



# Andromeda

## The Great White Mineral Company

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### Investor Presentation

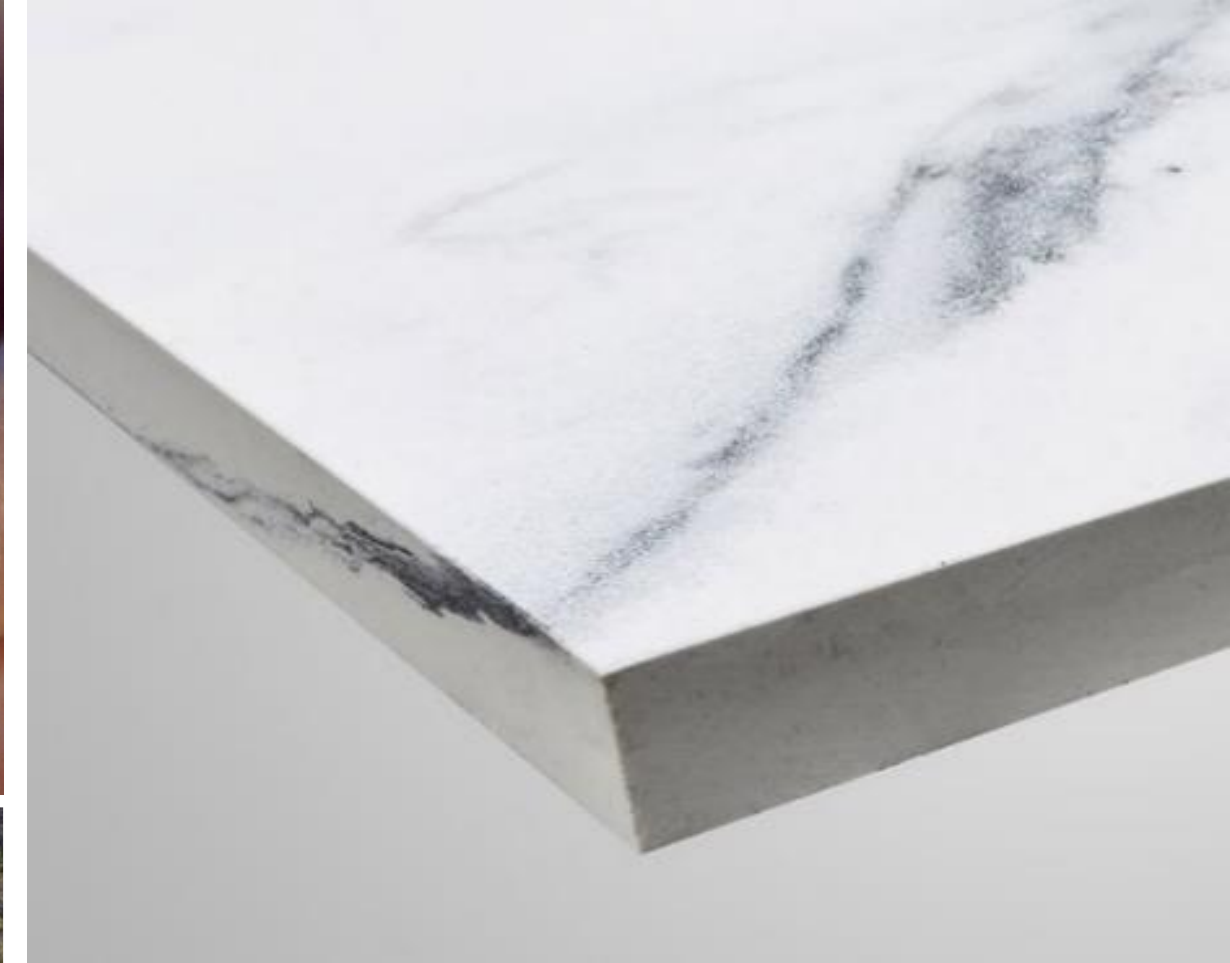
June 2024

**ASX:ADN**

**[andromet.com.au](https://andromet.com.au)**

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Authorised for release by the Board of Directors of Andromeda Metals Ltd



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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.



# Section A: Executive Summary

## 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 (TGPW, the Project) on the Eyre Peninsula in South Australia.
- TGPW 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 de-risked and is ready to develop – fully permitted, feasibility studies completed and offtakes nearing finalisation 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.
- TGPW 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 will be joining 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 TGPW 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

### 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>
- **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%)<sup>2</sup>
- **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
- **Offtakes nearing finalisation:** for project's first 100ktpa stage
- **Approvals:** All key approvals received to commence development<sup>4</sup>

1. 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).

3. 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.

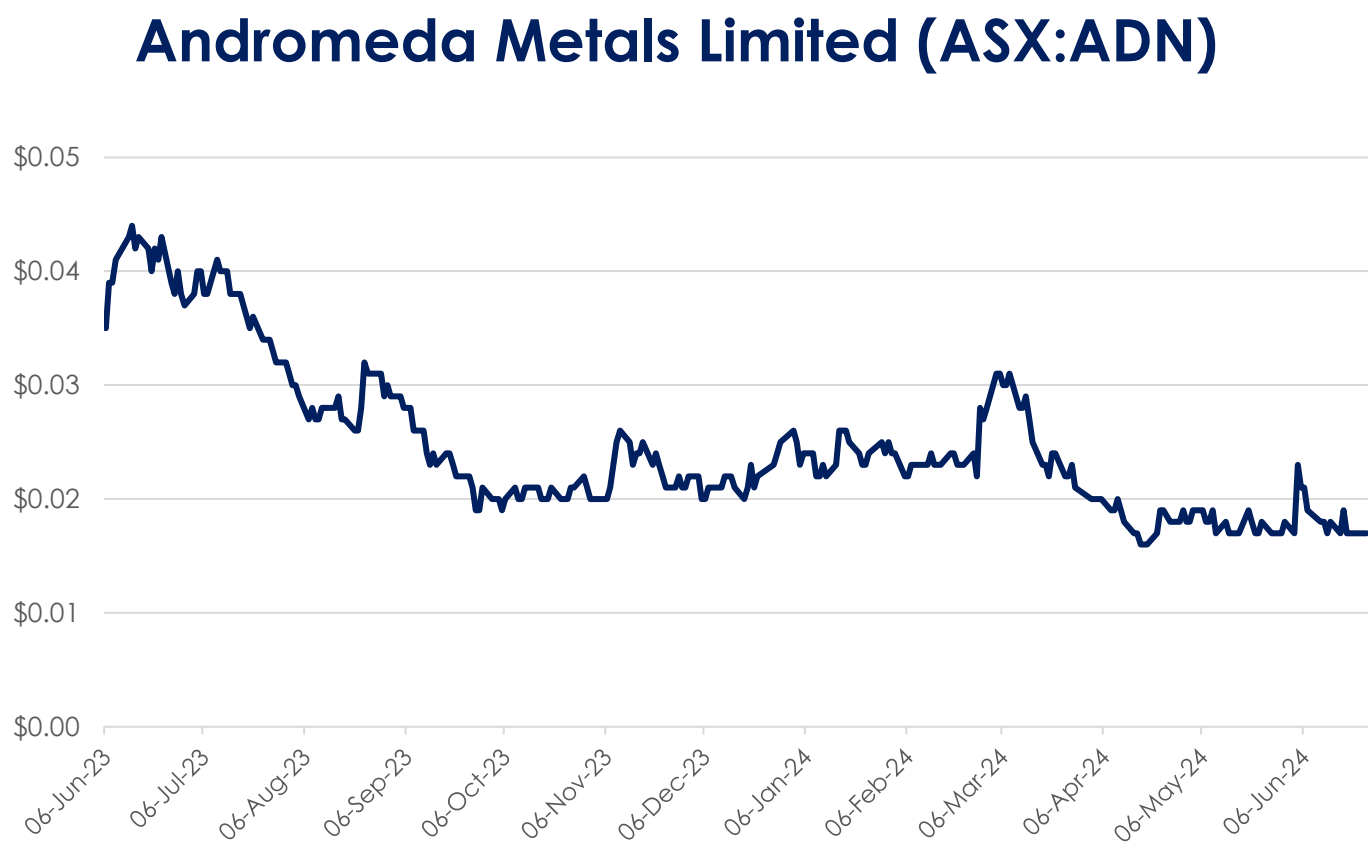


# Section B: Opportunity Overview

Corporate overview

Experienced Board & executive team to execute Andromeda’s strategy





Capital Structure	
Shares on Issue	Share Price <sup>1</sup>
3,110M	A\$0.018
Market capitalisation <sup>1</sup>	Cash-on-Hand <sup>2</sup>
A\$49.8m	\$7.9m

Key Shareholders <sup>3</sup>	
John Connolly/Buratu Pty Ltd <sup>4</sup>	5.04%
Board & Management	0.80%

Board of Directors



**Mick Wilkes**  
Independent Non-Executive Chair



**Bob Katsioularis**  
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



**Luke Anderson**  
Consultant and CEO-elect

M = million

1. As at 27 June 2024

2. As at 31 March 2024

3. Includes substantial shareholdings, and shareholding held by Board and Management.

4. Includes entities associated with John Connolly

# 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

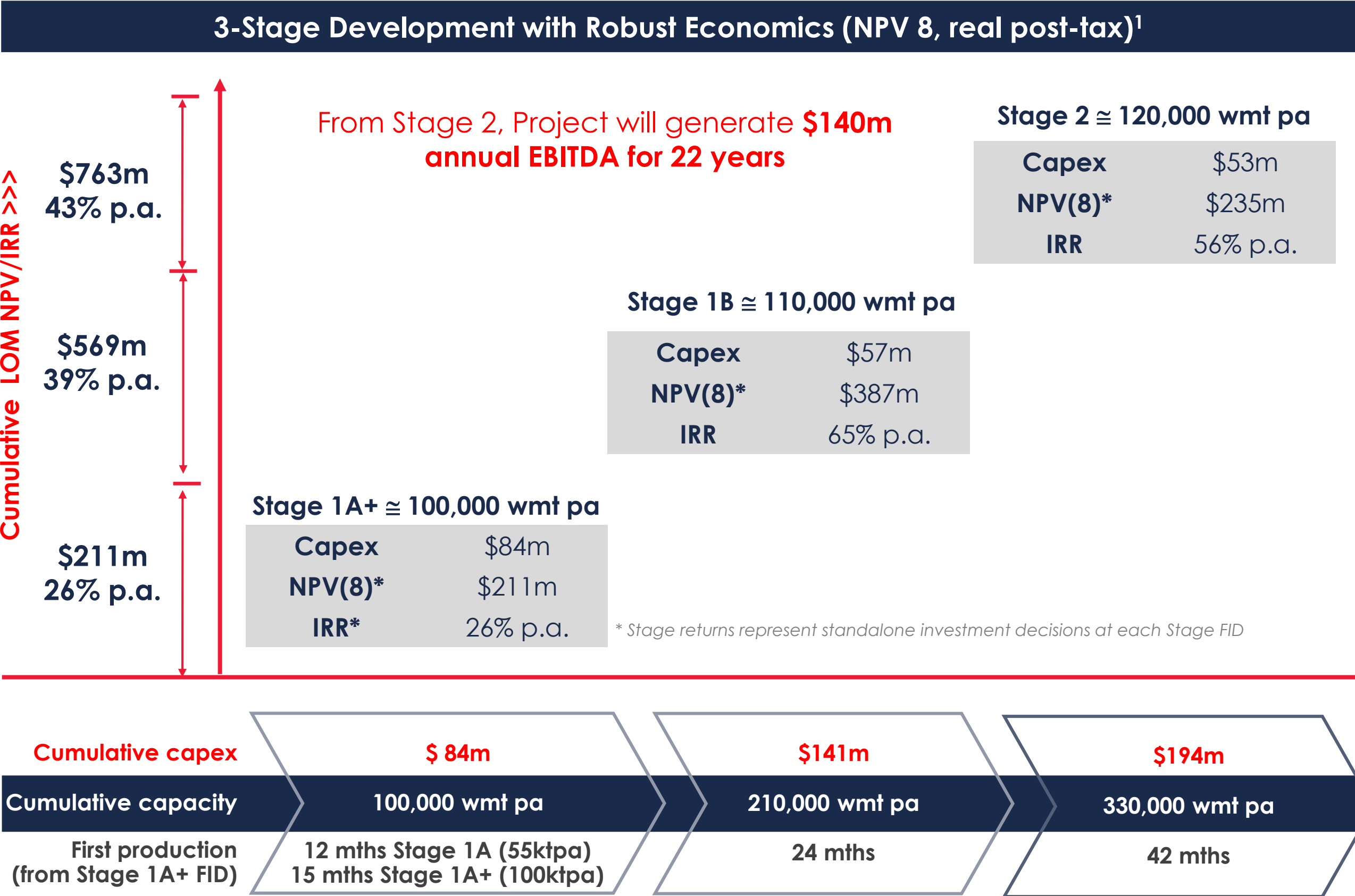
✓ All key approvals to commence operations

✓ Definitive feasibility study complete

✓ Low capex hurdle

✓ Staged development into market demand

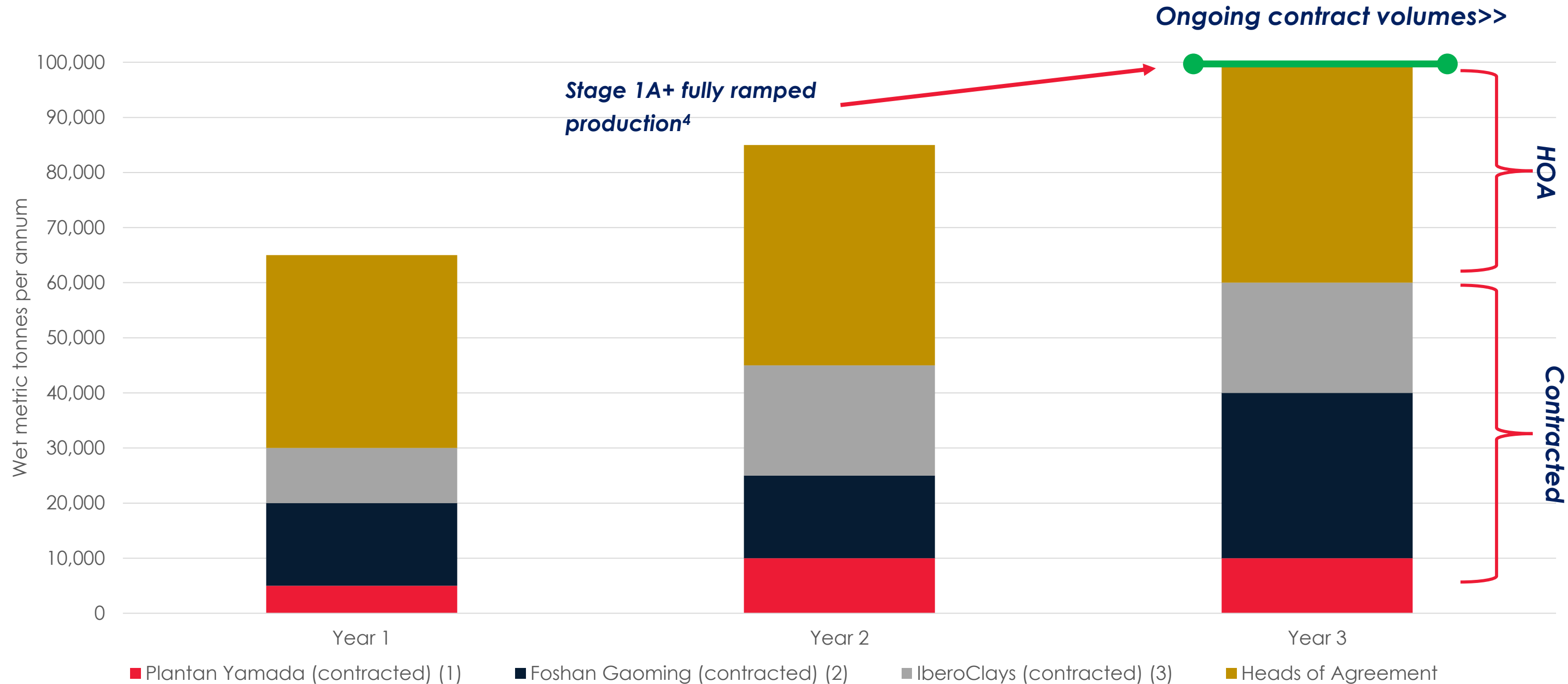




# Offtake profile

## Agreements for Andromeda's premium ceramic kaolins

- Contracted volumes<sup>5</sup> plus non-binding Heads of Agreement, including Traxys<sup>6</sup> which is at an advanced stage for conversion to a binding contract
- Andromeda products pricing within the high-quality price range<sup>7</sup>



- Refer ADN ASX dated 8 June 2023 titled Binding Offtake Agreement signed for Japanese market.
- Refer ADN ASX dated 18 October 2023 titled Binding Offtake Agreement signed for Chinese market.
- Refer ADN ASX dated 19 January 2024 titled Binding Sales and Distribution Agreement Signed with IberoClays.
- Refer ADN ASX dated 6 May 2024 Andromeda expansion plans for The Great White Project and Clarification of expansion plans for The Great White Project
- Volumes exclude contracted volumes for Great White HRM™ and assumes maximum volume options for other products in binding offtake contracts
- Refer ADN ASX dated 21 November 2023 titled Non-binding Heads of Agreement signed with Traxys
- Refer to slide 17

# Targeting Premium Markets

Offtakes geared towards high-quality/price kaolin import markets

Target markets	Target segments	Key metrics
<b>Europe</b> <i>Key markets – Spain &amp; Italy</i>	<b>High-end ceramics: tiles and countertops</b>	<ul style="list-style-type: none"><li>• <b>Spain</b> #1 importer of kaolin<sup>1</sup>; #5 ceramic tile producer<sup>2</sup>; #2 exporter of ceramic tiles<sup>3</sup></li><li>• <b>Italy</b> #4 importer of kaolin<sup>1</sup>; #7 ceramic tile producer<sup>2</sup>; #4 exporter ceramics tiles<sup>3</sup></li><li>• <b>Countertops</b><sup>4</sup>: US\$160bn global market opening to porcelain slabs due to silicosis risk</li><li>• <b>Stage 1A+ path to market</b>: binding offtakes with IberoClays, HOA with Traxys</li></ul>
<b>Asia Pacific</b> <i>Key markets – India &amp; Japan</i>	<b>High-end ceramics – tiles, tableware &amp; countertops</b>	<ul style="list-style-type: none"><li>• <b>India</b> #9 importer of kaolin<sup>1</sup>; #2 ceramic tile producer (14% CAGR)<sup>2</sup>; #3 exporter of ceramic tiles<sup>3</sup></li><li>• <b>Japan</b> #3 importer of kaolin<sup>1</sup>; leading high-end porcelain tableware producer<sup>6</sup></li><li>• <b>Countertops</b><sup>4</sup>: as above – US\$160bn global market opening to porcelain slabs due to silicosis risks</li><li>• <b>Stage 1A+ path to market</b>: binding offtakes with Plantan Yamada, HOAs with Traxys and Opaque</li></ul>
<b>China</b>	<b>A broad range of high-end applications via distribution</b>	<ul style="list-style-type: none"><li>• <b>Largest market</b> #1 consumer of kaolin; #2 importer of kaolin<sup>1</sup>; #1 exporter ceramic tiles<sup>2</sup></li><li>• <b>Deep high end-market</b> with multiple applications</li><li>• <b>High long-term growth</b><sup>5</sup>: kaolin demand to grow by CAGR of 4.6% to 2025; imports CAGR of 6.6%</li><li>• <b>Stage 1A+ path to market</b>: binding offtake with Foshan Gaoming</li></ul>

1. Based on World Bank data. 2. World production and consumption of ceramic tiles 2022, Manufacturing Economics Studies (MECS), October 2023  
3. 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.  
4. Global Countertop Industry Report, Freedonia Group, March 2023 5. HQ Kaolin Market Study, TZMI, 2023.  
6. Kaolin consumption by leading tableware manufacturers in Asia (excluding China), Hart, 2021.



Andromeda

# Section C: Global kaolin market & Andromeda's products

# The kaolin market

## Globally important industrial mineral



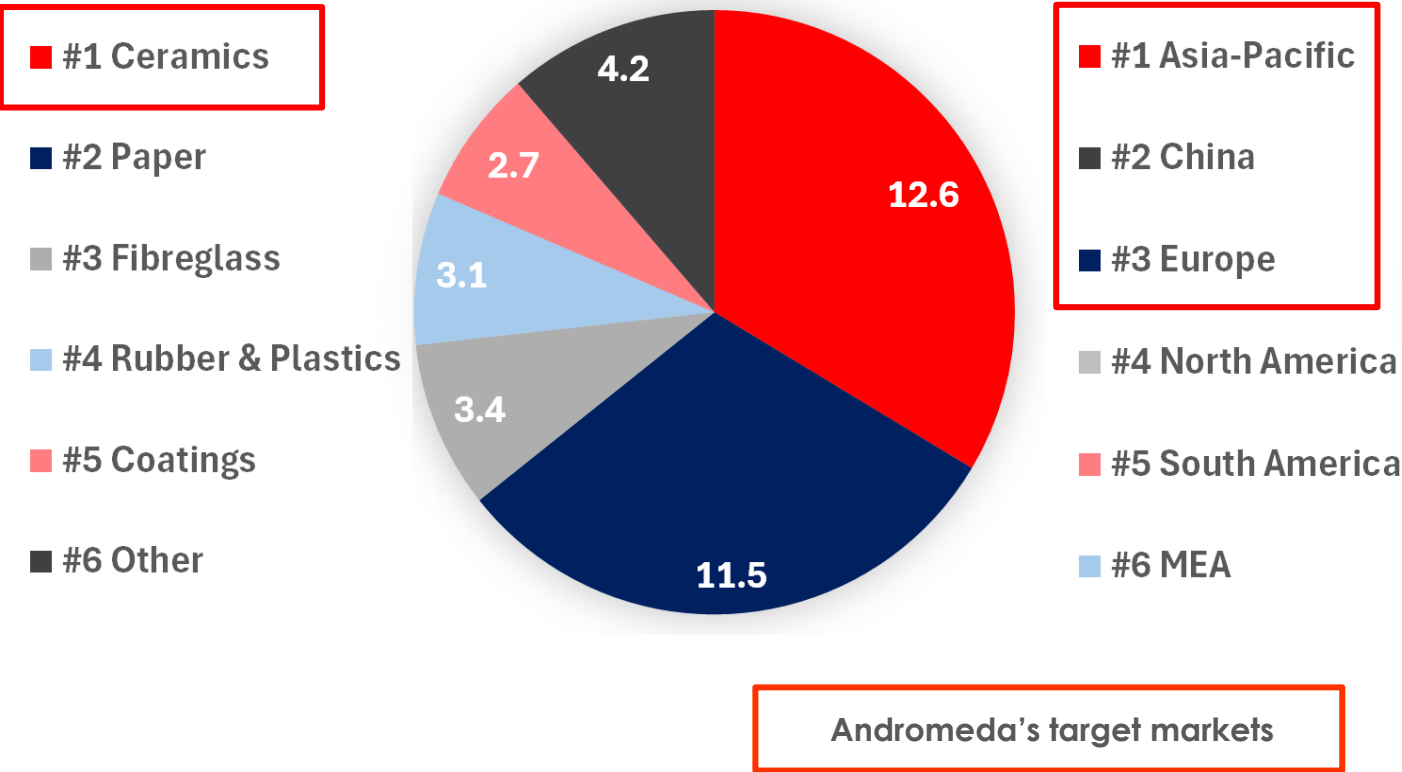
Large, Diversified Global Market

- 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, low-volatility growth of 4.7% CAGR<sup>1</sup>

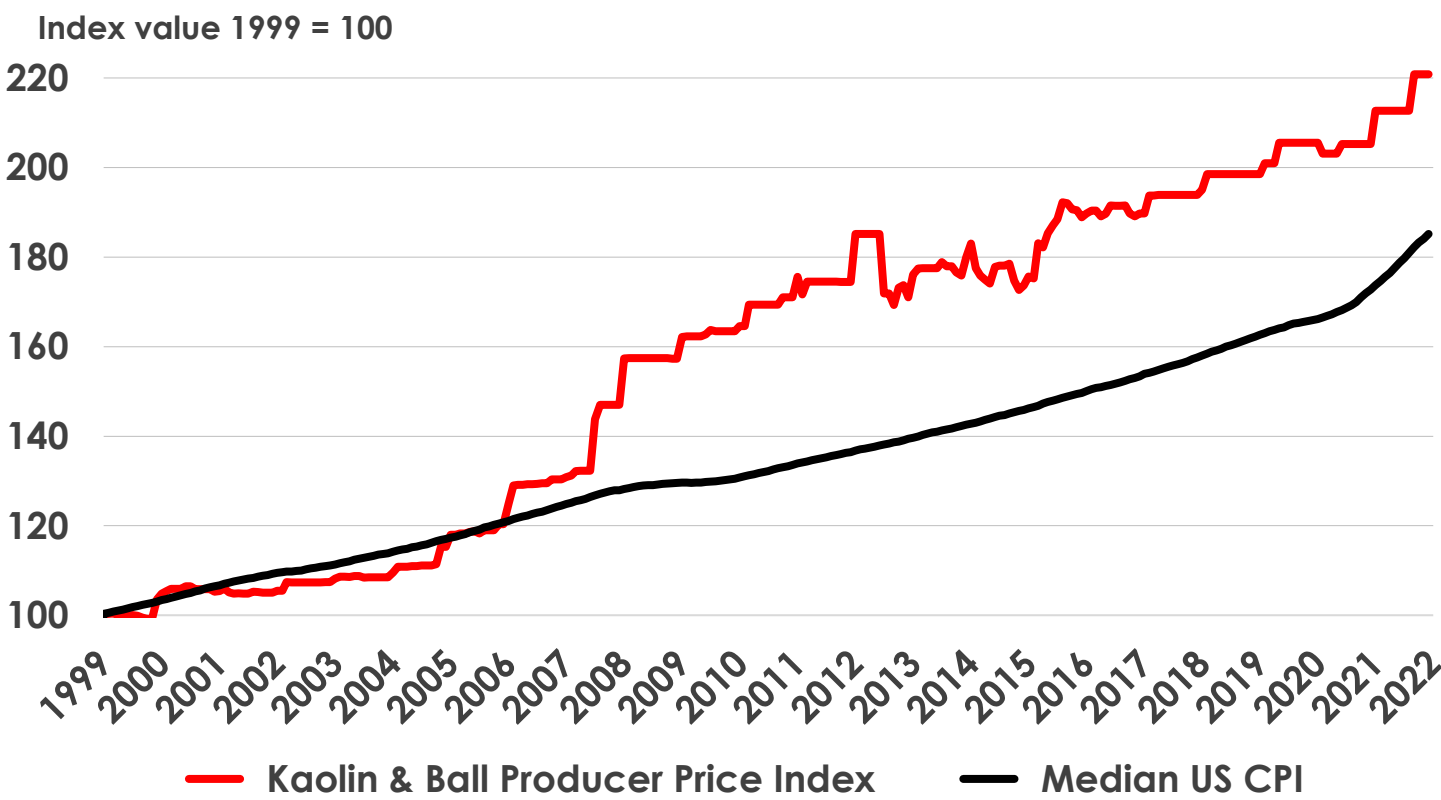
De-Commoditised Market

- 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)

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



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



1. Fortune Business Insights, "Kaolin Global Market Analysis, Insights and Forecast, 2024-2032 (2024) 2. HQ Kaolin Market Study, TZMI, 2023 3. US Federal Reserve of St Louis

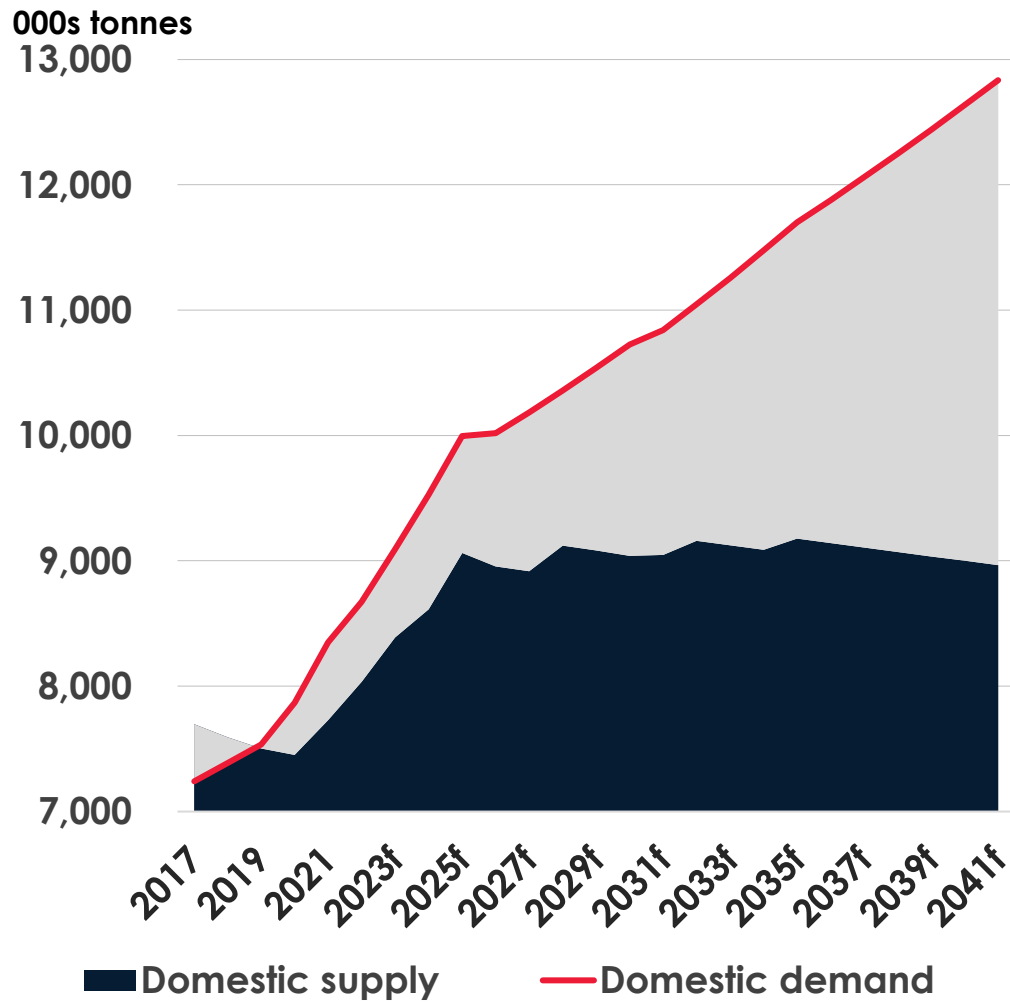
# Supply-demand outlook

## GDP+ demand growth supported by challenged supply

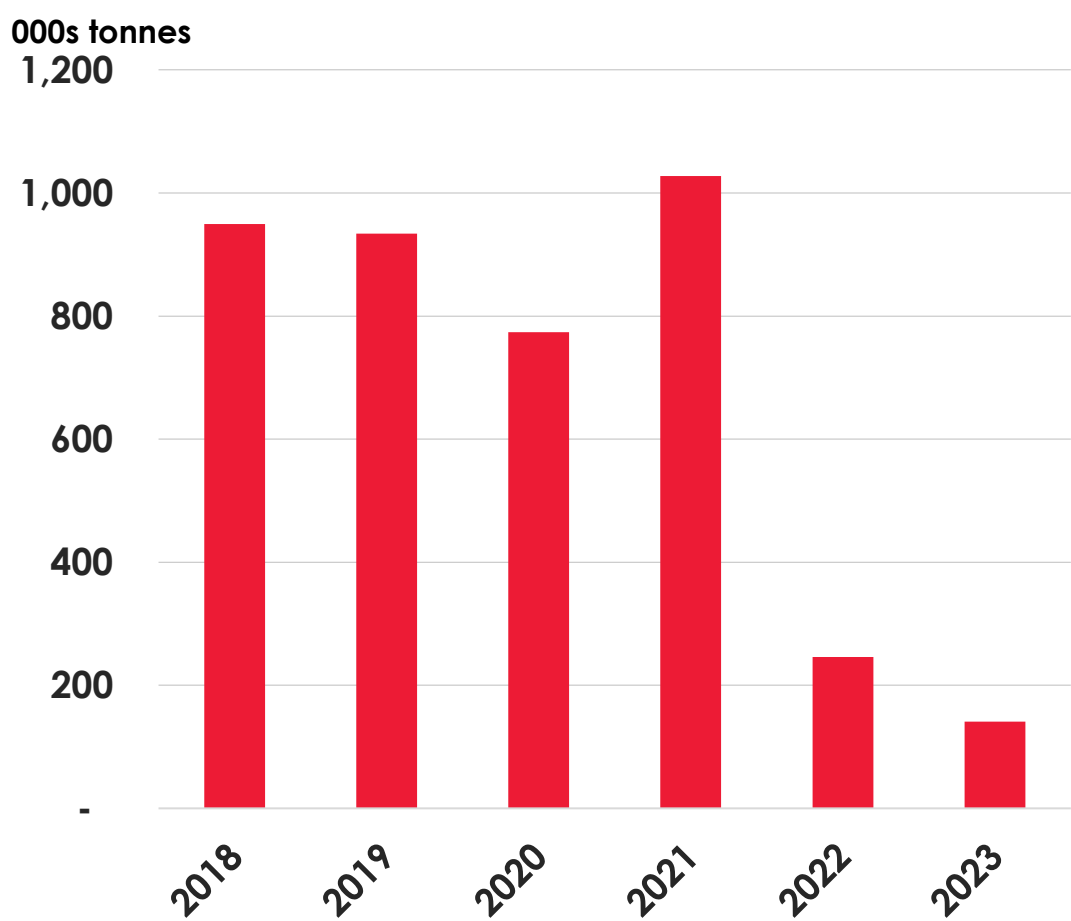


1	Demand growth in excess of global GDP	Highest growth segment is Andromeda's targeted ceramics segment (6.4% CAGR) <sup>1</sup>
2	Depletion of high-quality sources of supply	Affecting all major production regions (Europe, China, USA) <i>May 2024 &gt;&gt; Caobar mine ramp-down in Spain &gt;&gt; c.120ktpa removed from market<sup>2</sup></i>
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

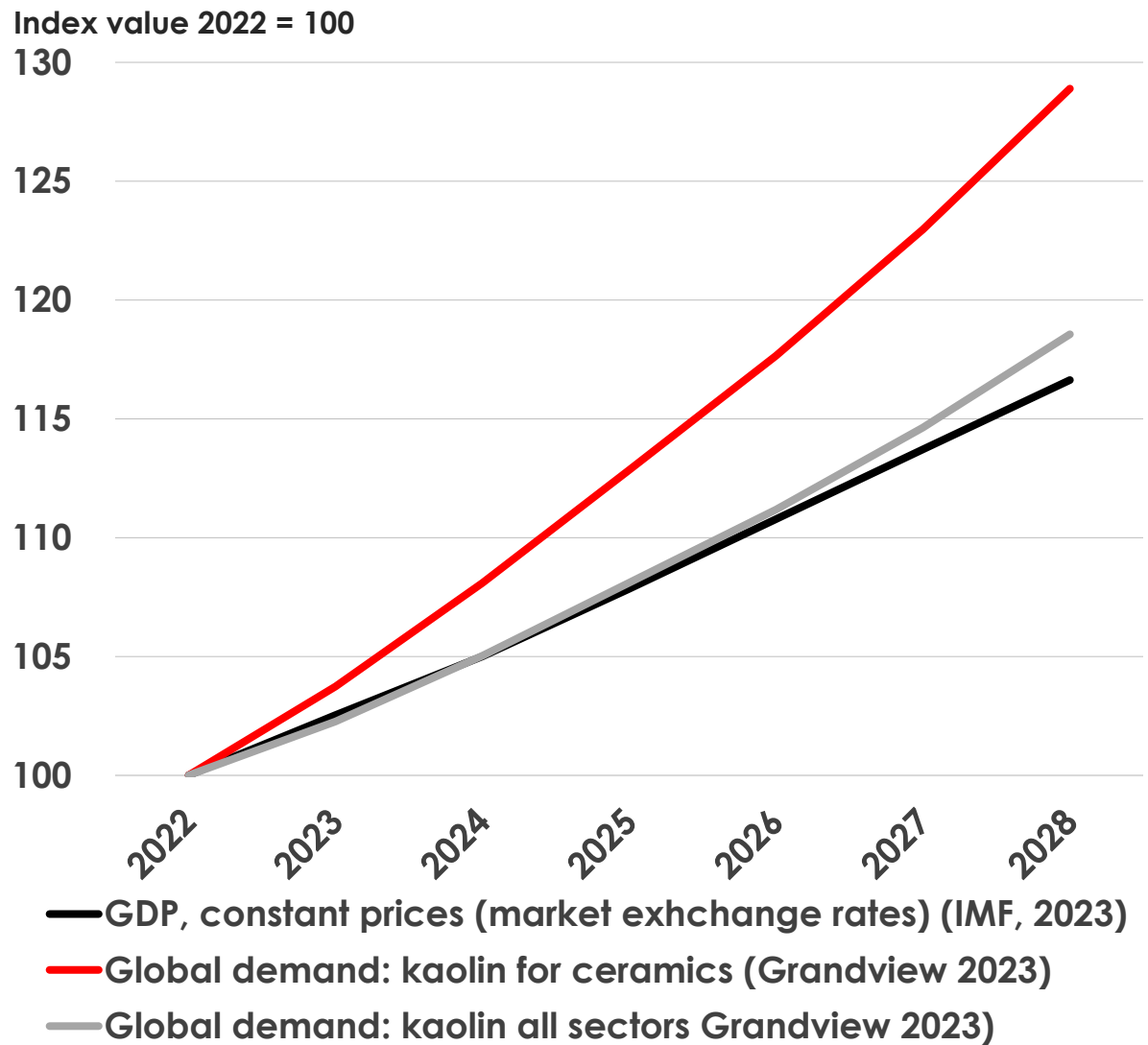
TZMI: China domestic supply & demand to 2041<sup>1</sup>



Ukraine: war impact on kaolin exports<sup>3</sup>



Global GDP vs kaolin demand – index value<sup>4</sup>



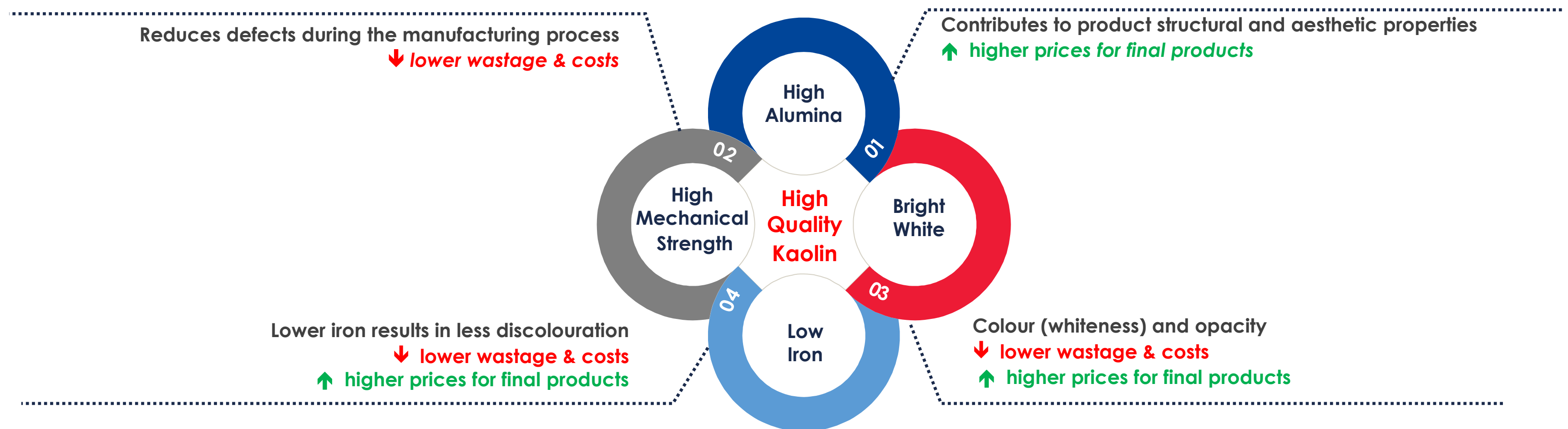
1. TZMI HQ Kaolin Market Study 2023 (CAGR 2022-2025). 2. Source: Galesk Consultancy. 3.Source: UN Comtrade. 4. Source: IMF and Grandview.

# 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

### Characteristics of high value in use kaolin products



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

for use in ceramic formulations

to deliver premium products

### Ceramic Product: Great White CRM<sup>TM</sup><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%)
- High whiteness with min ISO B 83%

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

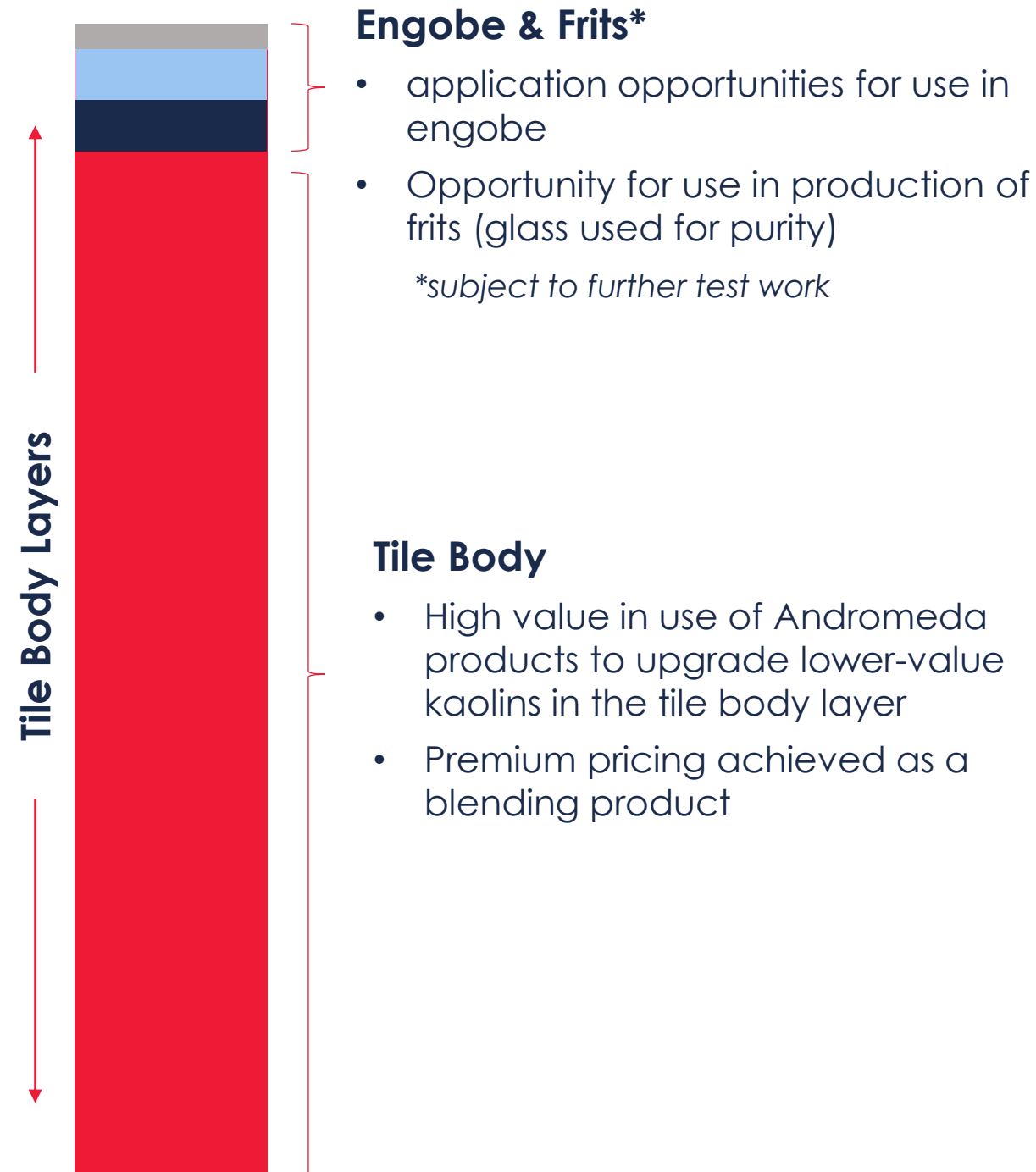
A refined high-quality product for the high-end porcelain tableware market

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

### Concentrate Product: Great White KCM<sup>TM</sup>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%)



White & super-white porcelain tiles



Porcelain slabs

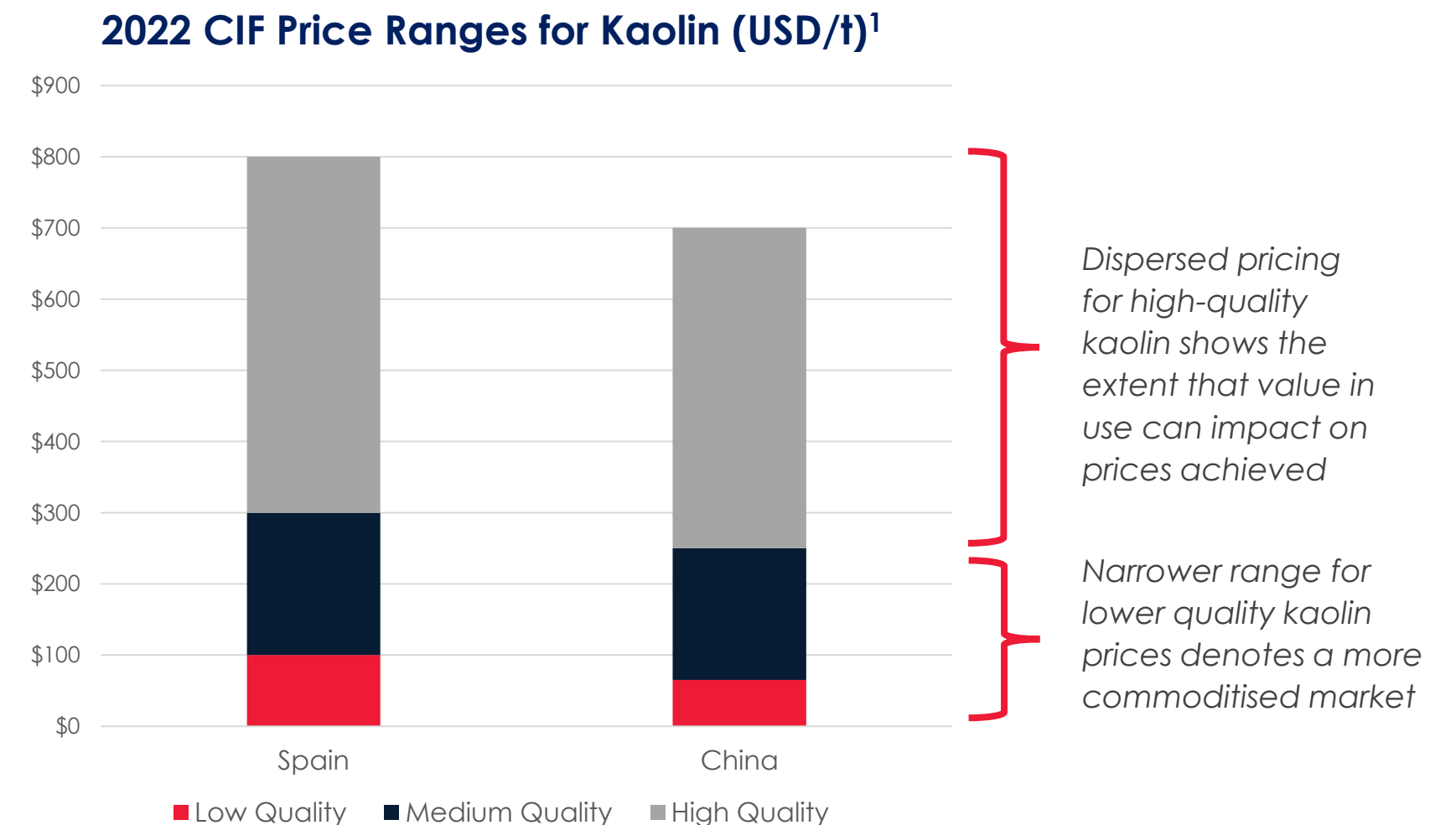
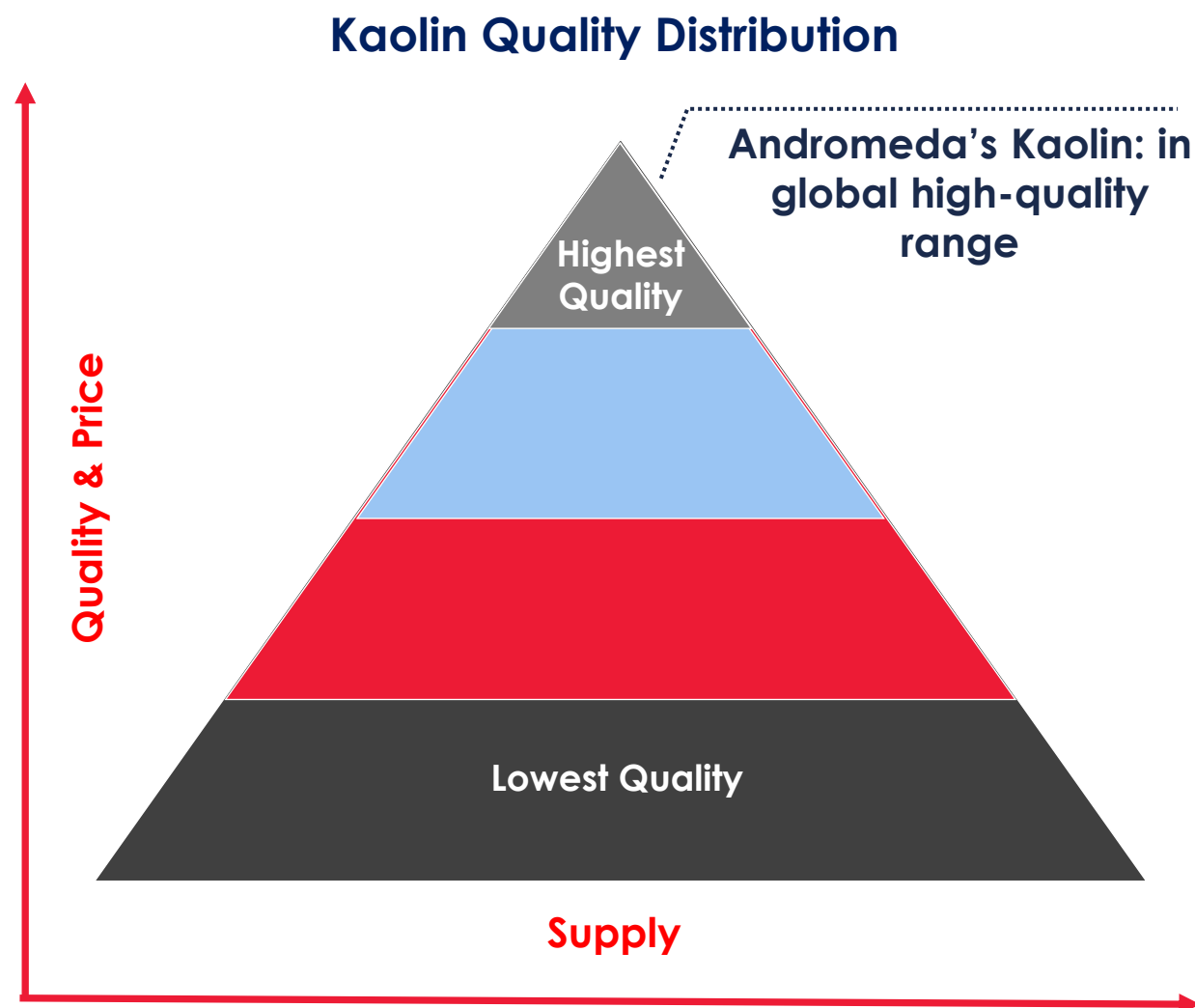


High-end porcelain tableware

# 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
  - European competition regulations do not allow the publishing of pricing received under confidential sales contracts in opaque markets
  - 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>**

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

2. 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™

Leveraging the high whiteness of CRM™ 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
  - Test work by IberoClays and ITC on Great White CRM™ supports up to 20% reduction in zircon for high-quality ceramic tiles and slabs<sup>1</sup>
  - Current price of zircon at US\$1,800/t (FOB)<sup>2</sup>, 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>
  - A combined Great White CRM™ : zircon product has potential to directly enter into this market with blending ratios of 10%:90% to 20%:80%
  - 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™

### Potential margin uplift at zero incremental capex cost

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

1. Refer ADN ASX dated 18 June 2024 titled *Report finds Great White CRM™ can displace up to 20% of zircon*.  
2. Refer to Iluka ASX announcement dated 8 May 2024 titled *Macquarie Conference Presentation*.  
3. 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.  
4. 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™

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

- **Value in use and pricing strategies driven by material commercial benefits:**
  - Cement industry has very few options to reduce CO<sub>2</sub> emissions
  - Independent Study<sup>1</sup> shows 1 kg of Great White HRM™/m<sup>2</sup> leads to:
    - Reductions of  $\cong$  8% in cement and  $\cong$  4% in water required<sup>2</sup>
    - $\cong$  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™
  - Certified: for use in concrete under Australian Standards (AS 1478.1 – 2000)
  - Strategic Alliance Agreement for commercialisation of Great White HRM™ 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™ 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™ = Cost Savings of A\$2-A\$3 per m<sup>3</sup> 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 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%**

1. Refer ADN ASX dated 22 March 2023 titled *Study Finds Great White HRM™ Offers a Cost-Effective Solution to Decarbonise Concrete*.  
2. Based on standard concrete mixes used commercially. Carbon footprint as measured by Global Warming Potential.  
3. Refer ADN ASX dated 16 November 2023 titled *Strategic Alliance Agreement signed with Hallett Group*.  
4. Refer ADN ASX dated 19 January 2024 titled *Binding Sales and Distribution Agreement Signed with IberoClays*.  
5. Refer ADN ASX dated 21 November 2022 titled *Andromeda Signs Offtake Agreement for Great White Concrete Additives*.  
6. C1 margin represents the gross profit after deducting variable costs directly associated with production, as a proportion of total product revenue.

## HPA with Andromeda's high-quality kaolin

- **Great White kaolin ideally suited to make High-Purity Alumina (HPA):**
  - 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.
  - 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:**
  - 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**

1. Refer AND ASX announcement dated 20 June 2024 titled *Andromeda progresses HPA product development*.



# Andromeda

Section D:  
Delivering the Great  
White Project

# The Great White Project

Defined, de-risked & deliverable

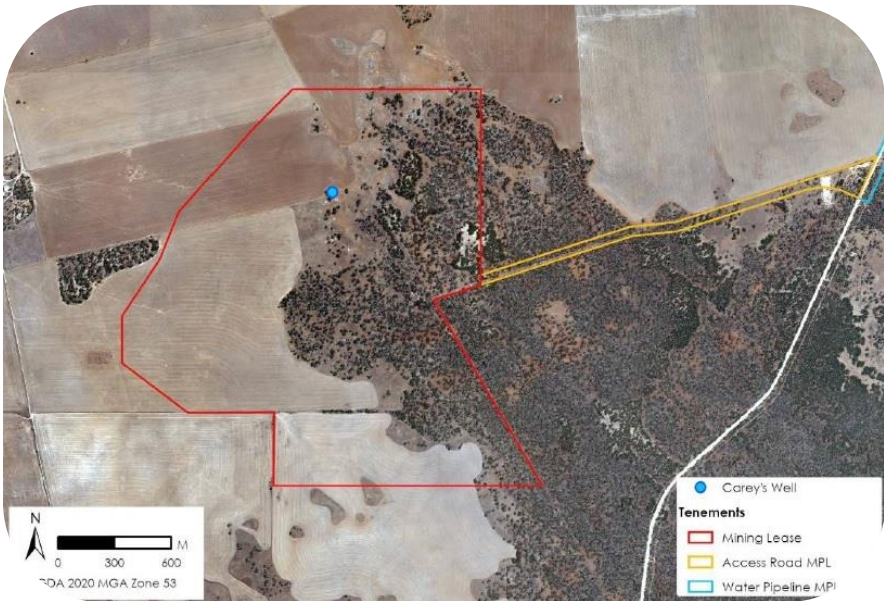


Building blocks are in place to deliver the TGWP

## 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



## 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>
  - Term of 35 years
- **Program for Environment Protection and Rehabilitation (PEPR)**
  - A secondary operating approval granted 1 March 2023
  - 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
  - May 2024: Announcement bringing forward Stage 1A+ expansion due to market demand, providing expedited ramp-up in initial production capacity from  $\approx 55,000$  tpa to  $\approx 100,000$  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

Full capacity of 330 ktpa delivered by 48 months from Stage 1A+ final investment decision (FID)

Stage 1A+ incorporates majority of site non-process infrastructure – supporting lower capital intensity per tonne for Stage 1B and Stage 2 expansions

Stage 1B FID  
+12 months

Stage 1A Start 55ktpa Processing  
+12 months

Stage 1A+ FID

Stage 1A+ Start 100ktpa Processing  
+15 months

Stage 1A+ Final Completion\*  
+21 months  
≈ 100,000 tpa

Stage 1B Final Completion\*  
+30 months  
+110,000 tpa

Stage 2: FID  
+30 months

Stage 2: Final Completion\*  
+48 months  
+120,000 tpa

Andromeda's Feasibility Studies provide a detailed pathway to LOM capacity of 330,000 tpa, with the staged approach de-risking development

\* Includes six-month ramp up following "Practical Completion"

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



engineering service provider

**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' the mining industry, a highly experienced commercial senior manager with multi-disciplinary expertise



# Stage 1A+ operations

## Low risk mining and processing

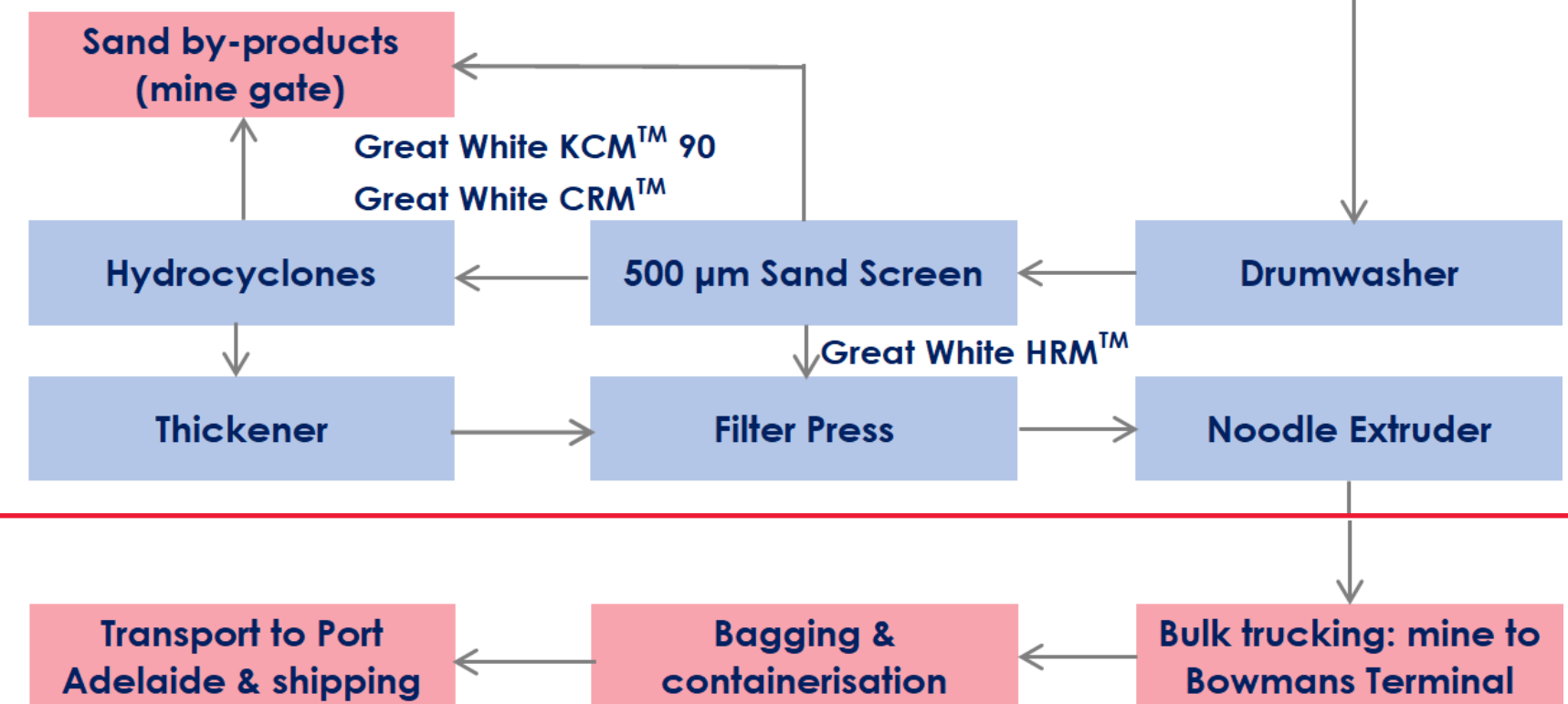
### Mining

- 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.



### 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.

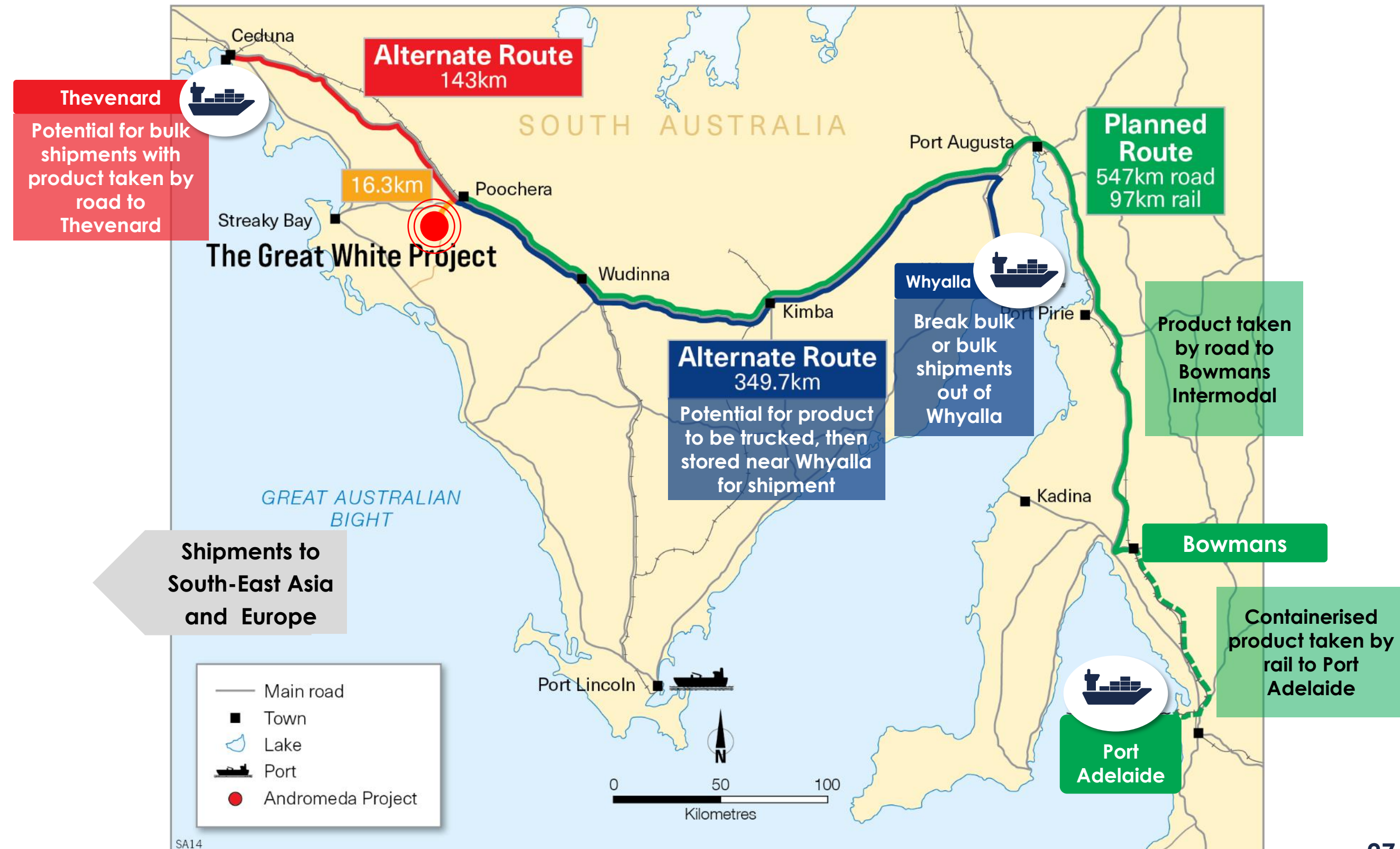


### Logistics

- 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.

## TGWP planned logistics route and expansion alternatives

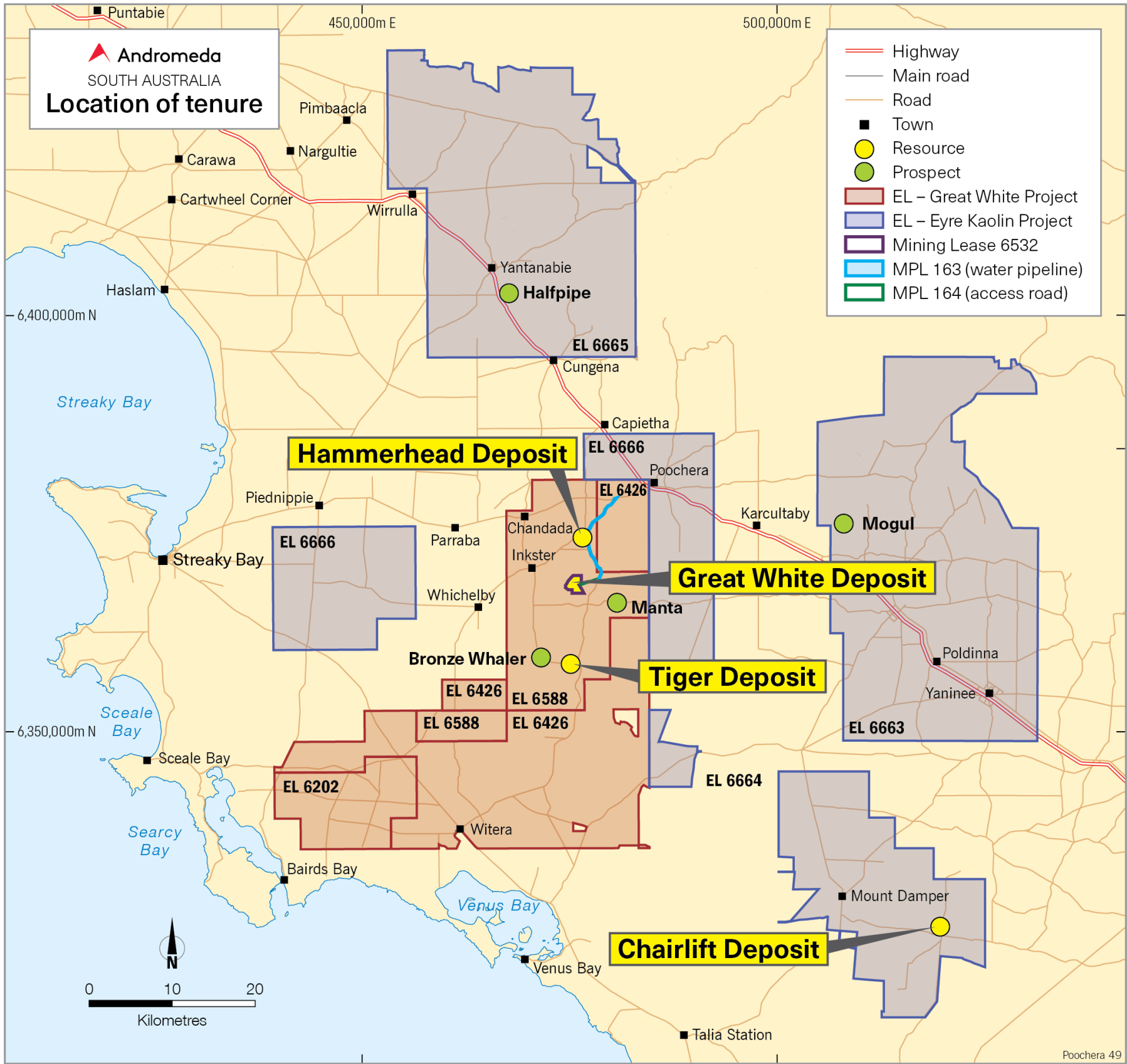
- Proposed route via Adelaide is considered a lower risk option
- As production expands, incremental volumes provide the opportunity to transition from shipping containerised products
- Bulk, or break bulk, shipments from either Thevenard or Whyalla are being investigated to enhance net mine gate margins



Resource Profile

Commercial optionality & potential upside value

Andromeda



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 (%)
			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 to be 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



## 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



## 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





# Andromeda

## Section E: Project economics

# 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%*	43%^
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

^ Cumulative

Due to rounding, some items may total differently to stated amounts

Robust NPV & IRR



Generational Asset



Low Capex Hurdle



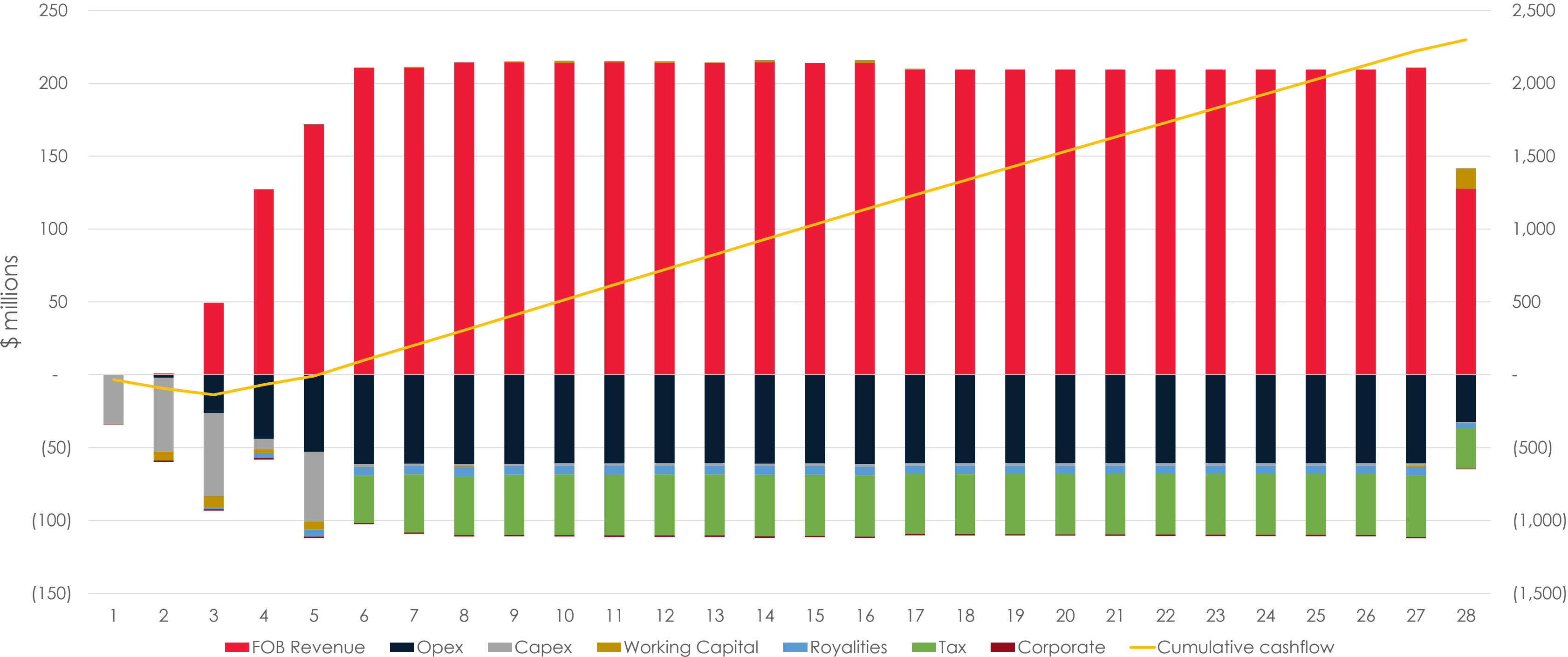
Low Sustaining Capex



High Margin

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

- Generational asset delivers significant long-term cash generation





# Andromeda

## The Great White Mineral Company

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For more information about the Company, please visit our website, [www.andromet.com.au](http://www.andromet.com.au) or contact:

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