



Andromeda Metals Limited ASX: ADN ASX Announcement

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ICerS Raw Materials for Ceramic Tile Conference Presentation

Andromeda Metals Limited (ASX: **ADN**) (**Andromeda**, the **Company**) is pleased to advise that CEO and Managing Director, Bob Katsioularis has been invited to present at the ICerS Raw Materials for Ceramic Tile Conference in Sassuolo, near Bologna, Italy.

The conference will take place later today (Italian time) and is focused on the ceramics supply chain, critical raw materials, global mineral resources, and technological aspects in the formulation of mixtures.

Conference attendees include a broad cross-section involved in the manufacture of ceramic tiles, including those involved in technical, operations and procurement.

The presentation, which is attached to this announcement, includes the following information not previously published, on tests conducted by the Institute of Ceramic Technology:

- Additional results from tests previously conducted on Great White CRM™ and Great White KCM™90^{1,2}, and
- Preliminary value in use results extending the zircon-replacement potential of Great White CRM™ to between 10-18% reduction in zircon¹.

Additionally, included are initial characterisation results produced by SACMI, a Tier 1 technology supplier for the manufacture of porcelain tiles and slabs.

Bob Katsioularis, Andromeda's CEO and Managing Director, said: *"I am pleased to have been asked to present at this important conference for the ceramics industry. It represents a unique opportunity to showcase the extraordinary results from tests on kaolin from The Great White Project to many key global buyers and users of kaolin for ceramics.*

"The opportunity to present at the conference highlights the heightened interest by the industry to the emerging potential offered by our high-quality kaolin products. This comes at a time of increasing scarcity in global kaolin markets, driven by ongoing geopolitical supply disruptions and the depletion of traditional high-quality sources of supply."

This announcement has been approved for release by the Board of Directors of Andromeda Metals Limited.

For more information about the Company and its projects, please visit our website, www.andromet.com.au or contact:

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¹ Refer to ADN ASX dated 16 November 2023 titled *Investor Update – presentation*.

² Refer to ADN ASX dated 28 August 2023 titled *2023 DFS investor presentation and webcast*.



Andromeda

The Great White Mineral Company

A new high-quality kaolin source for ceramics

ICerS Congress – Raw Materials Day
22 February 2024

ASX:ADN

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Authorised for release by the CEO and Managing Director of
Andromeda Metals Ltd



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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).

Assumptions and Notes for Financial Information on 2023 DFS this presentation:

Further details on the 2023 DFS and the assumptions and notes for the 2023 DFS can be found in the Company's ASX Announcement '2023 Definitive Feasibility Study Results' released on 24 August 2023, with no material changes to the assumptions underpinning the financial information.

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.

Competent Person's Statements

The data in this presentation that relates to Mineral Resource estimates for The Great White Deposit and the Chairlift 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.

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.



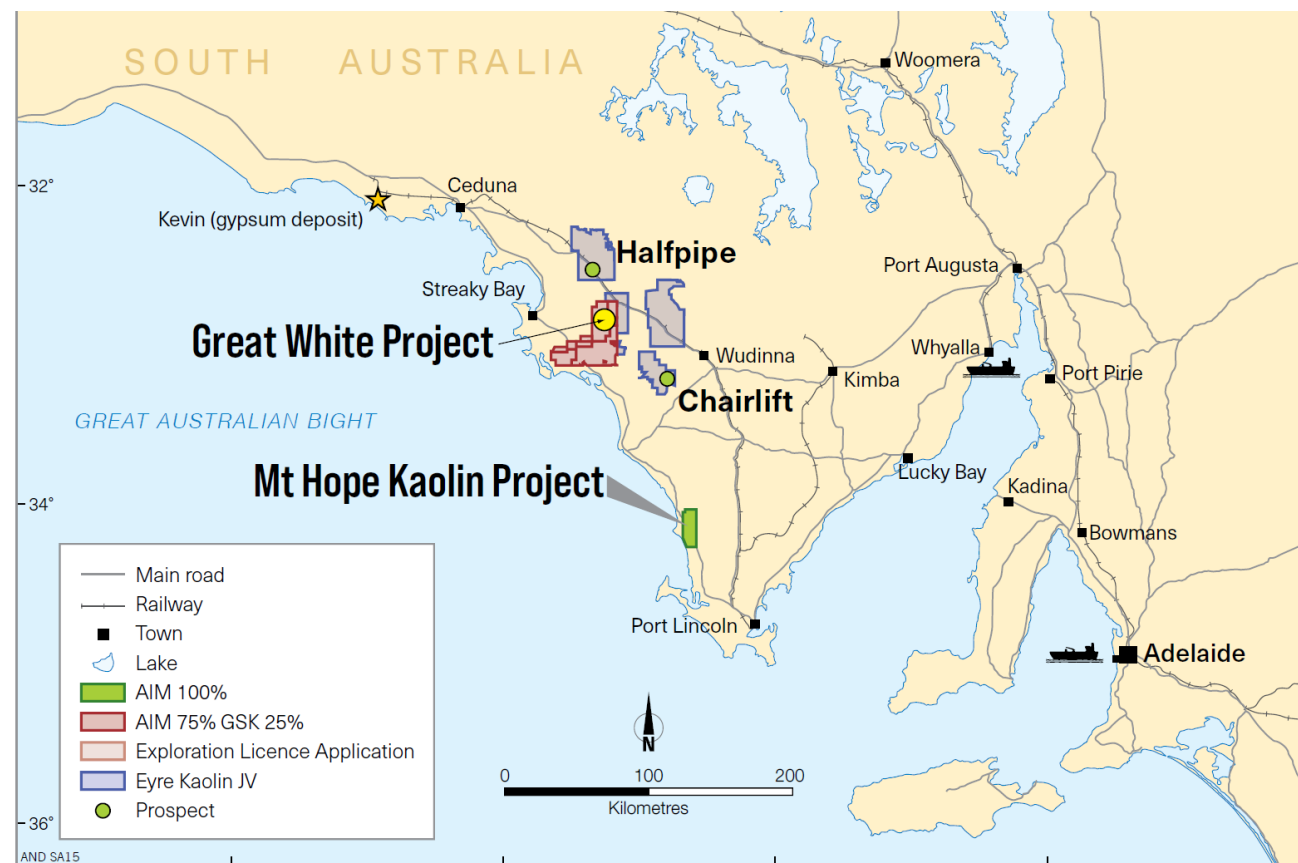
Great White Deposit

A new, large development-ready source of high-quality kaolin

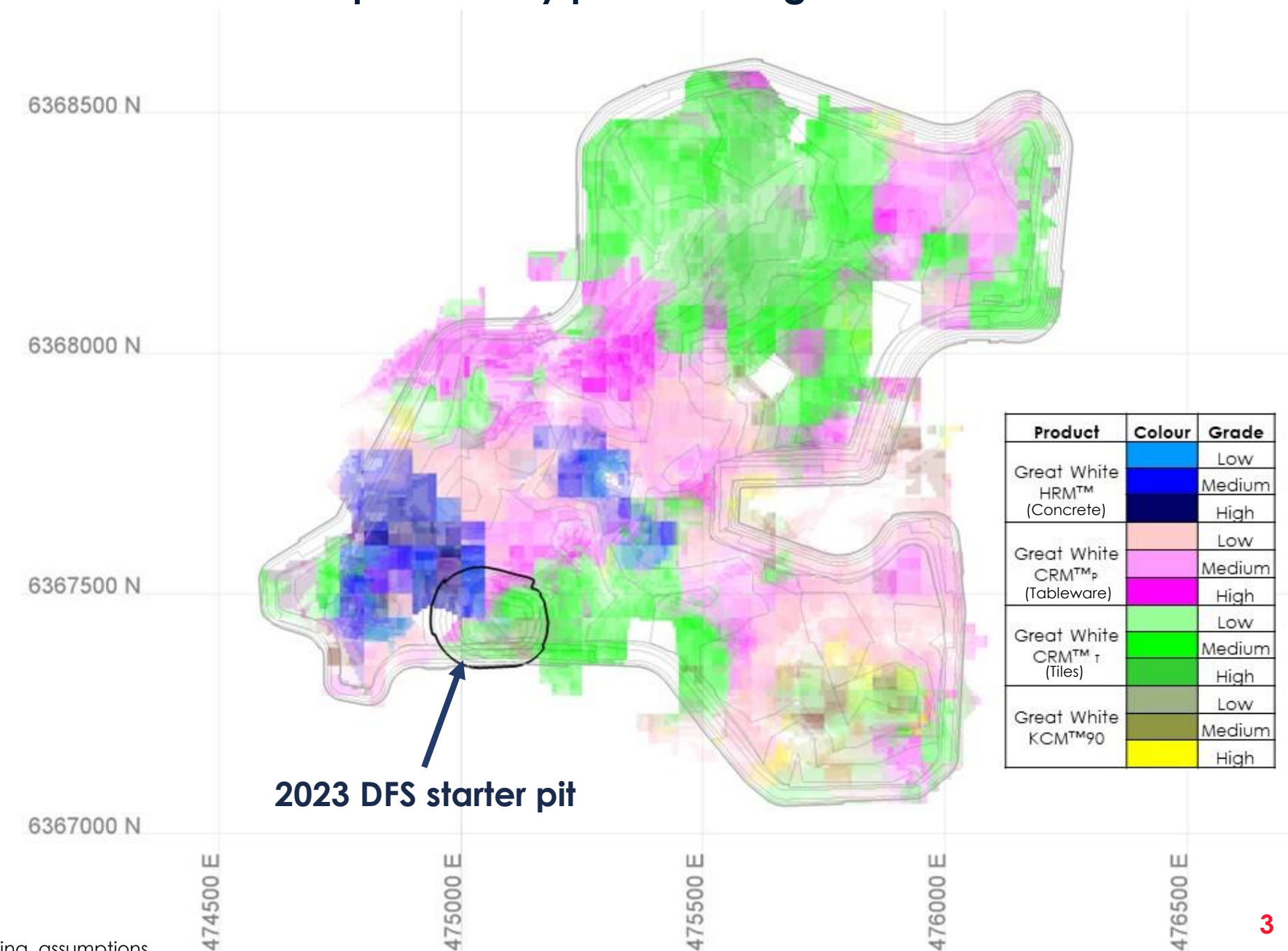
GREAT WHITE DEPOSIT KAOLIN ORE RESERVE

- 15.1Mt of JORC Reserves¹

Reserve Category	Mt	Yield	Halloysite	Brightness (%)	Fe ₂ O ₃
Proved	5.2	45	14	84	0.5
Probable	10	46	10	83	0.5
Total	15.1²	46	11	84	0.5



The Great White Deposit's 15.1 Mt JORC reserve¹ delineated by core and complementary products aligned to market demand



¹ Refer ADN ASX dated 6 April 2022 titled *Great White Kaolin Project - Definitive Feasibility Study*, with no material changes to the underlying assumptions.

² Table subject to rounding errors.

Andromeda Kaolin Products

Developed for premium ceramic market segments



Concentrate Product Great White KCM™90



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

- Highly consistent premium grade
- Halloysite optimised
- Suitable as feed for HPA

Ceramic Product Great White CRM™_T



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

- World class grade – high alumina and low iron, very high Al/Fe ratio
- High whiteness and translucency
- Good green and fired strength

Ceramic Product Great White CRM™_P



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

- World class grade – low TiO₂
- High whiteness and translucency
- Good green and fired strength

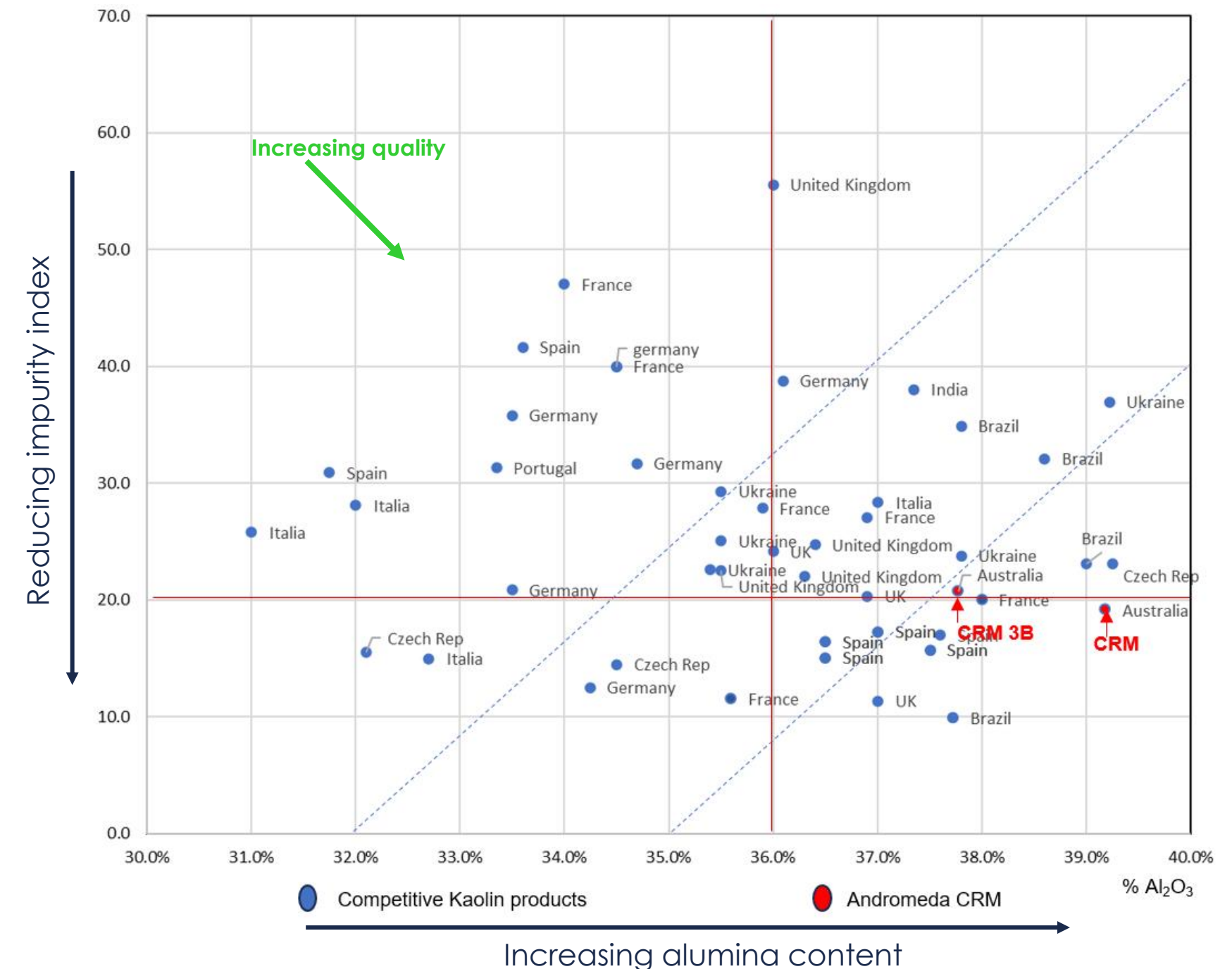
Independent Technical Validation

International benchmarking by Spain's Institute of Ceramic Technology (ITC)

- Work commissioned at ITC¹ has confirmed **Great White CRM™ is a world-class product grade** – benchmarked against a suite of globally traded kaolins.

Chemical composition (wt%) of Andromeda's products, compared to the industry standard interval for kaolins

Kaolin	KCM	CRM (1097)	CRM3B (1098)	Interval (ITC-AICE)
SiO ₂	48.4	47.0	48.0	47-49
Al ₂ O ₃	36.8	37.9	36.9	36.0-37.6
Fe ₂ O ₃	0.46	0.46	0.49	0.7-1.0
CaO	0.05	0.04	0.10	0.05-0.9
MgO	0.05	0.05	0.09	0.1-0.5
Na ₂ O	0.05	0.05	0.05	0.06-0.15
K ₂ O	0.50	0.28	0.35	0.8-2.6
TiO ₂	0.40	0.35	0.36	0.05-0.3
MnO	<0.01	<0.01	<0.01	-
P ₂ O ₅	0.05	0.06	0.05	-
BaO	0.02	0.02	0.02	-
Loss on ignition at 1000°C	13.3	13.85	13.5	11.7-12.6

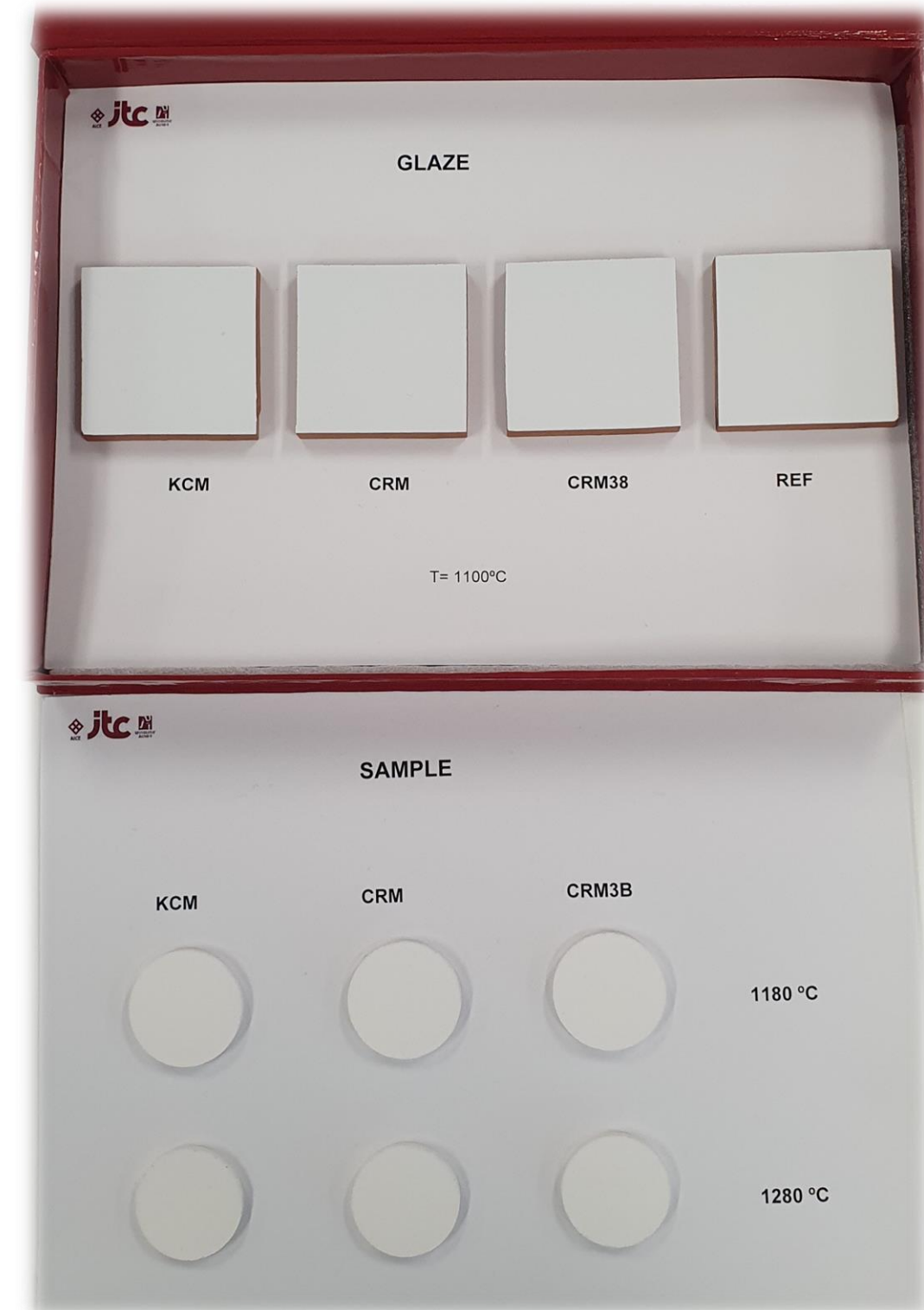


Independent Technical Validation

Excellent firing performance of Andromeda's products

Pressing and firing behaviour of Andromeda's products, compared to the industry standard interval for kaolins¹

Kaolin	KCM	CRM (1097)	CRM3B (1098)	Interval (ITC-AICE)
Reject at 40 µm (wt%)	1.0	0.4	0.4	0-2
Dry bulk density (g/cm ³)	1.38	1.32	1.40	1.55-1.67
Linear shrinkage at 1180°C (%)	6.4	6.5	6.9	3.0-6.6
Linear shrinkage at 1280°C (%)	12.8	12.5	12.1	6.0-12.4
Water absorption at 1180°C (wt%)	28.7	28.7	27.1	19.3-25.4
Water absorption at 1280°C (wt%)	14.4	15.7	16.0	6.4-20.3
L* at 1280°C	96.5	96.8	97.0	91.5-97.4
a* at 1280°C	0.1	0.0	0.1	-0.2 – 0.6
b* at 1280°C	3.3	3.2	2.9	2.2-7.3



¹ Feasibility of use of kaolin samples in ceramic products, Institute of Ceramic Technology , November 2023.

Independent Technical Validation

Strong performance when included in glaze formulations

- Results of testing of Andromeda's products¹, compared to the industry standard kaolin reference values

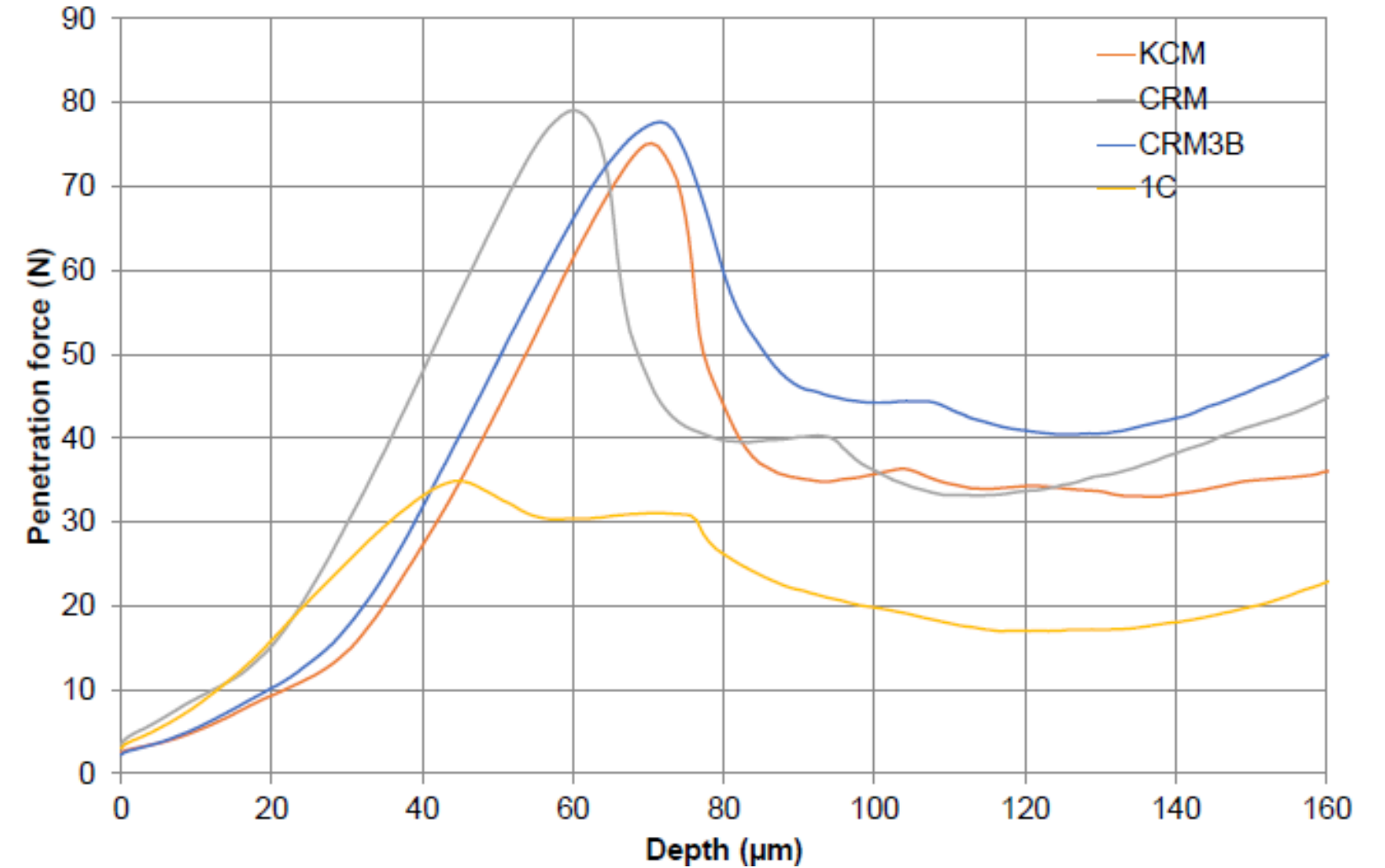
Viscosity values

Composition	E-KCM	E-CRM	E-CRM3B	E-REF
Viscosity 1' (cP)	250	268	290	283
Thixotropy 6' (cP)	260	283	300	295
Viscosity Ford Cup (s)	43	43	49	49

Chromatic coordinates and gloss of glazed pieces fired at 1100°C

Glaze	E-KCM	E-CRM	E-CRM3B	E-REF
Gloss (60°)	70	71	71	64
L*	92.6	92.4	92.4	92.5
a*	-0.60	-0.60	-0.59	-0.67
b*	-1.27	-1.33	-1.28	-1.02

Cohesion and adherence of glaze layer showing **significantly higher mechanical strength** compared to industry reference kaolin



Independent Technical Validation

International benchmarking by Spain's Institute of Ceramic Technology (ITC)¹

*"The three samples have **common characteristics for their use in glazes**. This is from their **low proportion of chromophorous oxides**, adequate **suspending capacity** and for the performance of the glazes prepared with these kaolins, including **high adhesion and cohesion** before firing and **high gloss** after firing. Specifically, the thigh adhesion and cohesion may imply an **increase in percentage of first quality tiles** due to the decrease in the effects associated with the lack of mechanical strength of the glaze layer before firing.*

*"The samples are adequate for **porcelain tableware bodies** because of their **low proportion of chromophorous oxides** and **high alumina content** and therefore **high whiteness**.*

*"In **porcelain tile bodies**, the performance of the samples support their application in bodies with high whiteness (unglazed porcelain tiles and slabs), due to their **low proportion of chromophorous oxides** and **high alumina** content and therefore **high whiteness**. Their use could support a reduction in the percentage of required opacifiers (aspect to be confirmed)."*

Institute of Ceramic Technology

Great White CRM™ use in super and ultra white slabs

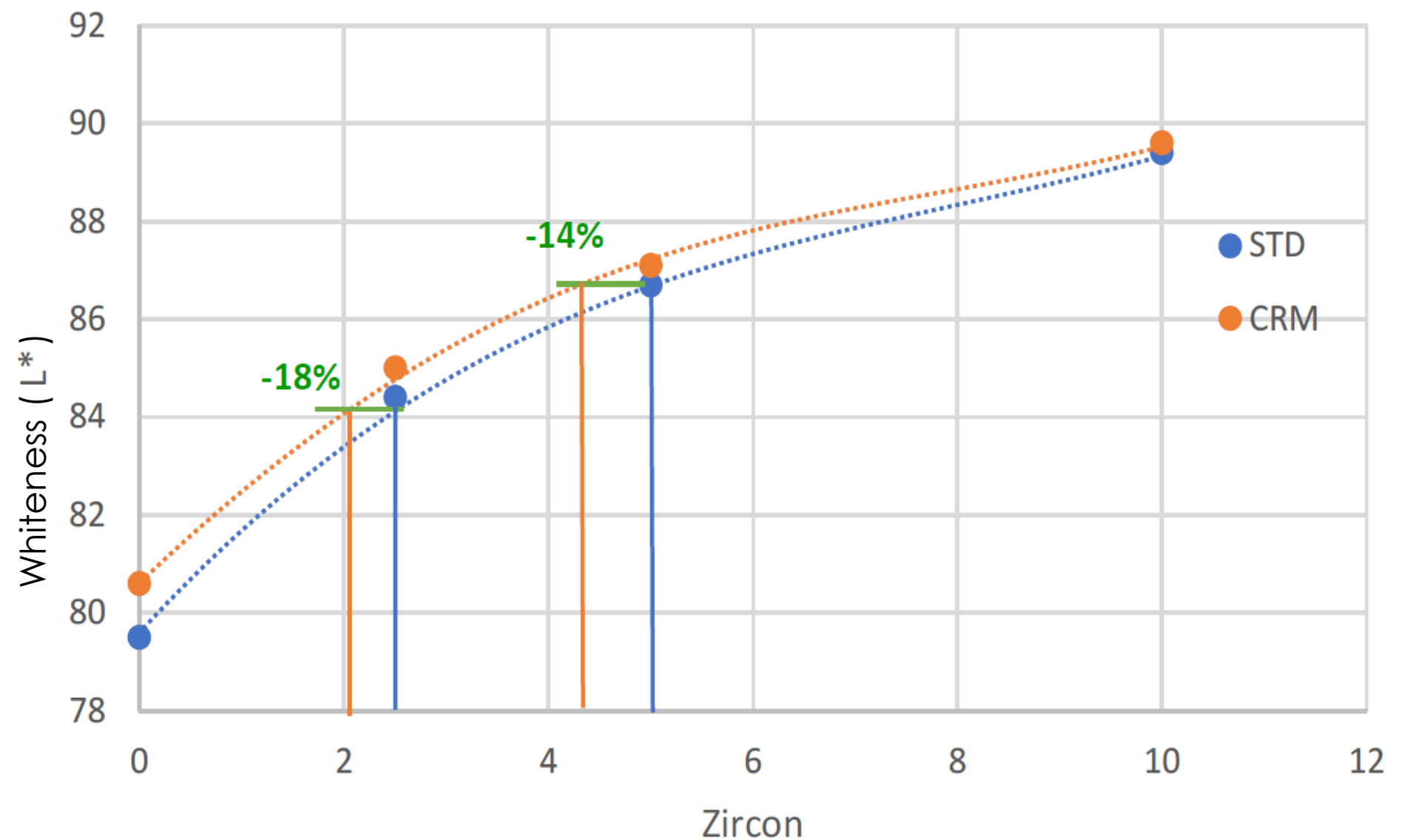
High-brightness supports reductions in use of high-priced zircon as opacifier



ZIRCON-REPLACEMENT POTENTIAL

- Premium slabs and porcelain tiles in super and ultra-white use micronized zircon for whitening
- Zircon priced at over US\$2,000/t
- Testwork¹ supports a **10-18% reduction in zircon by using Great White CRM™**

Feasibility of use | Porcelain tile compositions



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¹ As determined by preliminary results from tests conducted on Great White CRM™ by the Institute of Ceramic Technology (ITC), Spain, February 2024 in addition to earlier results.

Great White CRM™ use in super and ultra white slabs

Initial characterisation at SACMI - Italy



Feedback from SACMI R&D Centre - Imola

“It is a material of **excellent quality** and **great purity**, suitable for the production of first category products such as slabs, kitchen countertops, in particular **hyperwhite products with a very high L* degree**, and also for glazes and engobes compositions. “

		R & D CENTRE		Code AP 12997		
		PLASTIC RAW MATERIALS		Card P01		
Customer SACMI (LABORATORIO)			Country ITALY			
Item CAOLIN CMRT			Date 11-10-2023			
"RUN ON QUARRY" CHARACTERISTICS						
Size	powder	RESIDUES				
Colour	White	Over 180 µm	0.0%			
Moisture	9.3%	Over 125 µm	0.0%			
	CaCO ₃ 0.0%	Over 63 µm	0.0%			
CHEMICAL ANALYSIS Δ AP 12997						
L.O.I.	13.80	Total C				
SiO ₂	46.02	S tot	0.08			
Al ₂ O ₃	37.90	SO ₄ ²⁻				
TiO ₂	0.39	K ⁺				
Fe ₂ O ₃	0.36	Ca ²⁺				
CaO	0.25	Mg ²⁺				
MgO	0.10	Fe ³⁺				
K ₂ O	0.30	Total Soluble Salts				
Na ₂ O	0.19	Cl ₂				
Li ₂ O						
MnO						
P ₂ O ₅	0.06					
Organic C						
MINERALOGICAL ANALYSIS						
NATURE OF THE RESIDUE						
SPECIFICATIONS BEFORE FIRING						
Pressing Pressure (kg/cm ²)	300	Green thickness (mm)	5.60			
Powder Moisture	5.70%	Green breaking load (kg/cm ²)	14.50			
Expansion after pressing	0.64%	Dry breaking load (kg/cm ²)	16.90			
Dry size variation	+0.50%					
SPECIFICATIONS AFTER FIRING						
Kiln type	ER30 electric	Cycle 60 Minutes				
Temperature °C	1140	1160	1180	1200	1220	
Size variation %	-2.6	-2.8	-3.3	-4.1	-4.9	
Water absorption %	23.90	23.80	22.70	21.60	19.00	
Breaking load kg/cm ²	119	125	138	149	159	
Colour character.	L White	96.8	96.6	96.7	96.5	96.2
	a + red - green	+0.1	+0.5	+0.1	+0.0	+0.0
	b + yellow - blue	+3.8	+3.1	+3.7	+3.7	+3.8
Black core	no	no	no	no	no	
Dilat. coeff. 3 ₀₋₁₀₀₀ × 10 ⁻⁷ °C ⁻¹						
Colour	White	Shade from White to White		Ignition loss at 1060°C 13.80%		
REMARKS: AP 12997						
<p>It is likely to be almost pure kaolin, of very fine particle-size distribution.</p> <p>Before firing, the mechanical resistance is good in green, and low after drying. The pressing expansion is quite high. The expansion values are high even during the drying phase.</p> <p>The fired samples are refractory, with medium/high shrinkage, high porosity, and low mechanical resistance.</p> <p>No black core.</p> <p>The colour of the fired samples is excellent. The whiteness index value is very high, even confirmed by colorimetric coordinates.</p>						



Positioned to be the industrial mineral of choice in the global ceramics market

Great White CRM™ properties and applications¹



Top 3 Iron/Alumina ratio
(Fe₂O₃/Al₂O₃) of global kaolin samples



High whiteness is retained in high temperatures, with very good colour evolution, which is valued in **high quality porcelainware and ceramic tiles**



High dry mechanical strength is highly valued in **large format porcelain tiles**



Zircon-replacement potential in **super and ultra-white** premium slabs and porcelain tiles

Strongly positioned to offer exceptional value in use in:

**Porcelain tableware; large format porcelain ceramic tiles and glazes;
and super and ultra-white premium porcelain tiles and slabs**

¹ As determined by testing conducted on Great White CRM™ by Instituto de Tecnología Cerámica (ITC), located at the University of Castellón in Spain, and IberoClays.

IberoClays Agreement Provides Market Validation

High Quality & Price Point Validated for use in Ceramics

Market Validation IberoClays

- IberoClays is a **leading European formulator and distributor** of raw materials for ceramics, trading over 800Ktpa.
- On the basis of the ITC work and their own benchmarking, they have entered into a **5-year binding offtake agreement** for up to 20Ktpa (at Andromeda's option) of Great White CRM™. ¹
- Exclusive Distributor in Italy, Spain and Portugal with logistics infrastructure.



*“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.*

The Great White Project's products not only complete our portfolio of advanced formulations for high-quality porcelain tiles, slabs and ceramic glazes, but opens up the potential for a new market for kaolin as a high-performance additive to decarbonise concrete”

Alberto Piquer González, owner and CEO of IberoClays

TGWP is development-ready

Favourable market environment

- Demand growth for kaolin is linked to GDP and urbanisation
- Increasing use of high-quality kaolin in new applications
- Emerging supply deficit with global depletion of high-quality deposits
- No new >36% alumina deposits being developed, globally

Project without peer

- Tier 1 mining jurisdiction of South Australia
- The Great White Deposit with 15.1Mt of JORC Reserves¹
- Growing regional footprint of large high-quality deposits
- Defined, very high value in use in key target segments
- Simple and low-risk mining and processing flowsheet

Development-ready with all permits in place

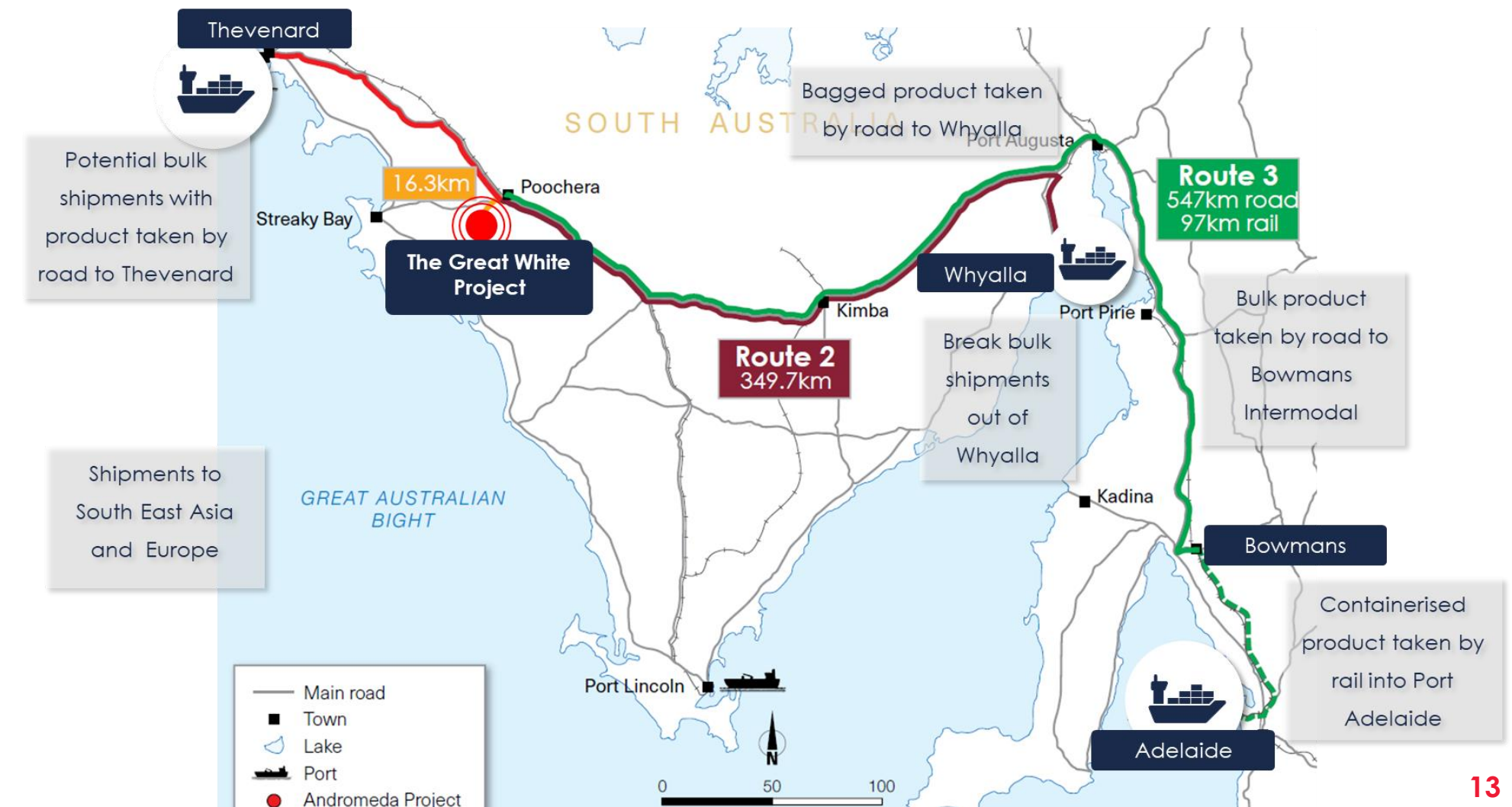
- Mining Lease, PEPR and EPA Works approval obtained
- Land acquisition agreement in place, with subdivision underway
- All Stage 1A long lead items on order and being fabricated

Experienced team in place

- Highly experienced and Board and Management
- Industrial minerals and kaolin expertise

Stage	Stage 1A	Stage 1B	Stage 2	Stage 3
First Shipment	Q1 2025	Dec 2025	Dec 2027	Dec 2029
Kaolin Production	50,000 tpa	150,000 tpa	250,000 tpa	300,000 tpa
Nominal Capacity	100,000 tpa	300,000 tpa	500,000 tpa	600,000 tpa
Capital Cost	\$62.4 million	\$57.6 million	\$57.2 million	\$10.9 million

Transport and logistics routes



¹ Refer ADN ASX dated 6 April 2022 titled *Great White Kaolin Project - Definitive Feasibility Study*, with no material changes to the underlying assumptions.

Chairlift – Mineral Resource Estimate

Expanding high-quality opportunities through regional exploration

CHAIRLIFT¹

- Combined **Inferred Resource of 53.5 million tonnes (Mt)**:
 - 27.0 Mt of Bright White, low titanium kaolinised granite (Chairlift CRM)
 - 26.5 Mt of rheology modifier kaolin (Chairlift HRM)
- Low titanium content of Chairlift CRM, with average TiO_2 of 0.18%
 - Chemistry could be ideal for advanced performance coatings and medical applications, supporting entry into new high value segments
- Chairlift HRM has the same rheological properties as Great White HRMTM, expanding the market opportunity for the HRM product range
- Exploration upside potential, with mineralisation open in multiple directions



¹ Refer ADN ASX dated 16 November 2023, Chairlift Kaolin Deposit Mineral Resource Estimate, with no material changes to the underlying assumptions.

Chairlift is located on exploration license EL 6664 and is part of the Eyre Kaolin Project. Andromeda is currently sole funding expenditure on the Eyre Kaolin Project to earn up to an 80% interest from Peninsula Exploration Pty Ltd. Refer ADN ASX announcement dated 12 August 2021 titled Andromeda enters New Kaolin Joint Venture on the Eyre Peninsula, SA.



Andromeda

The Great White Mineral Company

For more information about the Company, please visit our website, www.andromet.com.au or contact:

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