

# Andromeda The Great White Mineral Company

**Placement Presentation** 

August 2024

**ASX:ADN** 

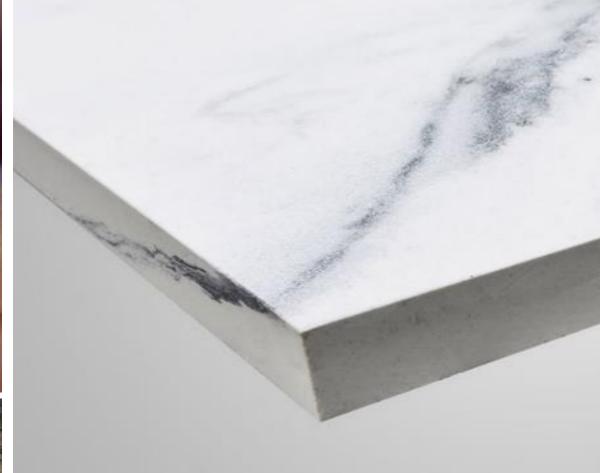
andromet.com.au

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### Assumptions and Notes for Financial Information on 2023 DFS and Stage 1A+ in this presentation:

Further details on the 2023 DFS and the assumptions and notes for the 2023 DFS (and risk factors applicable to the Company) can be found in the Company's ASX Announcement '2023 Definitive Feasibility Study Results' released on 24 August 2023. This should be read together with ASX Announcement dated 6 May 2024 "Andromeda expansion plans for The Great White Project" and "Clarification of expansion plans for The Great White Project" and the ore reserve estimate previously announced to ASX on 6 April 2022, "Great White Kaolin Project –Definitive Feasibility Study and Updated Ore Reserve".

Andromeda confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates and financial information continue to apply and have not materially changed.

#### Currency

Unless otherwise stated, all cashflows in this presentation are in Australian dollars, are undiscounted and are in real terms (not subject to inflation/escalation factors).

#### Mineral Resources and Ore Reserve Estimates

Information that relates to Ore Reserve Estimate has been previously announced to ASX on 6 April 2022, "Great White Kaolin Project –Definitive Feasibility Study and Updated Ore Reserve. Andromeda confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Information that relates to the other kaolin deposit Mineral Resource Estimates in this presentation have been previously announced to ASX as follows:

- 1. ADN ASX dated 26 November 2020, Updated Mineral Resource for the Great White Kaolin JV Deposit
- 2. ADN ASX dated 16 November 2023, Chairlift Kaolin Deposit Mineral Resource Estimate.
- 3. ADN ASX dated 29 September 2020, New mineral resource estimate for Hammerhead Halloysite-Kaolin Deposit.
- 4. ADN ASX dated 23 March 2022, Maiden Tiger Kaolin Resource and Regional Rare Earth Element Potential. Halloysite reported with kaolinite.
- 5. ADN ASX dated 11 August 2020, New Mineral Resource for the Mount Hope Kaolin project.

Andromeda confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

#### **Competent Person's Statements**

The data in this presentation that relates to Mineral Resource estimates for The Great White Deposit, the Chairlift Deposit, the Hammerhead Deposit, the Tiger Deposit and Mount Hope Deposit is based on information evaluated by Mr Eric Whittaker who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Whittaker is the Chief Geologist of Andromeda Metals Limited and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Whittaker has over 30 years of experience in the mining industry. Mr Whittaker consents to the information in the form and context in which it appears. Mr Whittaker is entitled to participate in Andromeda's employee incentive plan.

The data in this presentation that relates to Mineral Reserve estimates for The Great White Deposit is based on information evaluated by Mr John Millbank who is a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Millbank is the Director of Proactive Mining Solutions Pty Ltd, an independent mining consultancy, and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code"). Mr Millbank consents to the information contained in this presentation being used in the form and context in which it appears. Mr Millbank, or any of the entities he directly controls, has no financial interests in Andromeda Metals Ltd or any of its subsidiaries.

#### Third party data from consultants and government agencies

Andromeda has relied on information provided by specialist consultants and government agencies in preparing this presentation. Andromeda has reviewed all information to the best of its ability but does not take responsibility for its accuracy or completeness, or reliability of such information.

#### Third party data on markets and pricing

The 2023 DFS (and hence this presentation) uses information from third parties pertaining to the kaolin industry, forecast pricing, market segments and end-markets in which Andromeda intends to operate (**Market Data**). This information has been substantially derived from market research prepared by third parties.

The Market Data includes assumptions, estimates and generalisations that the Company believes to be reliable, but no representation or warranty is made as to the accuracy, completeness or reliability of such information. Due to the forward looking nature of the Market Data, it may not necessarily reflect actual market conditions and there is no guarantee that any forward looking statements in the Market Data will prove to be correct or will be achieved. Andromeda has not independently verified the Market Data and the Company cannot give any assurances to the accuracy or completeness of this information or the underlying assumptions used in generating this information. Industry assumptions, forecasts and estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed in the risk factors set out in this presentation.

#### Additional authorisations/certification

Additional authorisations or certification is required for certain activities described in this presentation, including:

- the current Program for Environment Protection and Rehabilitation (PEPR) covers a 13 year mine life, with processing of 300,000 tonnes per annum of kaolin ore, so any increase or change to this will require a new PEPR;
- the sale of sand products as extractive minerals, which is not currently authorised under Mining Lease 6532 (and will require a change in operations) or under the PEPR (which would need to be updated and approved by the regulators accordingly)
- the sale of Great White HRM™ outside of Australia, which may require certification for use in concrete applications.

Andromeda has no reason to believe that such additional authorisations and certifications will not be forthcoming, but no guarantee can be given on this, including as to timing.

Other permits and authorisations may also be applied for in the ordinary course of development and operations and will be applied for as and when required.

#### Photographs, images, diagrams, charts and maps

Photographs, images, diagrams, charts and maps used in this presentation are illustrative only and may not be drawn to scale. Unless otherwise stated, all data contained in the charts, graphs and tables is based on information available at the date of this presentation.



# Andromeda Metals



# Australia's next leading industrial minerals products company

# Who is Andromeda?

- Andromeda Metals (Andromeda, the Company) is an ASX-listed (ADN) pre-development industrial minerals company.
- We are developing The Great White Project (TGWP, the Project) on the Eyre Peninsula in South Australia.
- TGWP is a high-grade kaolin project with a 28 year mine-life.

# What is the Opportunity?

- The Company is at an inflection point in its development.
- The Project has been largely de-risked and is ready to develop fully permitted, feasibility studies completed and major offtakes finalised for the first phase of production.
- We are now focused on delivering the Project to a final investment decision (FID) being made, followed by development and production.

# Who are we?

- Andromeda is led by a highly experienced board and management team who have funded, built and delivered successful projects.
- TGWP will be delivered under an owner direct managed strategy by our dedicated project team, who have led all phases of pre-development studies.
- Luke Anderson has joined as new CEO to lead the Company into its development phase. Luke is a highly experienced industrial minerals & logistics executive, with the background required to successfully deliver TGWP to operations:
  - ✓ CEO of One Rail Australia
  - ✓ CFO of OZ Minerals
  - ✓ CEO of Unimin Corporation, one of the largest industrial minerals company in North America.

# Investment Thesis

# Andromeda

# De-risked, high-grade asset

# Tier 1 Project

- The Great White Project (TGWP): high-grade kaolin asset delivering premium products over a 28-year mine life
- Strong economics: \$763m post-tax NPV<sub>8</sub>; 43% IRR; \$140m average annual EBITDA
- Favourable capex: low \$194M capex hurdle achievable over 3 stages<sup>1</sup>, first stage capex \$84m
- Low-complexity operations: simple, free-dig mining with low strip ratio, mechanical separation processing
- Future upside: through additional expansion and new, high-value added products

# Significant Kaolin Market Opportunity

- Large, Diversified Addressable Market: US\$4.4Bn market in 2023 (with CAGR of 4.7%)2
- Challenged Supply: growing structural supply deficit for high-quality kaolin, exacerbated by geopolitical factors further reducing supply
- Attractive long-term trend: 30 years of low historical volatility, above CPI price growth<sup>3</sup>

# De-risked Development

- Clear Development Strategy: 3 stage development in line with expected offtake volume growth<sup>1</sup>
- Clear, Validated Product Strategy: targeting kaolin for premium ceramics. Our products have been validated by ceramics industry experts and customers
- Major Offtakes finalised: for project's first 100ktpa stage
- Approvals: All key approvals received to commence development<sup>4</sup>

<sup>1.</sup> ASX announcement 6 May 2024 "Andromeda expansion plans for The Great White Project". 2. Fortune Business Insights, "Global Kaolin Market Analysis, Insights and Forecast, 2024 2032" (2024).

<sup>3.</sup> Demonstrated by the US historical Kaolin and Ball Clay PPI published by the US Federal Reserve of St Louis. 4. Mining Lease 6532 and Miscellaneous Purpose Lease 164 granted for a period of 35 years on 17 December 2021, by the South Australian Minister for Energy and Mining. Program for Environment Protection and Rehabilitation (PEPR) was approved on 01 March 2023, by South Australia's Department for Energy and Mining.

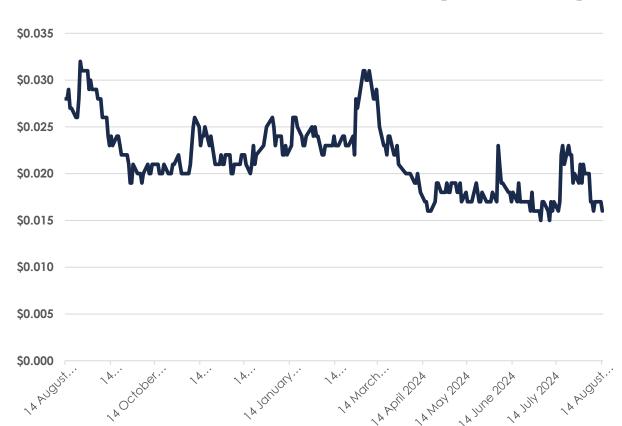


# Corporate overview

# Andromeda

# Experienced Board & executive team to execute Andromeda's strategy

# **Andromeda Metals Limited (ASX:ADN)**



Capital Structure	
Shares on Issue	Share Price <sup>1</sup>
3,110M	A\$0.016
Market capitalisation <sup>1</sup>	Cash-on-Hand <sup>2</sup>
A\$49.8m	\$5.4m

Key Shareholders <sup>3</sup>	
Buratu Pty Ltd <sup>4</sup>	5.02%
Board & Management	0.41%

# **Board of Directors**



Mick Wilkes
Independent NonExecutive Chair



Luke Anderson
CEO
& Managing Director



Austen Perrin
Non-Executive
Director



Sue-Ann Higgins
Non-Executive
Director

# **Executive Management**



**Joe Ranford**Chief Operating
Officer



Sarah Clarke
General Counsel &
Company Secretary



Pascal Alexander-Bossy
Chief Financial Officer

#### $\Lambda = million$

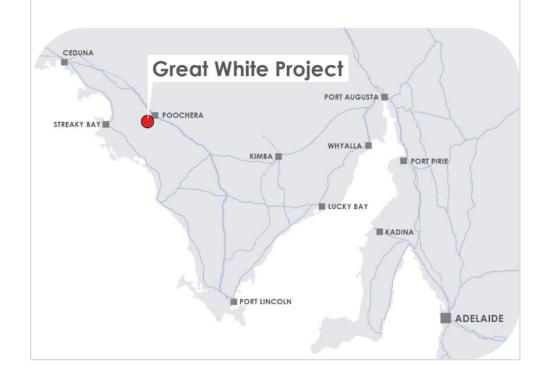
- 1. As at 15 August 2024
- 2. As at 30 June 2024
- 3. Includes substantial shareholdings, and shareholding held by Board and Management.
- 4. Includes entities associated with Buratu Pty Ltd

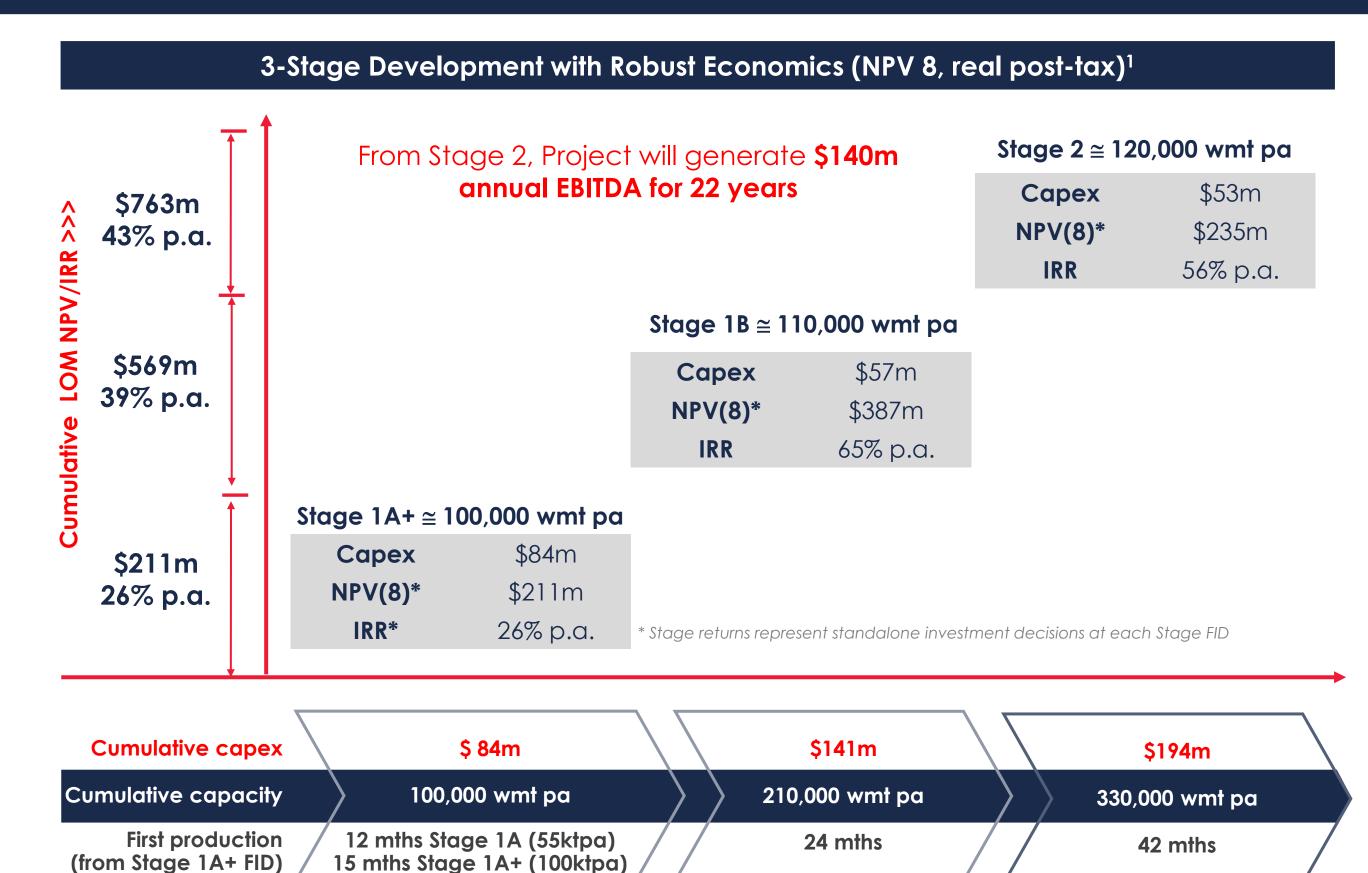
# The Great White Project Staged Delivery of a High-Value Project



# Characteristics

- ✓ High-grade 15.1Mt reserve supporting 28-year mine life
- ✓ Simple mining with low strip ratio
- All key approvals to commence operations
- ✓ Definitive feasibility study complete
- ✓ Low capex hurdle
- ✓ Staged development into market demand



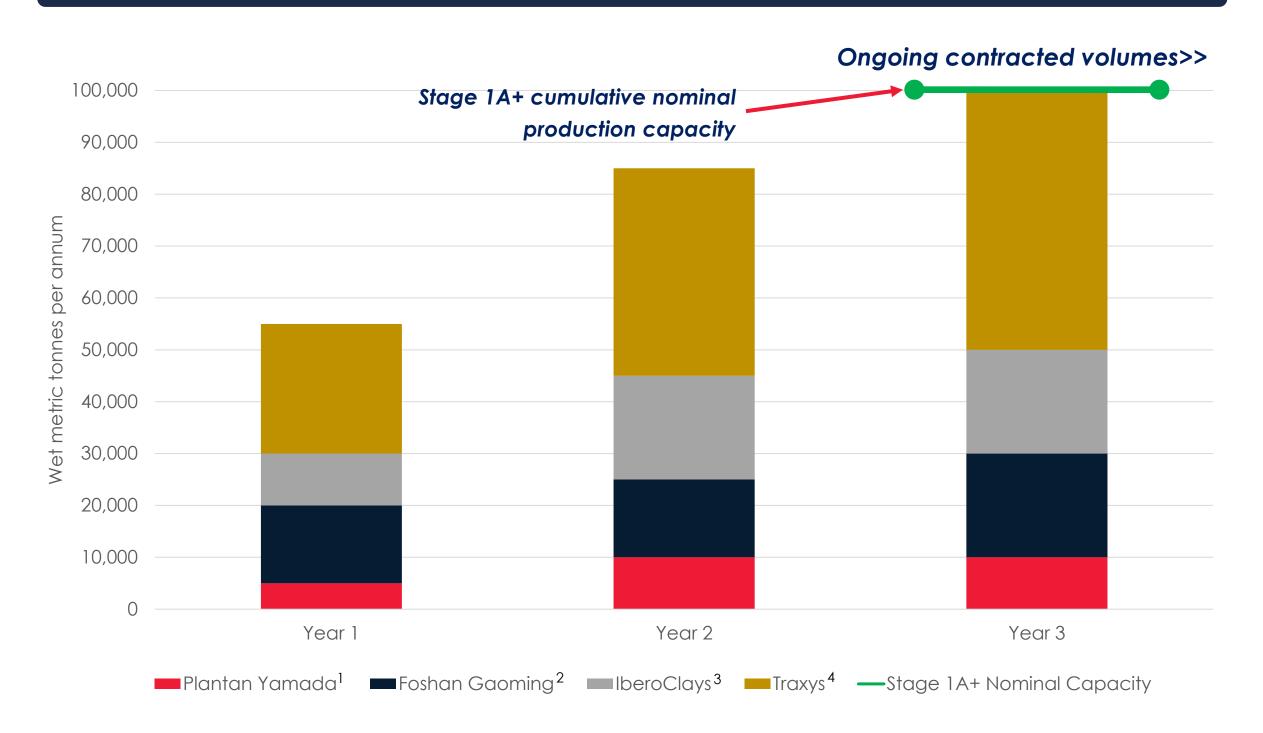


<sup>1.</sup> Refer ADN ASX dated 6 May 2024 titled Andromeda expansion plans for The Great White Project. Figures differ marginally due to changed timing to first production – increase from 10 to 12mths for Stage 1A+ 55ktpa due to extra expected pre-FID design work, compensated by a shortened time to ramp-up.

# Stage 1A+ supported by binding offtakes Agreements for Andromeda's premium ceramic kaolin



# Binding Offtake Agreements support Stage 1A+ production capacity<sup>5</sup>



# Traxys Agreement<sup>4</sup>

- Traxys is a global trader of industrial minerals.
- The offtake establishes a multi-year partnership supporting planned expansion of the project.
- Contracted volumes of Great White CRM<sup>™</sup> to increase proportionately with each stage, to 50% of the available processing capacity (capped at 130,000 wmt p.a.)
- Prices for year 1 and 2 broadly consistent with pricing assumptions in the 2023 Definitive Feasibility Study (2023 DFS), with prices for year 3 onwards subject to annual negotiation
- For each year, the parties share equally in pricing upside on on-sales by Traxys (other than sales of product for use in ceramic tile bodies) and in risk for on-sales of Great White CRM™ at less than the contract price (refer to slide 40 for further detail).

<sup>1.</sup> Refer ADN ASX dated 8 June 2023 titled Binding Offtake Agreement signed for Japanese market.

<sup>2.</sup> Refer ADN ASX dated 18 October 2023 titled Binding Offtake Agreement signed for Chinese market, adjusted per Seller's volume option for Year 3.

<sup>3.</sup> Refer ADN ASX dated 19 January 2024 titled Binding Sales and Distribution Agreement Signed with IberoClays.

<sup>4.</sup> Refer ADN ASX dated 17 July 2024 titled Binding Offtake Agreement signed with Traxys

<sup>5.</sup> Volumes exclude contracted volumes for Great White HRM™

# Targeting Premium Markets



# Offtakes geared towards high-quality/price kaolin import markets

# Target markets

# Target segments Key metrics

# **Europe** Key markets – Spain & Italy

High-end ceramics: tiles and countertops

- **Spain** #1 importer of kaolin<sup>1</sup>; #5 ceramic tile producer<sup>2</sup>; #2 exporter of ceramic tiles<sup>3</sup>
- Italy #4 importer of kaolin<sup>1</sup>; #7 ceramic tile producer<sup>2</sup>; #4 exporter ceramics tiles<sup>3</sup>
- Countertops<sup>4</sup>: US\$160bn global market opening to porcelain slabs due to silicosis risk
- Stage 1A+ path to market: binding offtakes with IberoClays, Traxys

# **Asia Pacific** Key markets – India & Japan

High-end ceramics – tiles, tableware & countertops

- India #9 importer of kaolin<sup>1</sup>; #2 ceramic tile producer (14% CAGR)<sup>2</sup>; #3 exporter of ceramic tiles<sup>3</sup>
- Japan #3 importer of kaolin<sup>1</sup>; leading high-end porcelain tableware producer<sup>6</sup>
- Countertops<sup>4</sup>: as above US\$160bn global market opening to porcelain slabs due to silicosis risks
- Stage 1A+ path to market: binding offtakes with Plantan Yamada, Traxys

# China

A broad range of high-end applications via distribution

- Largest market #1 consumer of kaolin; #2 importer of kaolin<sup>1</sup>; #1 exporter ceramic tiles<sup>2</sup>
- Deep high end-market with multiple applications
- **High long-term growth<sup>5</sup>:** kaolin demand to grow by CAGR of 4.6% to 2025; imports CAGR of 6.6%
- Stage 1A+ path to market: binding offtake with Foshan Gaoming

<sup>1.</sup> Based on World Bank data. 2. World production and consumption of ceramic tiles 2022, Manufacturing Economics Studies (MECS), October 2023

<sup>3.</sup> Top 10 countries for ceramic tile exports in 2018-2022 in million square metres (sqm), and Compound Annual Growth Rate (CAGR) 2018-22, Baraldi, 2023.

<sup>4.</sup> Global Countertop Industry Report, Freedonia Group, March 2023 5. HQ Kaolin Market Study, TZMI, 2023.

<sup>6.</sup> Kaolin consumption by leading tableware manufacturers in Asia (excluding China), Hart, 2021.

# Proposed Capital Raise



# Moving The Great White Project towards FID

# Offer Structure

Capital raise for a total of \$6.3m (before costs) comprising:

- Placement to professional and institutional investors to raise \$3.4m
- Pro-rata non-renounceable entitlement offer to raise up to \$2.9m (1 share for each 13 held)
- Investors in the Placement will receive 1 free attaching option for every 1 new share subscribed with an exercise price of \$0.0175 expiring 30 September 2027 (subject to shareholder approval and issue of a prospectus)
- Investors in the Entitlement Offer will receive the same option terms

# Offer Price

1.2 cents per share, representing:

- 25.0% discount to the last closing price of 1.60 cents per share on 15 August 2024
- 25.6% discount to the 5-day VWAP of 1.61 cents per share on 15 August 2024

Use of Funds

Funds to be used to progress The Great White Project, including detailed engineering and work packages, product and market development, project development funding costs and working capital prior to FID.

# Proposed Capital Raise Moving The Great White Project towards FID



# **Purpose of Raise**

- Initial stage of the project has been increased to 100ktpa (Stage1A+) based on market demand.
- Gating items required for the development of this increased scope are complete see Section D of this presentation.
- Funds are to be used to progress the project whilst development funding is progressed. Activities will include:
  - Advance plant design and engineering to a high level of accuracy. This will also de-risk the project further for investors and financiers, thereby facilitating the funding process and a final investment decision;
  - Product & market development for our zirconreplacement, HRM and HPA kaolin products;
  - Technical, financial and legal activities to support the funding process for project development.

# **Proposed Sources & Uses**

Sources and Uses for the Raise						
Sources			Uses			
Entitlement Offer	\$	2,900,000	Detailed Engineering & Work Packages	\$	2,320,000	
Placement	\$	3,400,000	Product and Market Development	\$	250,000	
			Project Development Funding Costs	\$	500,000	
			Working Capital	\$	2,780,000	
			Costs of Raise	\$	450,000	
Total	\$	6,300,000	Total	\$	6,300,000	

- If the offer is fully subscribed, Andromeda intends to apply the funds as above.
- If the full amount sought is not obtained, at the discretion of the Board:
  - The uses described above will be scaled back accordingly; and/or
  - The Company may seek to fund the shortfall and any additional funding required for activities prior to a FID from alternative sources of capital currently under negotiation, including an equity placement facility the use of which would be subject to any necessary shareholder approvals.

# Pro Forma Management Accounts as at 30 June 2024

Balance Sheet (\$000s)	Management	Equity Raised (net of fees)	Pro Forma
Cash	5,436	5,850	11,286
PP&E, Land & Buildings	5,949		5,949
Exploration & Evaluation	143,987		143,987
Other assets	2,695		2,695
Total assets	158,068		163,918
Trade & Other Payables	2,250		2,250
Other liabilities	942		942
Total liabilities	3,192		3,192
Net Assets	154,876		160,726



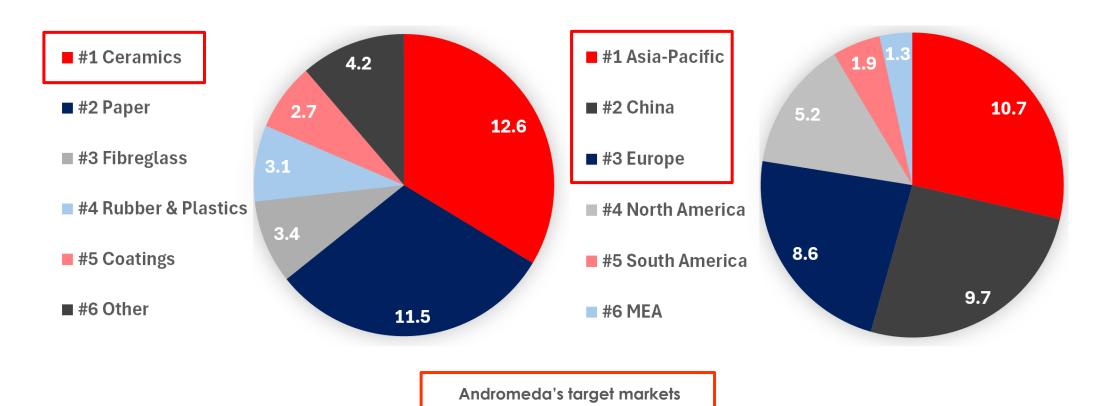
# The kaolin market Globally important industrial mineral



# Large, Diversified Global Market

- Natural white clay which is processed into a wide range of products
- Products are used in a diverse range of sectors and applications, e.g. as fillers, additives and pigments in industrial, medical, cosmetics and consumer products
- Large global market: ~30Mtpa, US\$4.4 billion characterised by consistent, lowvolatility growth of 4.7% CAGR<sup>1</sup>

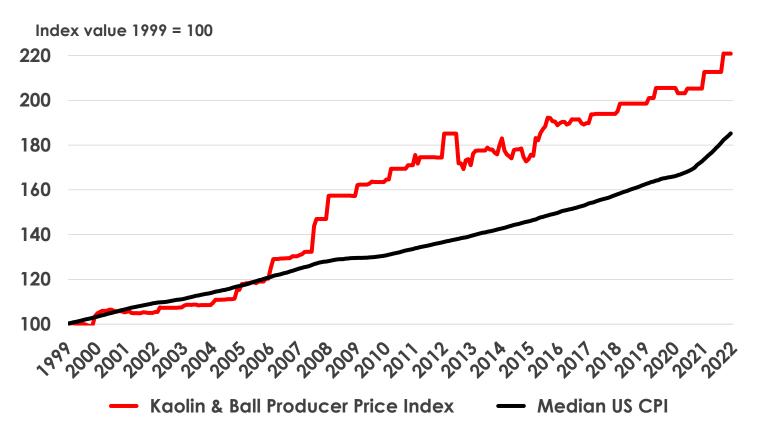
# TZMI: Global kaolin demand by end use & region in 2024 Mt<sup>2</sup>



# **De-Commoditised Market**

- Not a commodity market product-driven market with large quality and price differentials
- Once a product has an established customer base, demand and price growth is consistent and low-volatility – as demonstrated by US historical Kaolin and Ball Clay PPI (world's largest exporter of high-quality kaolins)

# US Kaolin & Ball Clay Producer Price Index vs Median CPI<sup>3</sup>

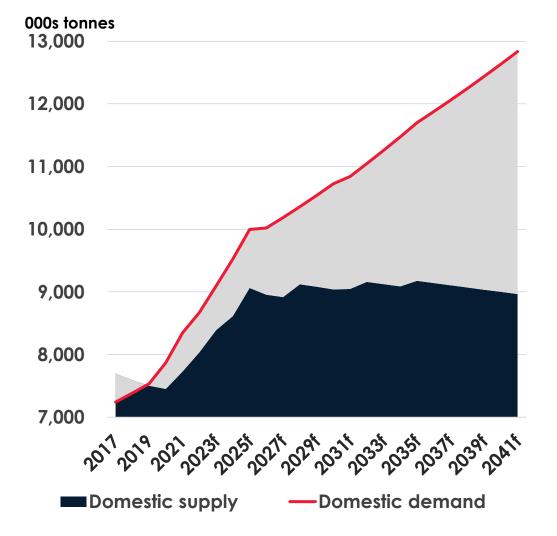


# Supply-demand outlook GDP+ demand growth supported by challenged supply

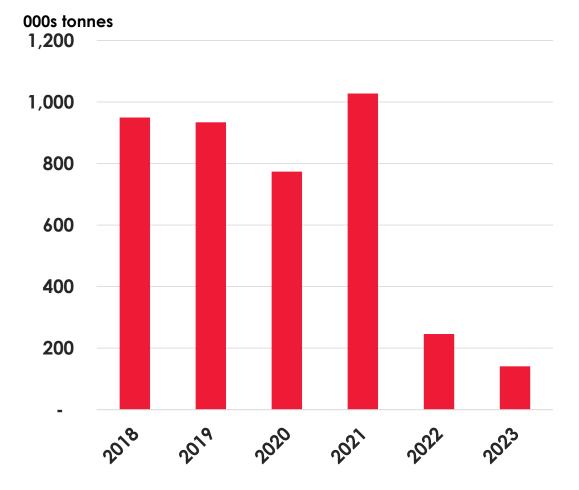


1	Demand growth in excess of global GDP	Highest growth segment is Andromeda's targeted ceramics segment (6.4% CAGR) <sup>1</sup>
2	Depletion of high-quality sources of supply	Affecting all major production regions (Europe, China, USA)
3	Few new near-term sources of high-quality kaolin	With >36% alumina, low iron, high brightness and high mechanical strength
4	War in Ukraine (Donbas) supply disruption	+5-year expectation, historically a leading source of high-quality product to Italy and Spain
5	China forecast – material supply deficits	Especially for high-quality kaolins – reflective of trends in all of Andromeda's target markets

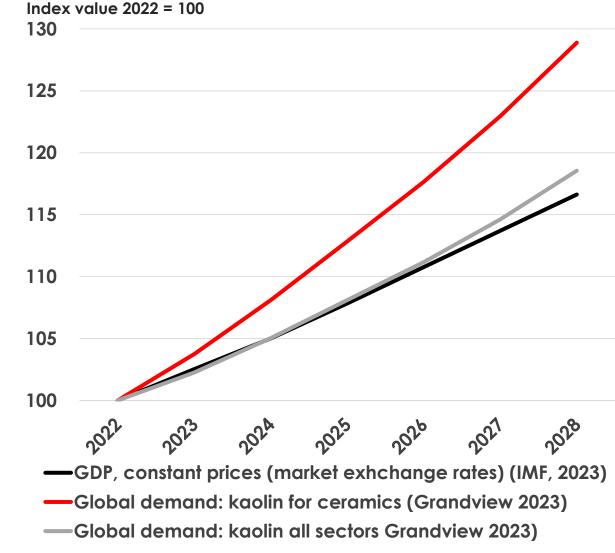
# TZMI: China domestic supply & demand to 2041<sup>1</sup>



# Ukraine: war impact on kaolin exports<sup>2</sup>



## Global GDP vs kaolin demand – index value<sup>3</sup>

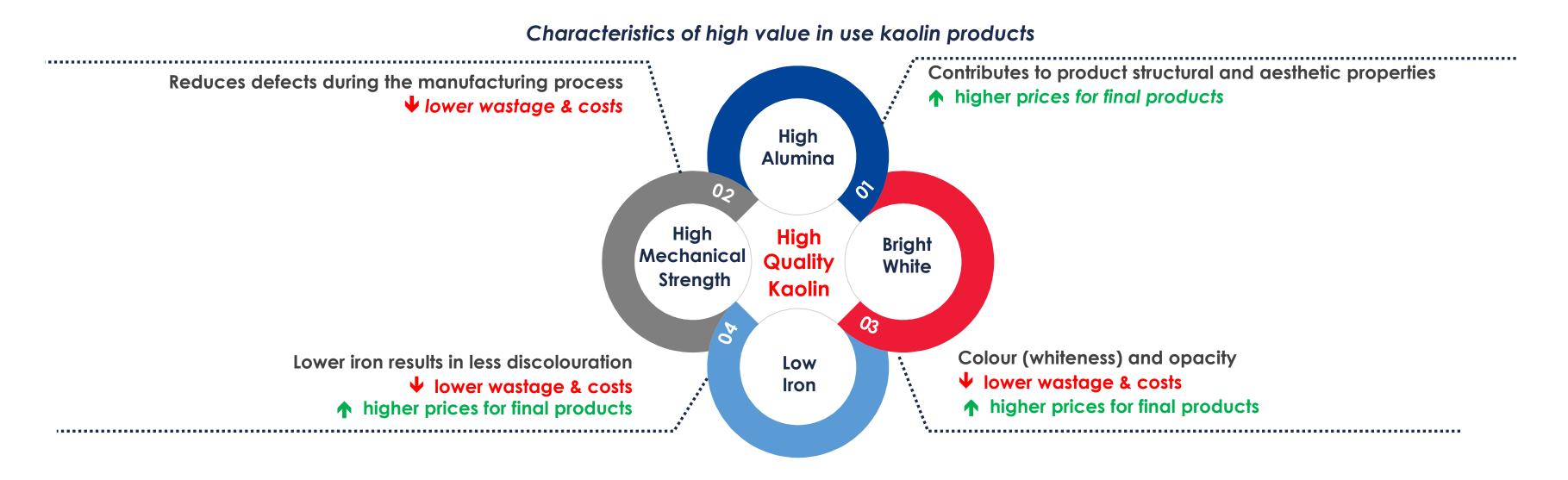


# What makes a premium ceramics kaolin?



# Andromeda delivers high "value in use" to customers

- Value in use is the pricing basis for industrial minerals. It quantifies the profit realised through converting a raw material into a finished product
- Andromeda has established high value in use and premium price point with Spain's Institute of Ceramic Technology and offtake partners



# Alberto Piquer González, CEO IberoClays

"We are excited by the opportunity to launch Andromeda's high-quality kaolin products for sale into the Mediterranean region. The emergence of **The Great White Project as a new source of supply** comes at a **crucial time in global kaolin markets**. Ongoing geopolitical supply disruptions, in addition to the **depletion of traditional high-quality sources of supply**, is seeing **elevated pricing for high-quality kaolin** that can be used in ceramics."

# What is Andromeda's market position?

High quality kaolin products for premium ceramics



# Validated premium ceramic kaolins

# Ceramic Product: Great White CRM™<sub>T</sub>

A refined high-quality product for the high-end ceramic tile and porcelain slab market

- High alumina (min. of 36.5%) and low iron (max 0.55%)
- o High whiteness with min ISO B 83%

# Ceramic Product: Great White CRM™<sub>P</sub>

A refined high-quality product for the high-end porcelain tableware market

- High alumina (min. of 35%) and low iron (max 0.6%)
- o High whiteness and translucency/min ISO B 82%

## Concentrate Product: Great White KCM™90

A semi-refined high-quality kaolin for direct use, further refinement or upgrade of inferior kaolins

High alumina (min. of 35%) and low iron (max 0.7%)

# for use in ceramic formulations

# **Engobe & Frits\***

- application opportunities for use in engobe
- Opportunity for use in production of frits (glass used for purity)
  - \*subject to further test work

# Tile Body

Tile Body Layers

- High value in use of Andromeda products to upgrade lower-value kaolins in the tile body layer
- Premium pricing achieved as a blending product

# to deliver premium products



White & super-white porcelain tiles



Porcelain slabs



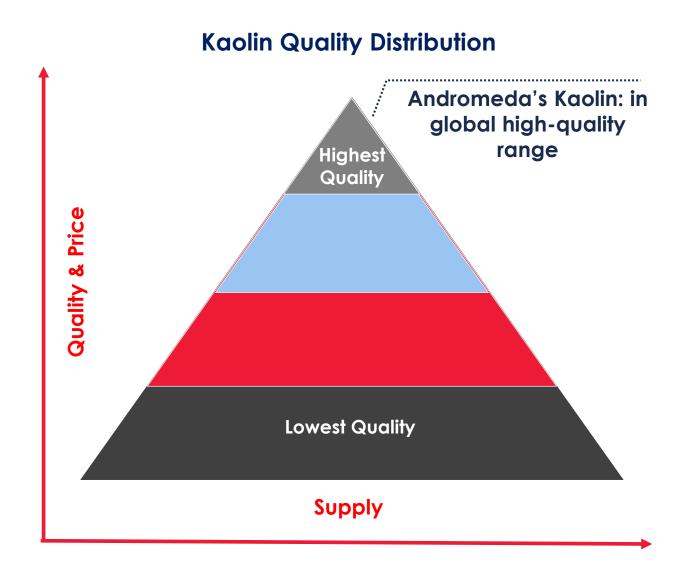
High-end porcelain tableware

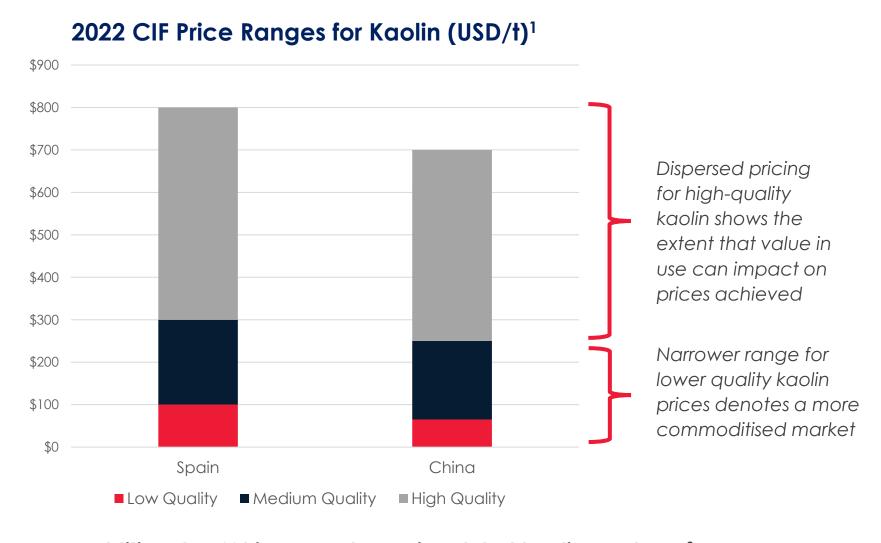
# Where does Andromeda's Kaolin Price?



# Premium pricing for high value in use

- Andromeda's premium products are priced within the high-quality range of global kaolins as validated by signed offtake agreements
  - o European competition regulations do not allow the publishing of pricing received under confidential sales contracts in opaque markets
  - o Prices under signed offtake agreements are consistent with product pricing assumptions made in the 2023 DFS
- Kaolin is a de-commoditised product particularly in high-quality end markets, where Andromeda's products are positioned





2023 saw an additional ~10% increase by major global kaolin producer<sup>2</sup>

<sup>1.</sup> Derived from import data statistics in reports provided to Andromeda by Galesk Consultancy (for Spain) and TZMI (for China).

<sup>2.</sup> KaMin LLC https://www.kaminllc.com/newsandpress.html

# Product in Development – Zircon Displacement



# ~25% margin uplift at zero incremental capex cost

# Zircon displacement with Great White CRM<sup>TM</sup>

# Leveraging the high whiteness of CRM<sup>TM</sup> to reduce high-cost zircon use as a whitening agent in ceramic tiles and slabs

- Value in use and pricing strategies driven by material commercial benefits
  - Zircon is typically used (at between 4% 9% of total product content) in formulations for high-end white/super-white porcelain tiles and slabs
  - o Test work by IberoClays and ITC on Great White CRM™ supports up to 20% reduction in zircon for high-quality ceramic tiles and slabs¹
  - o Current price of zircon at US\$1,800/t (FOB)², materially above Andromeda's current price assumptions for Great White CRM™, supporting high value in use and premium pricing
- Substantial and definable addressable market
  - Zircon volumes into ceramic tiles and slabs are estimated at 985,000 tpa<sup>3</sup>
  - o A combined Great White CRM™: zircon product has potential to directly enter into this market with blending ratios of 10%:90% to 20%:80%
  - o That is, an addressable market for Andromeda of 100,000 to 200,000 tpa

# **Mechanics and Price Drivers**

## How it works

Addition of Andromeda products reduces zircon use = reduction of overall cost and achieves the same outcome

# Value in use to end users

Cost saving of €300-€400/t to ceramic customers

# Andromeda's pricing drivers: capture of a fair % VIU

Pricing strategy to **capture a minimum of 50% of cost savings** from zircon displacement with Great White CRM<sup>TM</sup>

# Potential margin uplift at zero incremental capex cost

Potential C1 product margin<sup>2</sup> uplift of up to **25**%

<sup>1.</sup> Refer ADN ASX dated 18 June 2024 titled Report finds Great White CRM™ can displace up to 20% of zircon.

<sup>2.</sup> Refer to Iluka ASX announcement dated 8 May 2024 titled Macquarie Conference Presentation.

<sup>3.</sup> Back-calculated from addressable (2,110 ktpa) market for Andromeda kaolin in ceramic tiles assuming an overall average of 15% kaolin and 7% zircon in formulations.

<sup>4.</sup> C1 margin represents the gross profit after deducting variable costs directly associated with production, as a proportion of total product revenue.

# Product in Development – Concrete Decarbonisation



# ~50% margin uplift at zero incremental capex cost

# Concrete Decarbonisation with Great White HRM<sup>TM</sup>

# A kaolin concrete additive that will deliver cost-effective concrete decarbonisation

- Value in use and pricing strategies driven by material commercial benefits:
  - o Cement industry has very few options to reduce CO<sub>2</sub> emissions
  - o Independent Study<sup>1</sup> shows 1 kg of Great White HRM<sup>TM</sup>/m<sup>2</sup> leads to:
    - Reductions of  $\cong$  8% in cement and  $\cong$  4% in water required<sup>2</sup>
    - $\approx$  7% reduction in carbon footprint<sup>2</sup>
    - Cost savings of between \$2/m<sup>3</sup> and \$3/m<sup>3</sup>
- Clear commercialisation pathway
  - Production ready: processing using planned TGWP flowsheet, no additional capital required, lower C1 cost than Great White CRM<sup>TM</sup>
  - Certified: for use in concrete under Australian Standards (AS 1478.1 2000)
  - Strategic Alliance Agreement for commercialisation of Great White HRMTM signed with Hallett Group<sup>3</sup>, a significant SA construction firm – targeting critical end user validation
  - Conditional Binding Offtake: subject to validation with IberoClays<sup>4</sup> (2k tpa)

# **Mechanics and Price Drivers**

## How it works

Addition of 1 kg of Great White HRM<sup>TM</sup> per m<sup>3</sup> in standard concrete mixes lowers the required water and cement by ~8%

# VIU to end users

**Direct opex savings** of 1 kg of Great White HRM<sup>TM</sup> = Cost Savings of A\$2-A\$3 per m³ or A\$2,000-A\$3,000/t of Great White HRM™ **Decarbonisation savings** via reduction in carbon footprint

# Andromeda's pricing drivers: capture of a fair % VIU

Pricing strategy to capture a minimum of 50% of direct opex savings

Potential margin uplift at zero incremental capex cost

Potential C1 margin<sup>6</sup> uplift of up to **50%** 

Refer ADN ASX dated 22 March 2023 titled Study Finds Great White HRM™ Offers a Cost-Effective Solution to Decarbonise Concrete.

Based on standard concrete mixes used commercially. Carbon footprint as measured by Global Warming Potential.

Refer ADN ASX dated 16 November 2023 titled Strategic Alliance Agreement signed with Hallett Group.

Refer ADN ASX dated 19 January 2024 titled Binding Sales and Distribution Agreement Signed with IberoClays

Refer ADN ASX dated 21 November 2022 tilted Andromeda Signs Offtake Agreement for Great White Concrete Additives.

<sup>6.</sup> C1 margin represents the gross profit after deducting variable costs directly associated with production, as a proportion of total product revenue.

# Product in Development – HPA



# HPA with Andromeda's high-quality kaolin

# • Great White kaolin ideally suited to make High-Purity Alumina (HPA):

- O Test work carried out by external consultants confirmed that kaolin from TGWP is ideally suited for making HPA, due to its high aluminium content and low levels of alkali and alkaline earth metals.
- o The lab scale tests undertaken have produced HPA to 99.99% purity (4N HPA).

## Potential low-cost process developed:

Our process overcomes several inherent problems normally associated with other published processes for producing HPA from kaolin.

## • HPA a critical mineral:

o HPA is listed on Australia's Critical Minerals List as a niche, high value product with an increasing use in the manufacturing of LED lights, synthetic sapphire glass, semiconductors and lithium-ion batteries.

# Progress with HPA<sup>1</sup>

Successfully achieved refined 4N HPA at laboratory scale

Patent Cooperation Treaty (PCT) patent application has been filed

Progress to next phase – optimisation of whole process flow sheet



# The Great White Project Defined, de-risked & deliverable

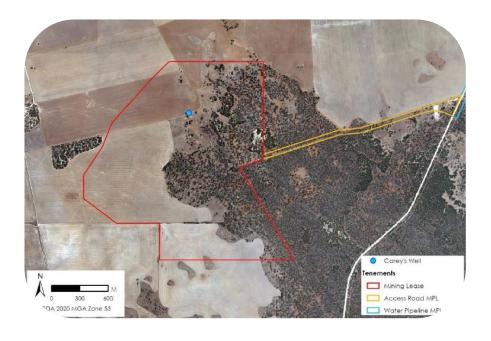


# Building blocks are in place to deliver the TGWP

# **Key Foundations**

Mining & Environmental Approvals Granted

2023 Definitive Feasibility Study



# First Stage Execution

Stage 1A+ 2024 Bankable Feasibility Study Finalised

Project Team & Execution Strategy Ready



# First Stage Operations

Mining contractor shortlisted

Stage 1A Plant long-lead items ordered Logistics pathway selected



# Foundation Works



# LOM scope & strategy driven by approvals held & Andromeda's feasibility studies

# Approvals (ML & PEPR)

# The Project has received all required approvals to commence development

- Mining Lease
- Primary approval granted on 17 December 2021 as ML 6532<sup>1</sup>
- o Term of 35 years
- Program for Environment Protection and Rehabilitation (PEPR)
- o A secondary operating approval granted 1 March 2023
- o Allows for up to 300,000 mt p.a. of ore mining and processing
- Will be updated regularly, in the ordinary course, as TGWP develops.



# **Feasibility Studies**

# Andromeda feasibility studies have established the viability of TGWP and the development pathway

- August 2023 LOM Definitive Feasibility Study (2023 DFS)
- TGWP focus on the delivery of high-quality product to ceramics segment of the global kaolin market
- o May 2024: Announcement bringing forward Stage 1A+ expansion due to market demand, providing expedited ramp-up in initial production capacity from  $\cong$ 55,000 tpa to  $\cong$ 100,000 tpa
- 2024 Bankable Feasibility Study (2024 BFS)
- A detailed and comprehensive delivery plan for the initial development stage of TGWP, i.e. the updated Stage 1A+
- Key documents for the assessment of the credit profile for Stage 1A+
   by debt providers supported by an independent technical review by
   Behre Dolbear Australia

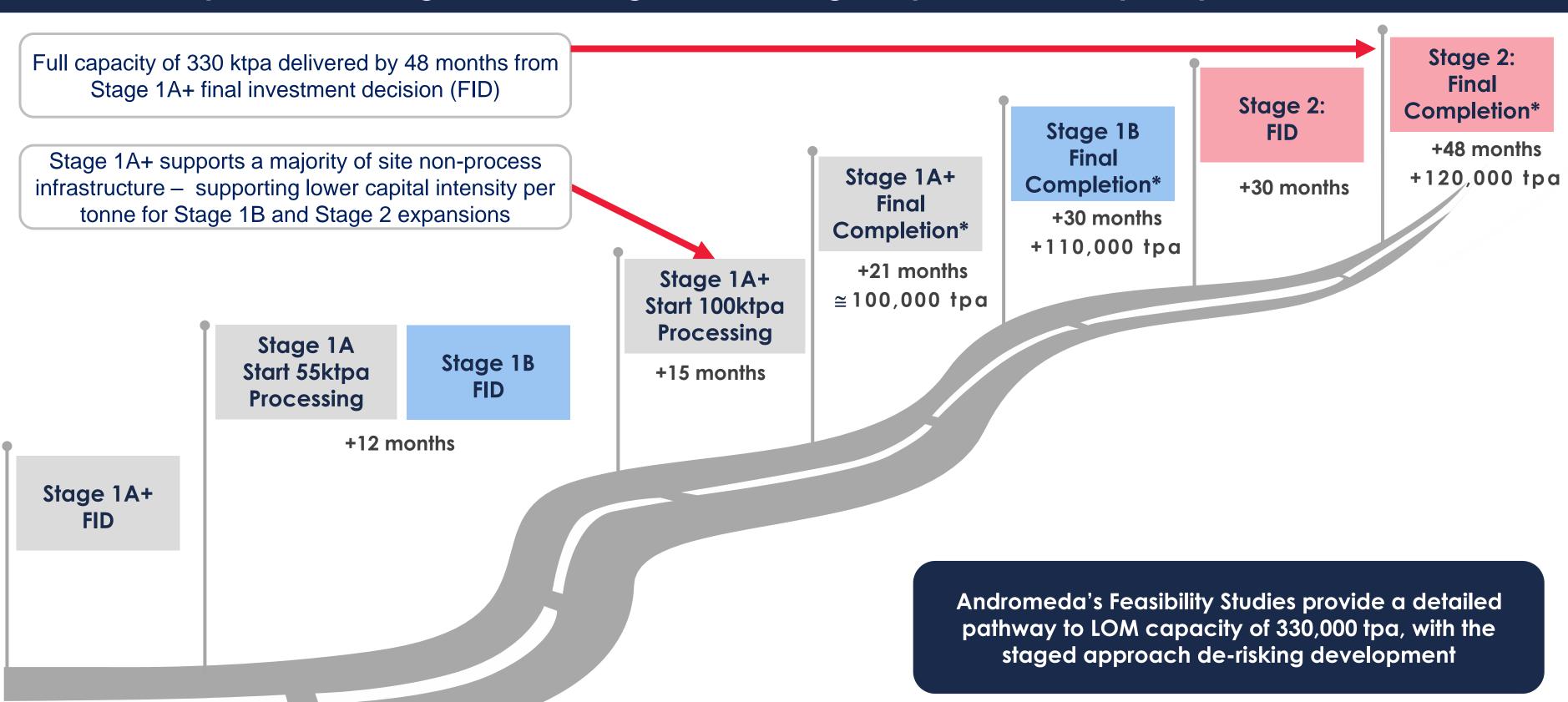


- 1. Granted together with Miscellaneous Purpose Licences:
- MPL 163 (for the water pipeline from Poochera to the Mining Lease), and
- MPL 164 (for the access road).

# LOM capacity pathway



Modular expansion to Stage 1B and Stage 2: derisking the path to full capacity



# Pathway to Stage 1A+ Development Foundations in place to move towards FID



- With the finalisation of the Traxys offtake, the Company now has the required foundations to move towards making a final investment decision (FID) for Stage 1A+.
  - ✓ Fully permitted
  - ✓ Feasibility Studies complete
  - ✓ Offtakes signed
- Stage 1A+ will be funded through a combination of debt and equity
- Andromeda is engaging with potential lenders and government funding initiatives are also being investigated to support the project

# **Stage 1A+ Development Funding**

- Development funding to include \$84 million in project capital expenditure.
- The total estimate does not include any deduction for pre-FID expenditure and cash balance, finance costs, working capital or cash reserve requirements. Estimates for these will be determined as project funding plans reach an advanced stage.
- The project is expected to be funded through a combination of debt and equity.

# **Debt Funding Milestones**

- Bankable Feasibility Study delivered in Q1

  Detailed and comprehensive delivery plan for the initial development stage of TGWP Stage 1A+
- Positive Independent Technical Engineer Report delivered in Q2
  Behre Dolbear Australia reviewed the project for the benefit of potential lenders
- Stage 1A+ Major Offtakes Finalised
  Key gating item for the funding of an industrial minerals project

# Stage 1A+ execution



# Defined development plan to be executed by Andromeda's experienced Project Team

# Stage 1A+ design and construction will be executed under an owner direct managed strategy by a dedicated Project Team, delivering:

- an integration of design, procurement, construction, quality, commissioning, and operational readiness, and
- a building of capabilities and understanding within Andromeda for both operations and planned future expansion projects at the site.

# Project Team: key personnel

# Joe Ranford Chief Operating Officer

BEng (Mining), MBA, Grad Dip (Business Management), FAusIMM, GAICD, WA 1st Class Mine Manager.

30 years' senior management experience with domestic and international mining companies green and brown fields project development and team building

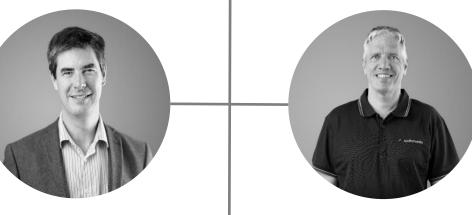




# Lucus Cree General Manager Technical Services and Operations

MMgmt, B.Eng(Hons), DipPM

30 years' experience as a Mechanical Engineer in the mining, automotive and defence industries.

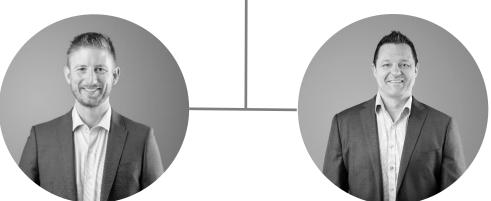


# Eric Whittaker Chief Geologist BApp ScAppGeo

Over 30 years' mining experience from resource definition through to mine development and operations.

# Darren Klingner Manager Project Development

BSc (Hons), Grad Cert Project Management 20 years' experience as an environmental and mining professional on a range of mining projects



# Norm Dinevski Commercial Manager

BACC, CA

22 years' in the mining industry, a highly experienced commercial senior manager with multidisciplinary expertise

# Stage 1A+ operations Low risk mining and processing



Drumwasher

**Noodle Extruder** 

# Mining

- Ore body is shallow with a low strip ratio. Mining will, typically, be a free dig operation (60 tonne excavator)
- Mined ore will be allocated into three quality graded ROM stockpiles for each product - high, medium and low – blended into high-quality feed ores (50% quartz sand/50% kaolin clays) requiring only limited processing once sand is separated.

# Mining Great White CRM<sup>TM</sup><sub>T</sub> (high/medium/low) Great White HRM<sup>TM</sup> (high/medium/low) Sand by-products (mine gate)

Great White KCM<sup>TM</sup> 90

Great White CRM<sup>TM</sup>

**Hydrocyclones** 

**Thickener** 

# **Processing**

- Processing will mechanically separate quartz sand and other materials before removing the materials that are greater than product specification size fractions.
- No chemical processing/transformation.
- The remaining kaolin material is then processed to final product form.

# Logistics

- All Stage 1A+ products will be containerised and transported 644 km to Port Adelaide's Flinders Adelaide Container Terminal (FACT) for shipment.
- This will involve trucking all products in bulk 547km to an intermediate holding terminal at Bowmans (114 km north of Adelaide) where they will be loaded into lined containers and transported by rail 97km to FACT.



500 µm Sand Screen

Filter Press

, Great White HRM™

**Stockpiles** 

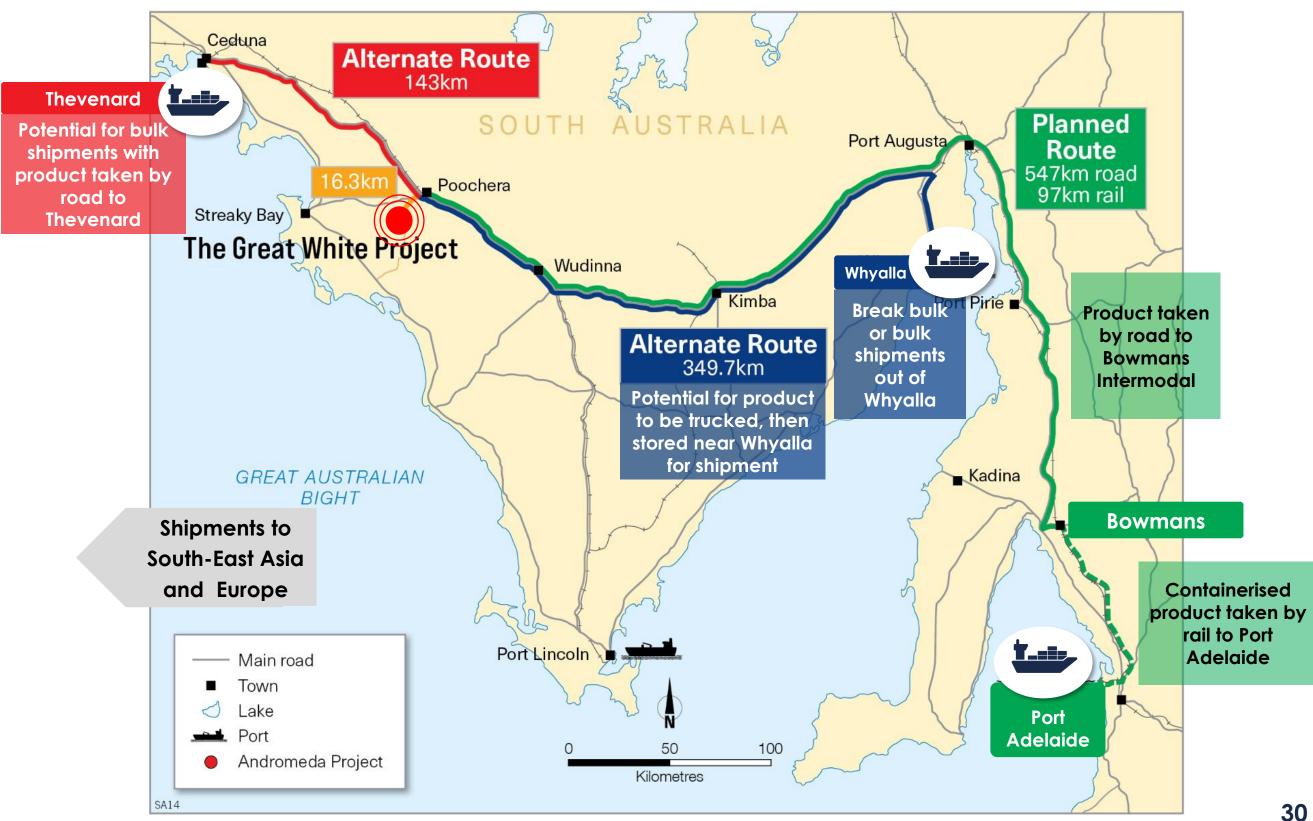
Great White CRM<sup>TM</sup>,

# Logistics Optionality and opportunities



- Proposed route via Adelaide is considered a lower risk option
- As production expands, incremental volumes provide the opportunity to transition from shipping containerised products
- Bulk, or break bulk, shipments from either Thevenard or Whyalla are being investigated to enhance net mine gate margins

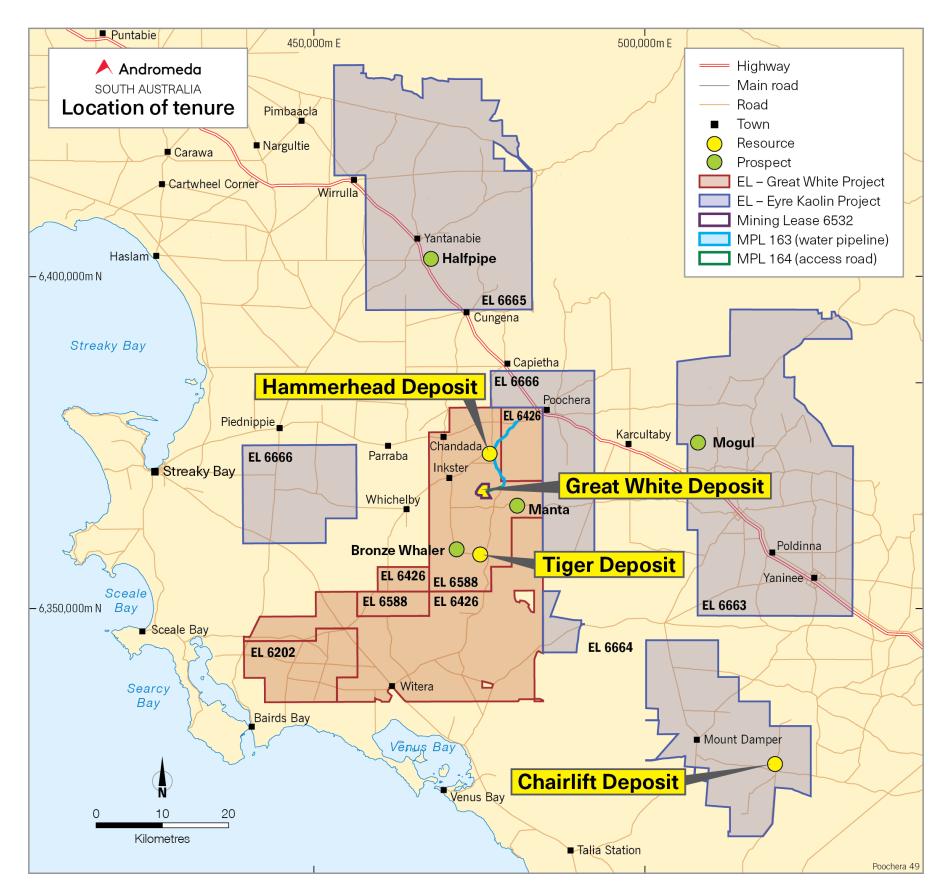
# TGWP planned logistics route and expansion alternatives



# Resource Profile

# Andromeda

# Commercial optionality & potential upside value



# Andromeda Metals: regional high-quality kaolin resources profile

KAOLIN DEPOSIT	Tonnes (Mt)	-45 μm (%)	ISO B (%)	Al <sub>2</sub> O <sub>3</sub> (%)	Fe <sub>2</sub> O <sub>3</sub> (%)	TiO <sub>2</sub> (%)	Halloysite (%)	
DEI OSII	(////	(/0)	in -45 μm fraction					
Great White <sup>1</sup>	34.6	50.2	83.2	36.5	0.51	0.45	10.5	
Chairlift <sup>2</sup>	53.5	50.4	81.9	36.7	0.62	0.18	N/A	
Hammerhead <sup>3</sup>	51.5	52.6	82.2	36.99	0.63	0.71	12.3	
Tiger <sup>4</sup>	12.1	59.9	83.1	37.2	0.81	0.61	N/A	
Mount Hope <sup>5</sup>	18.0	41.49	82.2	35.3	0.51	0.62	3.3	
TOTAL	169.7							

# JORC Resources of ~170 Mt <sup>1,2,3,4,5</sup> across 4,193 km<sup>2</sup> of regional exploration tenements

All material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

- 1. Refer ADN ASX dated 26 November 2020, Updated Mineral Resource for the Great White Kaolin JV Deposit
- 2. Refer ADN ASX dated 16 November 2023, Chairlift Kaolin Deposit Mineral Resource Estimate.
- 3. Refer ADN ASX dated 29 September 2020, New mineral resource estimate for Hammerhead Halloysite-Kaolin Deposit.
- 4. Refer ADN ASX dated 23 March 2022, Maiden Tiger Kaolin Resource and Regional Rare Earth Element Potential. Halloysite reported with kaolinite.
- 5. Refer ADN ASX dated 11 August 2020, New Mineral Resource for the Mount Hope Kaolin project.

# Focused on safe and sustainable operations



With the aim of being a supplier, partner and employer of choice

As the Company moves into production, its aspiration is to adopt, monitor and report on relevant frameworks and metrics that emerge from the developing consensus and convergence of ESG standards

# Y

# **Environment**

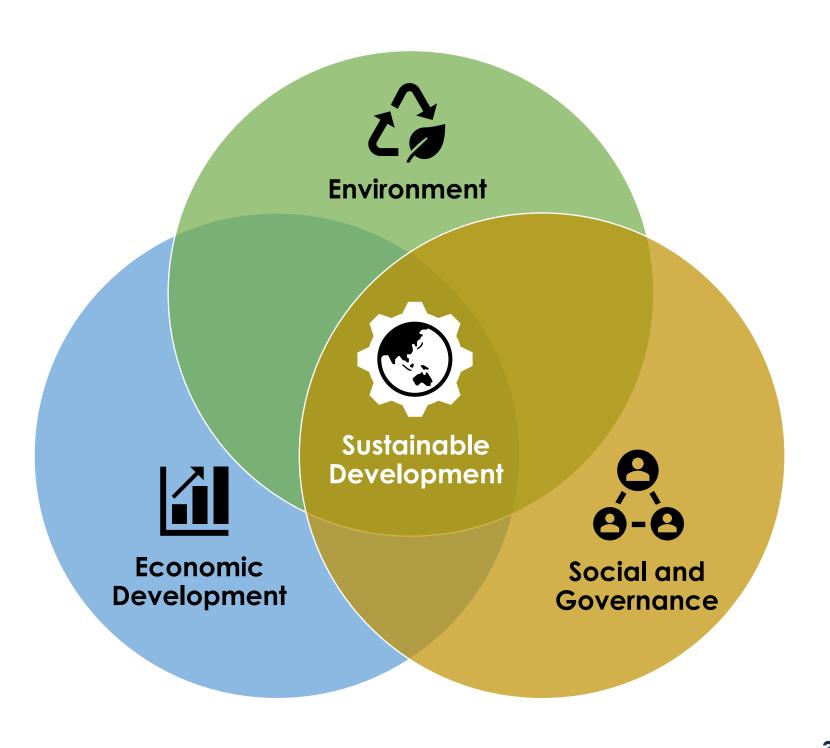
- Recycling over 90% of water requirements via reverse osmosis system
- Gas is used to co-generate heat and electricity for processing operations
- Planned reduction of operational carbon footprint as production expands

# Social

- Active stakeholder engagement and communications across local landholders, First Nations, businesses, community groups and employees
- Work health and safety (WHS) managed through risk based, systematic and best practice approach

# **M** Governance

- Comprehensive framework of Company policies to ensure consistent and coordinated management of ESG matters
- Active approach to risk management, mitigated as far as practicable



# Why invest in Andromeda?





# The Great White Project

- Long-Life, High-Quality Resource
- Strong Economics
- Stage1A+ Binding Offtakes
  Finalise
- Low Capex Hurdle
- Simple Mining and Processing
- ✓ Fully Permitted in Low-Risk Jurisdiction
- Clear Market and Product Upside
- √ Shovel-ready

# Building blocks are in place to deliver the TGWP







Environmental Plan (PEPR) Approved



Logistics PathwaySelected

2023 Definitive Feasibility Study Stage 1A+ Underpinned by Binding Offtakes

Mining contractor Shortlisted

Discussions underway to secure funding to support a final investment decision



# Project economics Robust returns with low capex hurdle



# Andromeda has assessed the economics of each Stage of development

- Standalone economics of each Stage analysed i.e. the discrete added value of each Stage to determine investment decision
- NPV calculated at an 8% discount rate on a real, post-tax basis

	Stage 1A+	Stage 1B	Stage 2	TGWP LOM	
NPV(8) real post-tax from each FID	\$211 M*	\$387 M*	\$235 M*	\$763 M^	
IRR	26%*	65%*	56%*	<b>43</b> %^	
Payback Period	4.8 years	2.4 years	2.7 years	4.8 years	
Ore Reserve				15.1 Mt	
LOM - from first production	28.2 years	26.2 years	22.3 years	25.8 years	
Kaolin Production Target (wmt)	100,000 tpa	~110,000 tpa	~120,000 tpa	~330,000 tpa	
LOM Kaolin production (wmt)	2,790,224	3,003,056	2,288,634	8,081,914	
LOM Revenue	\$1,776 M	\$2,003 M	\$1,352 M	\$5,131 M	
Capital Costs	\$84 M	\$57 M	\$53 M	\$194 M	
Sustaining Capital	\$17 M	\$11 M	\$6 M	\$35 M	
All-in Sustaining Cost	\$264/wmt	\$95/wmt	\$101/wmt	\$155/wmt	
Weighted Average Product Margin	\$322/wmt	\$515/wmt	\$429/wmt	\$424/wmt	
Average Annual EBITDA	\$35 M	\$62 M	\$46 M	\$141 M	
On a stand alone basis at the time of each Stage FID	mulative Due to rounding so	me items may total differently to	stated amounts		



<sup>\*</sup> On a stand-alone basis at the time of each Stage FID ^ Cumulative Due to rounding, some items may total differently to stated amounts Further details on the 2023 DFS and the assumptions and notes for the 2023 DFS (and risk factors applicable to the Company) can be found in the Company's ASX Announcement '2023 Definitive Feasibility Study Results' released on 24 August 2023. This should be read together with ASX Announcement dated 6 May 2024 "Andromeda expansion plans for The Great White Project" and the ore reserve estimate previously announced to ASX on 6 April 2022, "Great White Kaolin Project – Definitive Feasibility Study and Updated Ore Reserve". Andromeda confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that 35

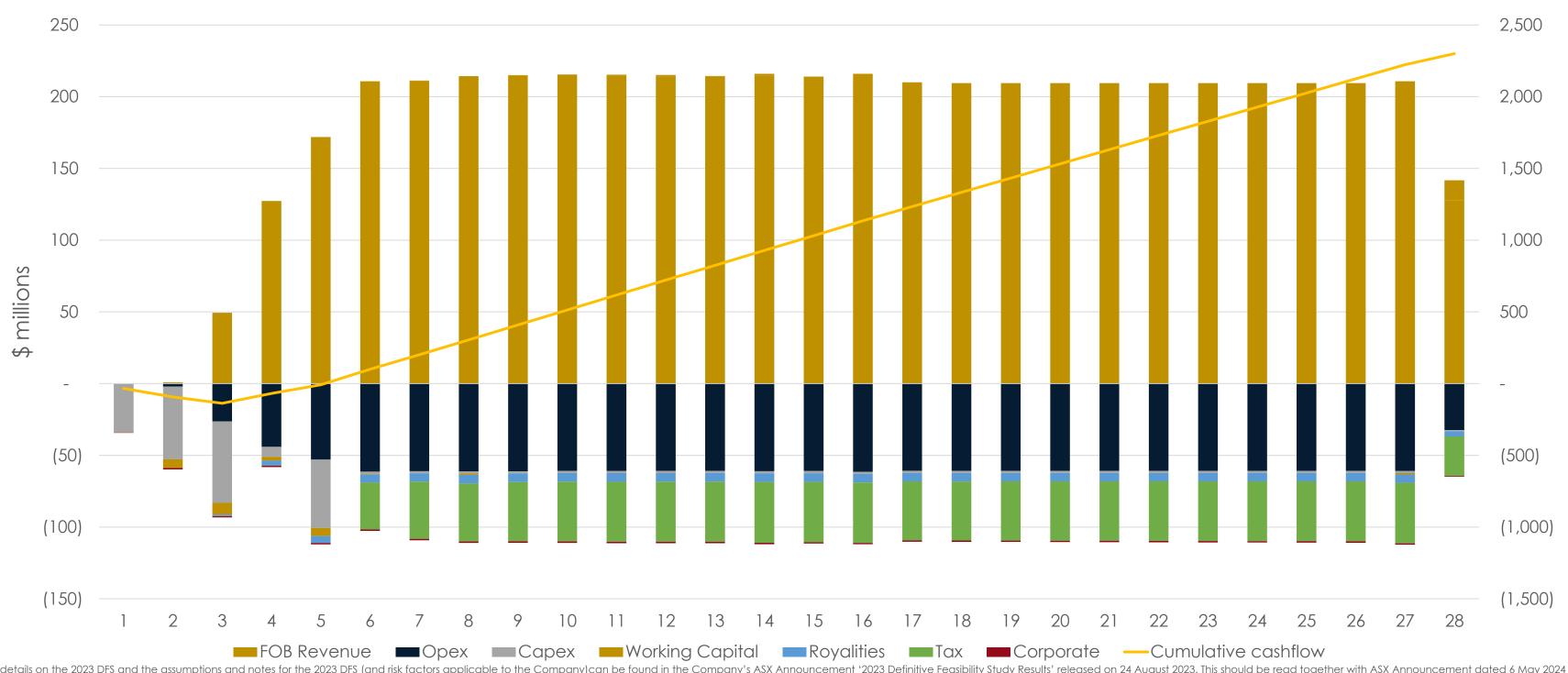
all material assumptions and technical parameters underpinning the estimates and financial information continue to apply and have not materially changed.

# Project economics LOM progressive cashflow



# Rapid payback followed by 22 years of \$140m average annual EBITDA

• Generational asset delivers significant long-term cash generation





The Risks section describes some of the potential risks associated with an investment in the Company. Any investment in the Company is subject to risk factors specific to the Company and its business activities and those of a general nature including general risks associated with investing in the Company's securities. Any or a combination of these risk factors may have a material adverse effect on the Company's business, financial condition, development, operating and financial performance, growth, and or the value of its securities. There can be no guarantee that the Company will achieve its stated objectives.

This summary of key risks does not list every risk faced by the Company or that may be associated with an investment in the Company's securities, now or in the future. Additional risks (including those that the Company, the Directors and Management are currently unaware of) also have the potential to have a material adverse effect upon the Company's business, financial condition, development, operating and financial performance, growth, and or the value if its securities. This summary of key risks should be considered in the context of previous disclosures made by Andromeda in accordance with its periodic and continuous disclosure obligations

While some of the risks identified can be mitigated by the use of safeguards and appropriate systems and actions, many of these risks are outside the control on Andromeda, its Directors and its management.

Risk have been outlined in two categories:

- Company specific Risks and
- General Risks

Before deciding whether to invest in the Company, you should read the entire document carefully and satisfy yourself that you have a sufficient understanding of the actual and potential risks associated with an investment in the Company. You should consider whether securities in the Company are a suitable investment for you having regard to your own investment objectives, financial circumstances and particular needs (including financial and taxation issues). If you do not understand any part of the document or are in any doubt as to whether to invest in the Company, you should seek professional advice from your stockbrokers, accountant, lawyer, financial adviser or other independent professional adviser before deciding whether to invest.

#### **COMPANY SPECIFIC RISKS**

#### **Future Funding Requirements**

Until the Company realises a profit from its operations it will continue to rely on external sources of funding. There is no guarantee that the Offer will be fully subscribed and there is a risk the Company may not raise sufficient funds to undertake its planned activities. In parallel with the Offer, alternative sources of funding are also being investigated, including equity placement, debt or convertible debt facilities (Additional Funding).

If the Company is unable to raise sufficient funds from the Offer and/or Additional Funding (or in the future), it may be required to scale back its activities, dispose of assets or consider funding alternatives, which could include additional equity funding, debt funding, joint venture or farm-out arrangements, sale of assets or other funding arrangements such as streaming finance or convertible loans. Any additional equity or convertible debt funding may have a dilutionary impact on a shareholder's holding in the Company, or a negative impact on the Company's share price. It may also be subject to shareholder approval (and there is a risk this may not be obtained). Any debt funding or funding alternatives, if available, may involve restrictions on the Company's activities or the grant of security over the Company's assets.

In order to bring the Great White Project into development, the Company will need significant funding in addition to that sought under the Offer and Additional Funding, for which the Company is considering a combination of secured debt and equity. Any additional equity funding may have a dilutionary impact on a shareholder's holding in the Company, or a negative impact on the Company's share price. Any debt funding, if available, may involve restrictions on the Company's activities and the grant of security over the Company's assets. There is no guarantee that the Company will be able to secure the additional funding required for project development via secured debt and/or equity, in which case, again, the Company may consider funding alternatives, such as those mentioned above.

Any delay in securing the project development funding will result in a delay in the development of the Great White Project, which will also impact on timing or the availability of product for sale under any offtake agreements, which could adversely impact on the Company's performance, reputation, financial position and prospects. If a secured debt facility is obtained and the Company defaults in its obligations in relation to that debt facility, the security over the Company's assets could be enforced, which could result in loss of assets and have adverse effects on the Company and its operations.

#### Dilution of existing shareholders

Shareholders that do not take up their Entitlements in full will have their percentage interest in the Company diluted. The level of dilution will depend on the level of shareholder participation and the placement of any Shortfall.

If the Offer is fully subscribed, the number of shares on issue will increase from 3,110,270,932 to 3,635,270,932 and Shareholders that do not take up their Entitlement will have their percentage interest in the Company reduced by up to 14% as compared to their percentage interest in the Company as at the Record Date. If all New Options are exercised, shares on issue will increase to 4,160,270,932 and Shareholders that do not take up their Entitlement will have their percentage interest in the Company reduced by up to 25% as compared to their percentage interest in the Company as at the Record Date.

#### Mine Development and Operational risks

The business of mining and mineral exploration, development and production by its nature involves significant risks. In the event the Company commences development of the Great White Project, the Company's financial performance will substantially depend on the accuracy of the cost estimates for the proposed development and other factors such as working capital requirements and time taken in construction and development activities. There is no guarantee that the financial projections in the 2023 Definitive Feasibility Study (or the Stage 1 A+ update) will be realised.

Factors that may impact on development and operations include:

- delays in delivery of key items of plant or equipment
- difficulties in commissioning and operating plant and equipment;
- failure to achieve predicted grades in exploration and mining;
- operational and technical difficulties encountered in mining;
- poor performance levels from external contractors;
- availability of suitable plant and expertise from contractors and consultants;
- mechanical failure or plant breakdown;
- unanticipated processing problems which may affect extraction rates and costs;
- adverse weather conditions;
- unusual or unexpected geological conditions;
- fires, explosions, accidents or other external force majeure events;
- environmental hazards;
- industrial and environmental accidents;
- industrial disputes;
- availability and economic supply of water and power;
- availability and economic supply of transport and logistics options;
- unexpected shortages or increases in the costs of labour, consumables, spare parts, plant and equipment; and
- cost overruns.

#### Mine Development and Operational risks

The occurrence of any of these things (or other things including those that result in interruption, delays or increased costs) could negatively impact the Company's operations and financial performance.

There is a risk that the Company will be unable to deliver the Great White Project within the anticipated budget or timeframes. Delays or inaccuracies in scheduling could lead to project overruns or delays in bringing the Great White Project into production, which may adversely impact the Company. Such overruns and delays could also limit the Company's ability to rely on any warranties for key items of plant and equipment if these expire before commissioning and stable operation.

No assurance can be given that the Company will achieve commercial viability through development or mining of its projects and treatment of ore. Until the Company is able to realise value from its projects, it is likely to incur ongoing operating losses.

#### Approvals, Permits and Licences

Whilst the Company has a granted Mining Lease and approved Program for Environment Protection and Rehabilitation necessary to commence initial construction and development works for the Great White Project, it may need additional approvals to accommodate changes in mine plan, operations, processing or any expansion.

Further Programs for Environment Protection and Rehabilitation (PEPR) or updates to existing PEPR may be required for the expansion of the Great White Project beyond 150,000 tonnes of production per annum and for the sale of extractive minerals. The Company will also need to apply for a 'change in operations' to obtain the requisite authorisations for the sale of any sand co-product that constitutes an 'extractive mineral'.

Delays or difficulties obtaining relevant approvals or obtaining conditional or limited approvals, may interfere with the Company's current or planned operations which could impact on the financial position and/or performance of the Company.

#### **Water Supply**

There is a risk that the Company will be unable to secure the supply of mains water from SA Water that is required for activities on-site at the Great White Project, including project development and construction activities, commissioning and operation of the Great White Project. If this occurs, the Company would need to scale back, cease or delay its activities and/or investigate other water sources, including groundwater sources near site and desalination options. This could delay the Project or substantially increase costs. There is no guarantee that an alternative economic water source could be secured.

#### Product specification

There is a risk that the Company will be unable to produce kaolin products with the technical specifications required under its offtake contracts, which could adversely impact the price at which it can sell the product at and in turn the financial performance of the Company.

#### Product development

The Company has several products or applications under commercialisation and development, including Great White HRMTM, HPA and zircon displacement applications. It is noted that the funding for the development of the Great White Project will not rely on revenues derived from Great White HRM<sup>TM</sup>, HPA or zircon displacement applications and the financial projections, including the net present values in the 2023 DFS and Stage 1A+ update, do not rely on any premium pricing being obtained for Great White HRMTM, HPA or zircon displacement applications.

Notwithstanding this, there is a risk that:

- Commercialisation of Great White HRM<sup>TM</sup> will not be successful, and this product will not be accepted by end users in the market;
- the Company will be unable to commercialise the use of its products in the displacement of zircon in various applications; and
- the Company will not be able to prove up its novel flow sheet for the production of HPA or be able to commercially produce HPA.

If that occurred, the Company would not have the benefit of the premium pricing that could be secured for these products or applications.

There is also a risk that the Company will be unable to sell the co-product sand at the pricing assumed in the 2023 DFS, or at all, which would impact on the financial projections in the 2023 DFS.

#### Counterparty risk

The ability of the Company to achieve its objectives will depend on the performance of the counterparties to its key contracts, including its offtake agreements and key construction, services and supply contracts. There is a risk of default by a counterparty or a risk of financial failure or managerial failure by any of the counterparties, which may adversely affect the Company's activities.

In the case of default by, or dispute with, a counterparty, it may be necessary for the Company to seek or defend legal remedies including through arbitration or court action. Legal action can be costly and there can be no guarantee that a legal remedy would ultimately be granted to the Company on the appropriate terms (if at all)

#### Offtake Agreements

The Company's expansion plans will be contingent on securing additional offtake agreements for its kaolin products with credit worthy counterparties as there is no spot market for kaolin that can readily be accessed.

Due diligence investigations are continuing on the counterparties for offtake agreements secured to date. There is a risk that the outcome of those due diligence investigations will not be satisfactory, or that financiers will not deem the counter parties as sufficiently credit worthy, which may mean that further offtake agreements will need to be secured to support full production of Stage 1A+.

There is a risk that additional offtake agreements will not be secured at the assumed pricing, on favourable terms or at all.

There are a wide range of jurisdictions for certain products that are exclusive to existing offtake partners. This means that the Company will be unable sell the relevant product itself into these jurisdictions, limiting the markets in which it can sell into.

If the Company is unable to secure the additional offtake agreements required this could have an adverse impact on the level of debt funding that can be secured (if any) or the terms of which it can be secured.

As noted above, the ability of the Company to achieve its objectives will also depend on the performance of the counterparties to its offtake agreements. If an offtake partner defaults in relation to its obligations or suffers financial failure, this could have adverse implications for the Company's finances and its ability to repay any project finance or accrued interest. If the Company is unable to repay any secured debt when it falls due, security over the Company's assets could be enforced, resulting in loss of assets.

#### Offtake Agreements

There is also a risk that debt financiers for project finance could view the terms and conditions of, or the counterparties to, the offtake agreements, negatively, which could impact on the total level of debt that can be obtained for project financing in the future, or the terms on which it can be secured.

There is also a risk that off-spec product is subject to a price adjustment or is rejected. Whilst the Company can manage this risk, if a price adjustment or rejection of product occurred, this could have a material adverse effect on the financial position of the Company and its ability to service any debt repayments.

#### Traxys Offtake

There are a number of risks specific to the offtake agreement with Traxys Europe S.A (Traxys Offtake), given the volumes to be sold under the agreement and the complexity of the terms.

The Traxys Offtake is for 50% of the production of the Great White Project. Therefore the counterparty risks noted above are concentrated in relation to one party.

Whilst the price under the Traxys Offtake is fixed, if the on-sale price of Great White CRM™ secured by Traxys is less than the contract price, half of the difference will accrue in a facility that will be a debt owing by the Company to Traxys. This will be subordinated to project finance (with a second ranking security) and will accrue interest at a rate of 15% per annum. It must be repaid within 5 years and can be converted to shares in the Company at Traxys' option, subject to any regulatory of shareholder approval that is required. The maximum facility limit is US\$5m.

The price at which the on-sale of product occurs is outside of the control of the Company (due to re-sale price maintenance restrictions under competition laws) and so the Company has no control over the incurring and accrual of the debt, other than the maximum facility limit. If the facility limit is reached this could have adverse implications for the Company.

#### Aboriginal heritage, native title and land access

Cultural heritage legislation may require cultural heritage surveys and clearances before certain activities are undertaken on the Company's tenements and may require agreement with Traditional Owner groups that may delay proposed activities and result in increased costs. Where designated cultural heritage sites are identified within tenements, the Company must ensure that is operations do not interfere with or impact upon those sites without requisite consents or approvals and such sites may lead to restrictions on the areas that the Company will be able to explore and mine.

Although the Company owns the underlying freehold for ML 6532 and native title has been extinguished in relation to this land, conducting operations on other sites may require third-party consents and/or the payment of compensation.

If native title is found to exist or native title rights are determined over areas covered by the Company's tenements, the ability of the Company to gain access to mineral tenements for exploration, or to progress from the exploration phase to the development and mining phases of operations may be materially adversely affected. This could impact the Company's activities.

#### **Executive Management and Key Personnel**

The responsibility of overseeing the day-to-day operations and the Company's strategic management depends substantially on its Directors and senior management. There can be no assurance that there will be no detrimental impact on the Company if one or more of these persons cease their involvement with the Company. The ability of the Company to achieve its objectives depends on the access to personnel and external contractors who have the required skills and qualifications or who can provide technical expertise and other services. If the Company cannot secure personnel or external contractors or if the services of the present personnel and external contractors cease to become available to the Company, this may affect the Company's ability to achieve its objectives.

#### **GENERAL RISKS**

#### Market conditions

Share market conditions may affect the value of the Company's quoted securities regardless of the Company's operating performance. Share market conditions are affected by many factors such as:

- (a) general economic outlook;
- (b) introduction of tax reform or other new legislation;
- (c) interest rates and inflation rates;
- (d) changes in investor sentiment toward particular market sectors;
- (e) the demand for, and supply of, capital; and
- (f) terrorism or other hostilities.

The market price of securities can fall as well as rise and may be subject to varied and unpredictable influences on the market for equities in general and resource exploration stocks in particular. Neither the Company nor the Directors warrant the future performance of the Company or any return on an investment in the Company. [Update to include risks applicable to options, if included in the offer]

Market conditions can fluctuate widely and are affected by numerous factors beyond the Company's control, including world GDP growth, international economic conditions, economic and political conditions of commodity producing countries where there is strong demand for commodities, expectations of inflation, currency exchange rates and interest rates.

If there is a sustained decrease in the price of kaolin products, the Company's cash flow from mining operations and the value of its assets, are likely to be materially adversely effected.

Furthermore, the company's offtake agreements are denominated in United States dollars and Euros, whereas the expenditure of the Company are and will be taken into account in Australian currency, exposing the Company to the fluctuations and volatility of the rate of exchange between the United States dollar and the Australian dollar or Euro and Australian dollar, as determined in international markets. The Company intends to mitigate some of these risks through the use of financial derivatives.

#### **Economic**

General economic conditions, movements in interest and inflation rates and currency exchange rates and supply and demand may have an impact on operating costs, product prices and stock market prices. This may have an adverse effect on the Company's share price and its exploration, proposed development and production activities, as well as on its ability to fund those activities.

#### Regulatory and government risks

The exploration and mining industry is subject to extensive legislation, regulation and supervision by a number of federal, state and regulatory bodies, including regulations regarding exploration, mining, health and safety, employment, workers' compensation, native title and heritage and environmental matters, taxes and royalties. Adverse changes in government policy or laws, including additional compliance obligations, may result in delays, additional time commitment and compliance costs. Further changes in tax laws or royalties in Australia may affect the taxation treatment of the holding or disposal of the Company's securities and may adversely affect the financial performance of the Company in the future. Failure to observe all relevant regulations could expose the Company to penalties or require the Company to cease or suspend operations or be subject to increased compliance costs and accordingly may adversely affect the operations, financial position and/or performance of the Company and the market price of its Shares.

Mineral exploration, development and mining activities may be adversely affected by political and economic instability. There can be no guarantee that changes in governments or the laws within the jurisdictions in which the Company's assets are located will not adversely impact the Company's operations and activities in the future.

#### Changes in political environment and international conflicts

The Company's share price and ability to generate returns to investors can be affected by changes in legislation, domestic or foreign governments and government policy. Events may occur within or outside Australia that could impact upon the world economy, the operations of the Company and the market price of the Company's securities. These events include pandemics, war, acts of terrorism, civil disturbance, political intervention and natural events such as earthquakes, floods, fires and poor weather.

#### **Import Restrictions or Tariffs**

Any changes to laws, the introduction of any import restrictions or tariffs or changes to trade policies or international free trade agreements affecting any of the jurisdictions in which the Company exports its products to could prevent the Company from selling its products into those jurisdictions or increase the costs of doing so, which could have an material negative impact on the financial position of the Company.

#### **Unforeseen Expenditure**

Expenditure may need to be incurred that has not been taken into account in this document. Although the Company is not aware of any such additional expenditure requirements, if such expenditure is subsequently incurred, this may adversely affect the expenditure proposals of the Company.

#### Tenement risks

The mineral tenements and permits held by the Company are subject to the applicable mining acts and regulations in South Australia and federal legislation. Mineral tenements and permits are also subject to periodic renewal. There is no guarantee that current or future mineral tenements and mining properties or future applications for production mineral tenements and mining properties will be approved. Further, if renewed, renewal conditions may include increased expenditure and work commitments or compulsory relinquishment of areas of the mineral tenements and mining properties comprising the Company's projects. The imposition of new conditions or the inability to meet those conditions may adversely affect the operations, financial position and/or performance of the Company.

Mineral tenements and permits may carry annual expenditure and work commitments and reporting obligations, as well as other conditions requiring compliance. Consequently, the Company could lose title to, or its interests in, one or more of its tenements if conditions are not met or if sufficient funds are not available to meet work and expenditure commitments.

#### **Mineral Resources and Reserves**

The Company's mineral resources and ore reserves estimates are based on a number of assumptions in accordance with the JORC Code. There can be no assurance that the Company's mineral resources and ore reserves will be recovered in the quantities, qualities or yields presented to the market.

Mineral resources and ore reserves estimates are inherently prone to variability. They involve expressions of judgment with regard to the presence and quality of mineralisation and the ability to extract and process the mineralisation economically. These judgments are based on a variety of factors, such as knowledge, experience and industry practice. The accuracy of these estimates may be affected by many factors, including the quality of the results of drilling and sampling of the mineral deposits and analysis of the mineral samples and the procedures adopted and experience of the person(s) making the estimates.

There are risks associated with such estimates, including that the mineral mined may be of a different or inferior quality, volume, overburden strip ratio or stripping cost from the mineral resource estimates. Such estimates may also be revised following actual production, further exploration or analysis.

If the Company encounters mineralisation or geological or mining conditions different from those predicted by drilling, sampling and similar examinations, it may have to adjust its mining plans in a way that may materially and adversely affect its business, prospects, financial condition and results of operations and reduce the estimated amount of mineral resources and ore reserves available for production and expansion plans.

#### **Exploration risk**

The exploration tenements of the Company are at various stages of exploration, and potential investors should understand that mineral exploration and development are high-risk undertakings. Exploration activities require substantial expenditure on exploration surveys, drilling, sampling, analysis, studies to establish the presence, extent and estimate grade of mineralisation. Even if significant mineralisation is discovered, it may take additional time and substantial financial investment to determine whether sufficient Ore Reserves exist to support a development decision on these exploration tenements. There can be no assurance that exploration of the Company's exploration tenements, or any other exploration tenements that may be acquired in the future, will result in the discovery of an economic ore deposit. Even if an apparently viable deposit is identified on the Company's mineral tenements, there is no guarantee that it can be economically exploited. The future exploration activities of the Company may be affected by a range of factors including geological conditions, limitations on activities due to seasonal weather patterns, unanticipated operational and technical difficulties, industrial and environmental accidents, availability of equipment, services and skilled personnel, native title or indigenous process, changing government regulations and many other factors beyond the control of the Company. Losses resulting from any of these risks could have a material adverse effect on the Company's financial resources or could result in a total loss of the assets affected, and accordingly, may affect the market price of the Company's securities.

In the event that exploration programs prove to be unsuccessful this could lead to a diminution in the value of the mineral tenements and mining properties and possible relinquishment of the mineral tenements and mining properties.

The exploration costs of the Company are based on certain assumptions with respect to the method and timing of exploration. By their nature, these estimates and assumptions are subject to significant uncertainties and the effects of inflation and, accordingly, the actual costs may materially differ from these estimates and assumptions. Accordingly, no assurance can be given that the cost estimates and the underlying assumptions will be realised in practice, which may materially and adversely affect the Company's viability.

#### Operations risk

In the event the Company commences operations at the Great White Project, the Company's assets and mining operations and its ability to achieve any production, development, operating cost and capital expenditure estimates, as any others, will be subject to uncertainty with respect to (among other things): ore tonnes, mine grade, ground conditions, metallurgical recovery or unanticipated metallurgical issues (which may affect extraction costs), in-fill resource drilling, mill performance, availability and the cost of labour, the level of experience of the workforce, input prices (some of which are unpredictable and beyond the Company's control), operational environment, funding for development, regulatory changes, accidents and other unforeseen circumstances such as supply chain disruptions, unplanned mechanical failure of plant or equipment, storms, floods, bushfires or other natural disasters.

The occurrence of any of these circumstances could result in the Company not realising its operational or development plans, or plans costing more than expected or taking longer to realise than expected. Any of these outcomes could have an adverse effect on the Company's financial and operational performance.

#### Insurance

The future viability of and profitability of the Company is also dependent on a number of other factors which affect the performance of all industries, and not just mineral exploration and mining, such as pandemic risks, cyber security risks, industrial disputation, litigation, natural disasters and extreme weather conditions and acts of war and terrorism or the outbreak or escalation of international hostilities and tensions. No assurance can be given that the Company will be able to obtain insurance cover for all risks faced by the Company at reasonable rates or that the insurance cover it arranges will be adequate and available to cover all possible claims. The occurrence of an event that is not covered or fully covered by insurance could have a material adverse effect on the business, financial condition and results of the Company.

#### **Environment risks**

The operations and proposed activities of the Company are subject to both Australian federal and state laws and regulations concerning the environment. As with most exploration projects and mining operations, the Company's activities are expected to have an impact on the environment, particularly if mine development proceeds and may cause environmental harm.

The Company endeavours to conduct its activities to the highest standard of environmental obligations, including compliance with all environmental laws, in order to minimise damage to the environment and risk of liability. Nevertheless, there are inherent risks in the Company's activities associated with safety and damage to the environment, including accidental leakages, spills, or other unforeseen circumstances that could subject the Company to extensive liability (including for damages, clean-up costs or penalties).

Further, the Company may require approval from the relevant authorities before undertaking activities that are likely to impact on the environment. If the Company fails to obtain such approvals it will be prevented from undertaking those activities. The Company cannot predict what future legislation and regulations may govern mining, and may impose significant environmental obligations on the Company.

Following cessation of any production from any future operations, the Company will be required to participate in rehabilitation programs, removal of disused plant and equipment and where necessary, restoring the environment that has been disturbed in the course of operations. The cost of that participation may be considerable if operations result in significant environmental liabilities being incurred. In such a case, any allowance made for rehabilitation may possibly be inadequate.

#### Safety

Safety is of critical importance in the planning, organisation and execution of the Company's exploration and operational activities. Although the Company is committed to providing and maintaining a working environment in which its employees are not exposed to hazards that will jeopardise an employee's health and safety, or the health and safety of others associated with its business, the Company is unable to guarantee that it can completely eliminate hazards. Any workplace incidents (including loss of life incidents) may adversely affect the reputation of the Company and its exploration and operational activities, may lead to significant fines and penalties and could result in an indefinite shut down of a project if deemed serious enough. If any injuries or accidents occur on a worksite, this could have adverse financial implications including legal claims for personal injury, wrongful death, amendments to approvals, potential production delays or stoppages, any of which may have a material adverse effect on the financial performance and/or financial position of the Company.

#### Social and climate change risks

Establishment of strong relationships with the community and other stakeholders is fundamental to the long term success of the Company's business. Although the Company endeavours to conduct its business in a manner which respects those communities and ensures mutually beneficial outcomes, the Company's activities may have or be perceived to have an adverse impact on local communities, cultural heritage, the environment, or other matters which may result in community concern, adverse publicity, activism, litigation or other adverse actions taken by community, environmental or other action groups. Failure to maintain and build strong relationships and such adverse actions could affect the company's social licence to operate, its reputation and lead to delays and increase costs which may adversely impact on the Company's operations, financial position and/or performance and the market price of its Shares.

Any future mining activities of the Company may be exposed to risks associated with the transition to a lower-carbon economy, including policy and legal risks, technology risks, market risk and reputation risk. Further climate change may result in physical risks, such as changes in water availability and extreme weather changes which may affect the Company's operations, supply chains, transport needs and employee safety.

#### **Litigation Risks**

The Company is exposed to possible litigation risks including contractual disputes, occupational health and safety claims, environmental claims, and employee claims. Further, the Company may be involved in disputes with other parties in the future which may result in litigation. Any such claim or dispute, if proven, may impact adversely on the Company's operations, financial performance and financial position. The Company is not currently engaged in any litigation.

#### Cyber risks

The Company, as with all organisations, is reliant on information technology for the effective operation of its business. Any failure, unauthorised or erroneous use of the Company's information and/or information systems may result in financial loss, disruption or damage to the reputation of the Company.

#### **Pandemic Risk**

COVID-19 caused substantial disruption to businesses and operations during 2020 and 2021 and impacted global economic markets. Any future global pandemic may also result in economic uncertainty and impact the health of personnel or impact on global supply chains, causing potential disruption to operations and increased costs. Further, any governmental or industry measures taken in response to a pandemic may adversely impact the Company's operations, and availability of personnel and are likely to be beyond its control.



# Andromeda The Great White Mineral Company

For more information about the Company, please visit our website, <a href="www.andromet.com.au">www.andromet.com.au</a> or contact:

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