guidance of 42 000 ounces per annum
- Cost per PGM ounce of US\$785 (excluding chrome credits) in FY23
- The PGM business (excluding chrome credits) remains cash generative in the prevailing PGM pricing environment

## Financial performance



Robust Balance Sheet and Liquidity



Note(s): All figures from FY22 and FY23 audited full-year accounts

## Sustainability – a core value



Pursuing Responsible Growth



#### **Environmental Performance**

- Total environmental spend £147 730 (US\$177 887)
- Social responsibility spend £9.2 million (US\$11.1 million)
- Created 252 job opportunities with Local Economic Development partnerships
- Successfully maintaining community water projects
- All environmental permits valid during the reporting period
- Group Sustainability and Zero Effluent Policy implemented



### **Our Employees**

- 21 employees promoted
- All 14 candidates in the inaugural Graduatein-Training programme successfully completed the course
- 419 individuals trained in a wide spread of skills
- Lost Time Injury Frequency Rate: South Africa: 1.16 | Zambia: 2.4
- Successful multi-year wage negotiation processes concluded

## **New Strategic Committee**



### Providing the organisational capacity to support our growth strategy



Mr Leon Coetzer – Chief Executive Officer

Leon Coetzer is a qualified chemical engineer with more than 30 years' experience in the mining and mineral processing sectors. He enjoyed a long, successful career with the Anglo-American Plc Group where he was responsible for managing both technical and production units of large operations, including both platinum concentrators and smelters. Leon was appointed Chief Executive Officer of Braemore Resources in 2008, which was responsible for the commercialisation of the patented ConRoast pyro- metallurgical process. Leon oversaw the acquisition of Braemore by Jubilee Metals Group Plc (formerly Jubilee Platinum Plc) and was appointed Chief Executive Officer of Jubilee in 2010. Mr Coetzer is also a member of the advisory board of process engineering faculties at University of Pretoria.



Mr Bertus van der Merwe – Chief Operations Officer

A qualified metallurgist with career spanning across operational, technical and business optimization. These included Chief Operating Officer at one of the world's leading chrome and ferrochrome entities and later Chief Executive Officer of an international ferrochrome company. In his career he was regularly called upon to design and lead the implementation of turn around strategies and business optimisation programmes.



Mr Pedja Kovacevic – Chief of Strategy and Advisory

Mr. Kovacevic has a Master Degree in Economics and a Postgraduate Diploma in Management and Business Administration. A corporate finance expert, with over 20 years of international experience. Senior positions held in both public and private sectors across Europe and Africa, including VP Head of Banking at Duff & Phelps Africa and Director Financial Advisory Services at Deloitte Central Europe. Prior to joining Jubilee, he was the Group CFO at Afarak Group Plc.



Mr Neal Reynolds – Chief Financial Officer

A Chartered Accountant with a postgraduate qualification in Leadership Development, Neal holds more than 15 years of experience in mostly African focused mining and metals operations. He was most recently Chief Operational Officer at Chemaf Resources Ltd. He began his career at Deloitte & Touche and in 2009 moved to Pan African Resources Plc and held numerous managerial roles. In 2019, he was appointed CFO of Mopani Copper Mines for Glencore and later became CFO of Glencore Copper Africa.



Mr Ricus Grimbeek – Chief of Energy Metals

A Mining Engineer with more than 30 years of experience in the mining industry holding various executive management and technical roles with global mining houses. He has managed numerous operations and the implementation of projects, across various mining jurisdictions. He is also a board member of Makor Resources which focuses on the formalisation of small scale and artisanal miners in Africa.

### **Board of Directors**





Mr Ollie Oliveira – Non-Executive Chairperson

Ollie Oliveira is a Chartered Accountant and economist and has over 40 years of strategic and operating experience in corporate finance and strategy, mainly in the mining sector. Taking early retirement in 2008, he spent the next nine years running his own consultancy as a corporate strategy advisor and private equity advisor and co-investor. Ollie has substantial international quoted company experience having been an executive director of companies quoted in Switzerland and South Africa and a non-executive director of companies listed on the TSX, NYSE and Hong Kong stock exchanges. He has chaired or been a member of Board committees covering the whole spectrum of governance bodies. He is presently Lead Independent Director of Vale SA.



Mr Leon Coetzer – Chief Executive Officer

Leon Coetzer is a qualified chemical engineer with more than 30 years' experience in the mining and mineral processing sectors. He enjoyed a long, successful career with the Anglo-American Plc Group where he was responsible for managing both technical and production units of large operations, including both platinum concentrators and smelters. Leon was appointed Chief Executive Officer of Braemore Resources in 2008, which was responsible for the commercialisation of the patented ConRoast pyro- metallurgical process. Leon oversaw the acquisition of Braemore by Jubilee Metals Group Plc (formerly Jubilee Platinum Plc) and was appointed Chief Executive Officer of Jubilee in 2010. Mr Coetzer is also a member of the advisory board of process engineering faculties at University of Pretoria.



**Dr Mathews Phosa** – Non-Executive Vice-Chairperson

Dr Mathews Phosa is a prominent legal, political and business leader in South Africa. He opened the first black law practice in Nelspruit in 1981 and was appointed as the first Premier of Mpumalanga – one of nine provinces established in 1994. He resigned his seat in parliament in 1999 to enter a career in business, although returned to politics to serve as Treasurer-General of the National Executive Committee of the ANC between 2007 and 2012. Dr Phosa received the inaugural Fellow of Stadio lifetime award from Stadio on 13 April 2022. He sits on the boards of a number of prominent South African institutions and companies, including Innibos, the Afrikaanse Handelsinstituut, Special Olympics South Africa, Value Group, Phosa Loots Inc Attorneys, Merensky Timber, Phosa Legacy Group, Frans Schutte & Mathews Phosa Inc. and Rubic Consortium (a company established to produce cost effective vaccines in South Africa, the Continent and globally) to name a few. Dr Phosa is a prolific author who speaks nine languages and has two anthologies in Afrikaans poetry to his name under the title "Deur die oog van 'n naald" – some of which have been prescribed in the school curriculum for our national matric syllabus. Dr Phosa launched an English anthology called "Chants of Freedom" on 2 June 2015. Dr Phosa is currently writing two books on the history of South Africa.



**Dr Evan Kirby** – Technical Director

Dr Evan Kirby is a metallurgist with extensive experience in the mining sector. His career started in the South African platinum sector and included management of process developments, plant expansions and new projects. In 1992, he moved to Australia and joined an engineering company, working in management and technical roles on local and international mining projects. In 2002, Evan established his consulting business, Metallurgical Management Services. He has worked as a consultant to a wide range of projects and has served on the boards of several Australian and UK listed companies.



Mr Christopher Molefe – Non-Executive Director

Christopher Molefe has over 20 years' experience in the South African banking and mining industries. He began his career as Group Human Resources Manager at Union Carbide Africa Corporation after which he moved to Royal Bafokeng Resources where he served as Chief Executive. He has served as director of Transfrontier Capital Proprietary and Sabicor Proprietary and is currently on the boards of a number of South African corporates.



Mr Nicholas Taylor – Independent Non-Executive Director

Nick Taylor has more than 30 years' experience in financial accounting, banking, strategy and business development. Having qualified in the UK with Price Waterhouse as a Chartered Accountant, Nick spent over 20 years in investment banking, focusing principally on the mining and minerals sector, where he has significant experience of corporate transactions, particularly public and private M&A, capital raising and deal structuring. He is currently a business development and strategy consultant in the natural resources sector and is also involved in a start-up developing technologies to improve the environmental footprint of the mining and building materials sectors



Ms Tracey Kerr – Independent Non-Executive Director

Tracey Kerr has had an extensive career in the mining industry at executive and board level. Her formative career was spent at Vale and BHP after which she moved to Anglo American Plc Group where she held a number of senior roles including Group Head of Exploration and Group Head of Sustainable Development and was accountable for safety, operational risk management and sustainable development across the organisation. Tracey currently serves as a Non-Executive Director at Hochschild Mining Plc, a precious metals mining company and at Weir Group Plc, a mining technology company.

## Company **Snapshot**

# Jubilee Metals Group

### **Capitalisation Summary**

Jubilee Metals Group Plc	AIM: JLP / AltX: JBL
Share price at 15 Nov 2023	£0.048 (4.80 pence)
Shares Outstanding	2 738 129 981
Market Cap on 15 Nov 2023	£131.43 million

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Matthew Armitt/ Jennifer Lee/ Detlir Elezi

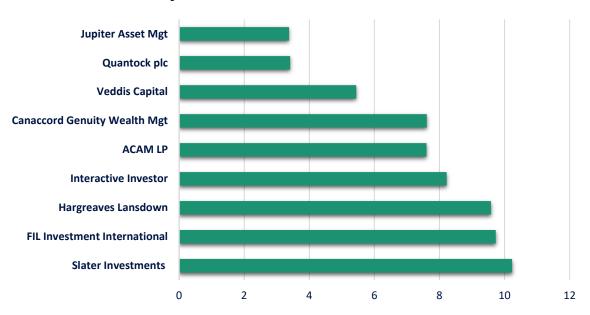
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Alison McLaren

### Major Institutional Shareholders



### **Covering Analysts**





Canaccord – GBP 12P



