

8 September 2022

**ASX ANNOUNCEMENT**

## **VRX to present at New World Metals Conference**

VRX Silica Limited (**VRX** or the **Company**) (ASX: VRX) is pleased to attach a copy of its presentation to be delivered later today by Managing Director, Bruce Maluish at the New World Metals Conference held in Perth, Western Australia.

Mr Maluish will provide an update on the Company's silica sand projects in Western Australia.

The New World Metals Conference will follow on to Sydney and Melbourne on 20 and 22 September 2022, respectively.

This announcement has been authorised for release to ASX by the Managing Director, Bruce Maluish.

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### **ASX: VRX**

#### **Capital Structure**

*Shares on Issue:  
558.4 million*

*Unlisted Options:  
35.3 million*

#### **Corporate Directory**

**Paul Boyatzis**

*Non-Executive Chairman*

**Bruce Maluish**

*Managing Director*

**Peter Pawlowitsch**

*Non-Executive Director*

**David Welch**

*Non-Executive Director*

**Ian Hobson**

*Company Secretary*

#### **Silica Sand Projects**

*Arrowsmith Silica Sand  
Projects, 270km north of  
Perth, WA.*

*Muchea Silica Sand  
Project, 50km north of  
Perth, WA.*

*Boyatup Silica Sand  
Project, 100km east of  
Esperance, WA.*

*The Company is actively  
assessing other silica  
sand projects in  
Australia.*

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### **Further information:**

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### About VRX Silica

VRX Silica Ltd (ASX: VRX) is developing a portfolio of world-class, high-grade silica sand projects in Western Australia.

The Arrowsmith North and Arrowsmith Central Silica Sand Projects, 270km north of Perth, comprise five granted exploration licences and two granted mining leases. Bankable feasibility studies for both projects have demonstrated exceptional financial metrics.

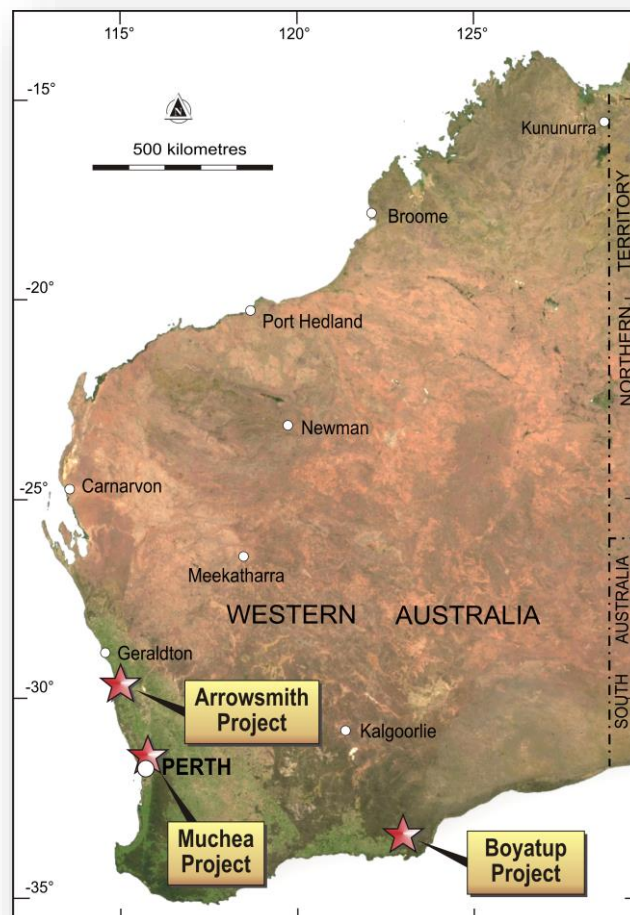
The Muchea Silica Sand Project, 50km north of Perth, comprises two granted and one under-application exploration licences as well as one granted and one under application mining leases. Muchea is a world-class project with high-purity silica sand in situ. A bankable feasibility study has demonstrated outstanding financial metrics.

The Boyatup Silica Sand Project, 100km east of Esperance, comprises two adjacent granted exploration licences. Indications from a recent drill program and Mineral Resource Estimate indicate that this project can complement the Arrowsmith and Muchea projects and add to VRX's range of potential silica products.

### Proven Management

VRX Silica's Board and Leadership Team have extensive experience in mineral exploration and mine development-to-production and in the management of publicly listed mining and exploration companies.

### Silica Sand Projects Locations



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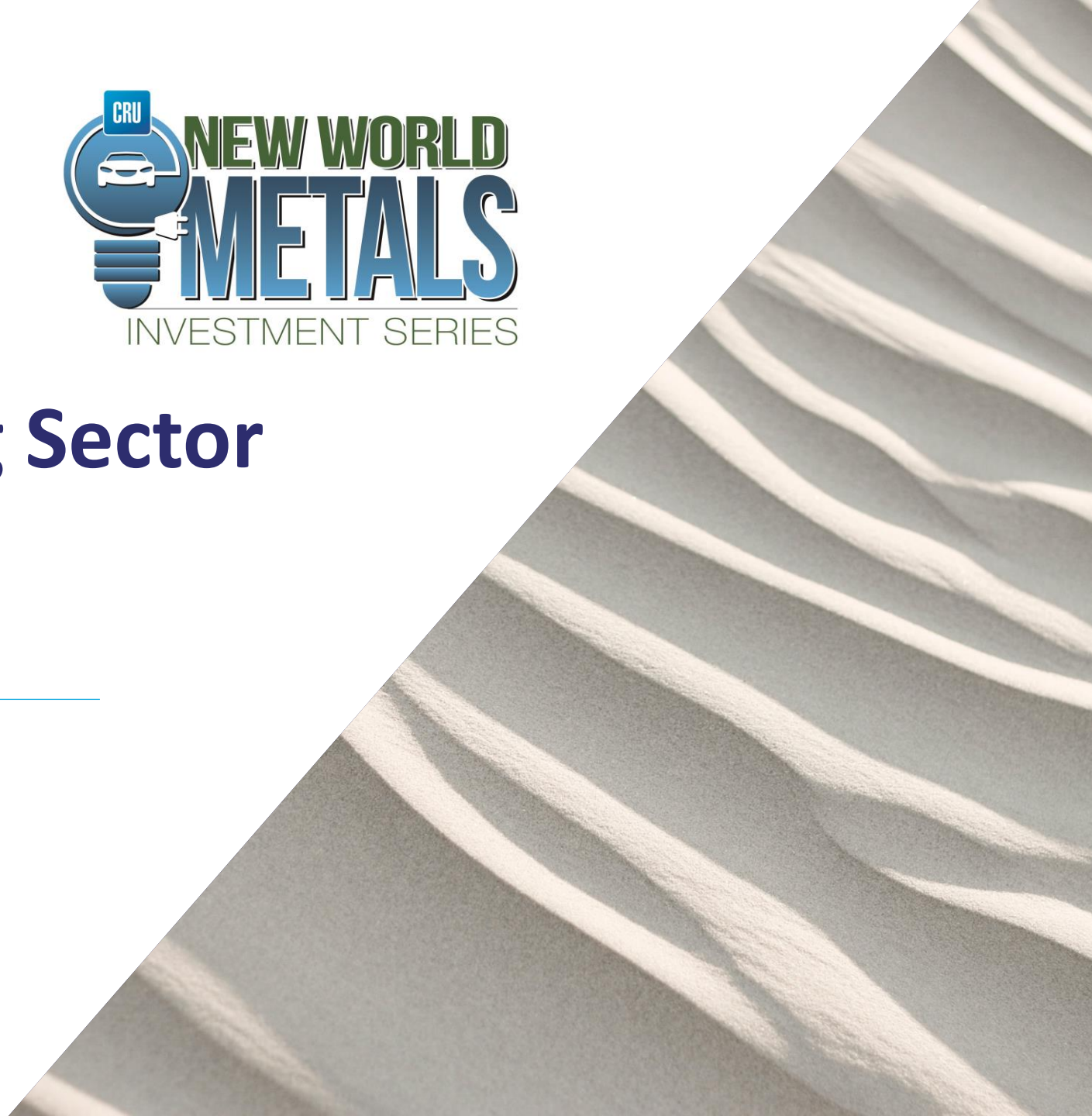
# Silica Sand An Emerging Mining Sector

Western Australian  
Silica Sand Projects

September 2022



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#### Disclaimer

This document has been prepared by VRX Silica Limited. The information contained in this document is for information purposes only and has been prepared for use in conjunction with a verbal presentation and should be read in that context.

The information contained in this document is not investment or financial product advice and is not intended to be used as the basis for making an investment decision. In preparing and providing this document, VRX has not considered the objectives, investment profile, financial position or needs of any particular recipient. Mineral exploration is subject to significant risk. There is no guarantee of exploration success, and even if exploration success is achieved, there is no guarantee that development of any mineral deposit will be economically viable. VRX strongly suggests that investors consult a financial advisor prior to making an investment decision.

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Such forward looking statements are not guarantees of future pricing, performance and events, and involve known and unknown risks, uncertainties and other factors, many of which are beyond the control of VRX, its related bodies corporate, and their directors, officers, employees, contractors, agents and advisors, that may cause actual results to differ materially from those expressed or implied in such statement. Actual results, performance or achievements may vary materially from any projections and forward looking statements and the assumptions on which those statements are based. In particular, potential revenue opportunities and guideline pricing models set out in this document are based on certain assumptions which may in time prove to be false, inaccurate or incorrect. Readers are cautioned not to place undue reliance on forward looking statements and VRX assumes no obligation to update such information.

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#### Competent Persons Statement

The information in this document that relates to Arrowsmith North, Arrowsmith Central and Muchea Exploration Results and Muchea Aircore Drilling Area Mineral Resources are based on data collected and compiled under the supervision of Mr David Reid, who is a full-time employee of VRX Silica. Mr Reid, BSc (Geology), is a registered member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and the activity being undertaken to qualify as a Competent Person under the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Reid consents to the inclusion of the data in the form and context in which it appears.

The information in this report that relates to Arrowsmith North, Arrowsmith Central and Muchea Auger area Mineral Resources is based on information compiled by Mr Grant Louw who is a full-time employee of CSA Global, under the direction and supervision of Dr Andrew Scogings, who is an Associate of CSA Global. Dr Scogings is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. He is a Registered Professional Geologist in Industrial Minerals. Dr Scogings 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 Competent Person as defined in the 2012 edition of the Australasian Code for the Reporting of Exploration Results, Mineral Resources, and Ore Reserves (JORC Code). Dr Scogings consents to the disclosure of information in this report in the form and context in which it appears.

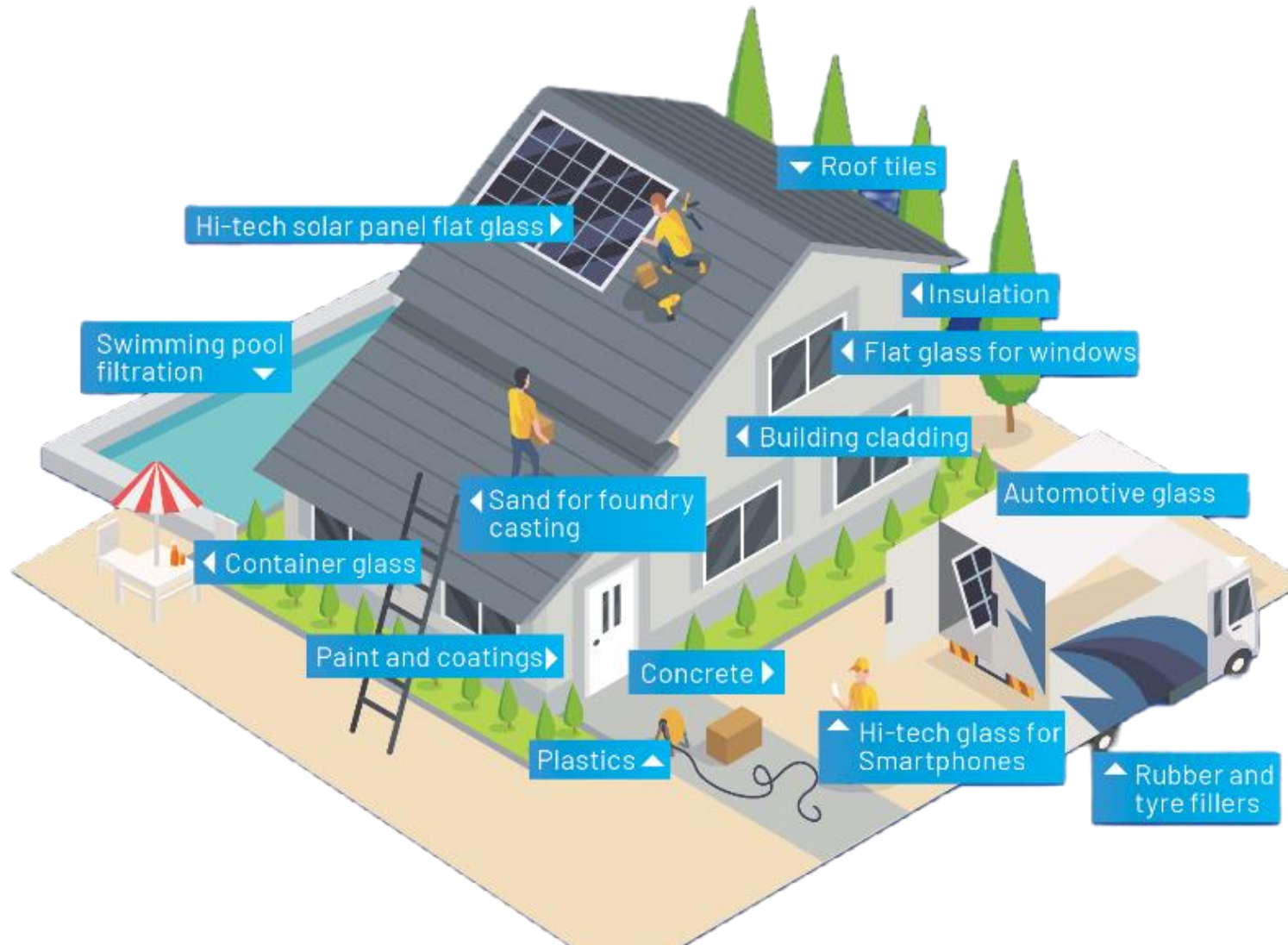
The information in this report that relates to Arrowsmith North, Arrowsmith Central and Muchea Probable Ore Reserves is based on data collected and compiled under the supervision of Mr David Reid, who is a full-time employee of VRX Silica. Mr Reid, BSc (Geology), is a registered member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and the activity being undertaken to qualify as a Competent Person under the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Mr Reid consents to the inclusion of the data in the form and context in which it appears.

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# Silica Sand - the Second-most Consumed Material on Earth



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# Portfolio Highlights

**WA-based, pure-play silica sand company with advanced silica sand projects**

**100+ year production life**

- ❑ 100% owner of four high value silica sand projects in Western Australia - Tier 1 mining region
- ❑ Multi-decade-scale contiguous sand deposits with significant high-grade Resources
- ❑ Most-advanced non-private silica sand projects in Australia
- ❑ Mining Leases granted over three projects with permitting and infrastructure preparations well-advanced
- ❑ Arrowsmith North to lead staggered development. First production expected 2023 – followed by Muchea, Arrowsmith Central and Boyatup
- ❑ Strong interest from customers in Southeast Asia at a time of diminishing global supply and increasing demand
- ❑ Scale of projects provides long-term opportunity for silica sand export and glass manufacturing and downstream industries in Western Australia



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# Corporate Summary



Person	Role	Experience
<b>Paul Boyatzis</b>	Chairman	Governance: over 30 years' experience in investment, equity markets and managing public companies
<b>Bruce Maluish</b>	Managing Director	Technical and finance: over 35 years' experience in mining industry including previous roles as ASX MD and General Manager
<b>Peter Pawlowitsch</b>	Non-Executive Director	Senior executive in finance and corporate roles
<b>David Welch</b>	Non-Executive Director	Senior executive; responsible for strategy, business transformation and performance, commercial negotiations
<b>Steven Papadopoulos</b>	Commercial Manager	Legal and commercial: over 20 years' experience as corporate lawyer and commercial advisor in resources and other industries
<b>Yoonil Kim</b>	Marketing Manager	Marketing: 17 years' experience selling silica sand in the Asian market

Capital Structure	
Share Price	<b>16cps *</b>
Ordinary Shares on Issue	<b>558 million</b>
Options on Issue	<b>35 million</b>
Market Capitalisation	<b>\$87 million*</b>
Cash	<b>\$8 million</b>
Debt	<b>Nil</b>
Enterprise Value	<b>\$79 million</b>

Shareholders	
Board and Management	<b>12%</b>
Top 20 Total	<b>33%</b>

Broker Coverage	
Euroz Hartleys	<b>EUROZ HARTLEYS</b>

\* Closing share price on ASX on 6 September 2022



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# Silica Sand – World Class Portfolio

**Project development pipeline to ensure disciplined, staged development of world-class assets**



- ❑ WA-based company and management team
- ❑ Most advanced non-private silica sand projects in Australia
- ❑ Four large scale, high grade and low impurity silica sand projects – Arrowsmith North, Arrowsmith Central, Muchea and Boyatup
- ❑ Each project capable of independent operation to supply raw material to diverse markets
- ❑ Simple, low impact mining and processing
- ❑ Access to established infrastructure (logistics, power, water and gas)
  - rail lines to port run adjacent to all project tenements
  - gas pipelines run adjacent to each of the project areas
- ❑ Infrastructure planning and permitting well-advanced





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# Arrowsmith North

## Near-term development opportunity for a world-class silica sand project

- ❑ Production expected to commence 2023 (subject to final environmental approvals)
- ❑ Probable Reserve of 223Mt or @99.7% SiO<sub>2</sub> (100-year production)
- ❑ Tailored 2Mtpa processing plant with patented process circuit, revised capital estimate and DFS underway
- ❑ Access to established infrastructure –
  - ❑ Unused rail line (from Eneabba to Geraldton) runs adjacent to project tenements
  - ❑ Water from Yarragadee North deep aquifer
  - ❑ Access by adjacent Brand Highway
  - ❑ Hybrid gas and solar power supply



# Arrowsmith North Environmental and Mining Approvals

- ❑ Confirmation by Commonwealth Department of Agriculture, Water and the Environment of accredited State approval under the EPBC Act
- ❑ State Department of Water and Environmental Regulation and Environmental Protection Authority (EPA) require PER assessment
- ❑ Environmental Scoping Document (ESD) Approved 15 March 2022
- ❑ Environmental Review Document (ERD) lodged 14 April 2022
- ❑ No further direction on any future requirements or timing until comments from PER on published ERD received from EPA (imminent)
- ❑ Mining proposal for DMIRS to be lodged subject to receipt of comments on ERD



# Arrowsmith Central Environmental and Mining Approvals

- Confirmation by Commonwealth Department of Agriculture, Water and the Environment of accredited approval under the EPBC Act
- State Department of Water and Environmental Regulation and Environmental Protection Authority (EPA) require PER assessment
- Environmental Scoping Document (ESD) lodged 29 June 2022
- Environmental Review Document (ERD) prepared and will lodge on ESD approval



# Arrowsmith North/Central Vegetation Kwongan Heath

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Loose sand/shallow root systems suitable for VDT





# Muchea

## Large scale, world class high-grade and low impurity silica sand project

- ❑ Production to follow Arrowsmith North subject to EPA approval
- ❑ Unique mining/rehabilitation method and duplicate plant
- ❑ Access to established infrastructure
  - ❑ Underutilised railway connects to Kwinana (100km)
  - ❑ Grid power
  - ❑ Water from Yaragadee deep aquifer
  - ❑ Adjacent to Brand Highway
- ❑ Granted Mining Lease and Miscellaneous Licences for access
- ❑ +99.9% SiO<sub>2</sub> - <100ppm Fe<sub>2</sub>O<sub>3</sub> after processing (high-grade, low impurity)
- ❑ Raw material for premium ultra-clear cover glass production for solar panels
- ❑ Potential for manufacturing cover glass from adjacent gas/hydrogen pipeline



# Muchea Vegetation Banksia Woodland

Low grasses and sedges suitable for VDT

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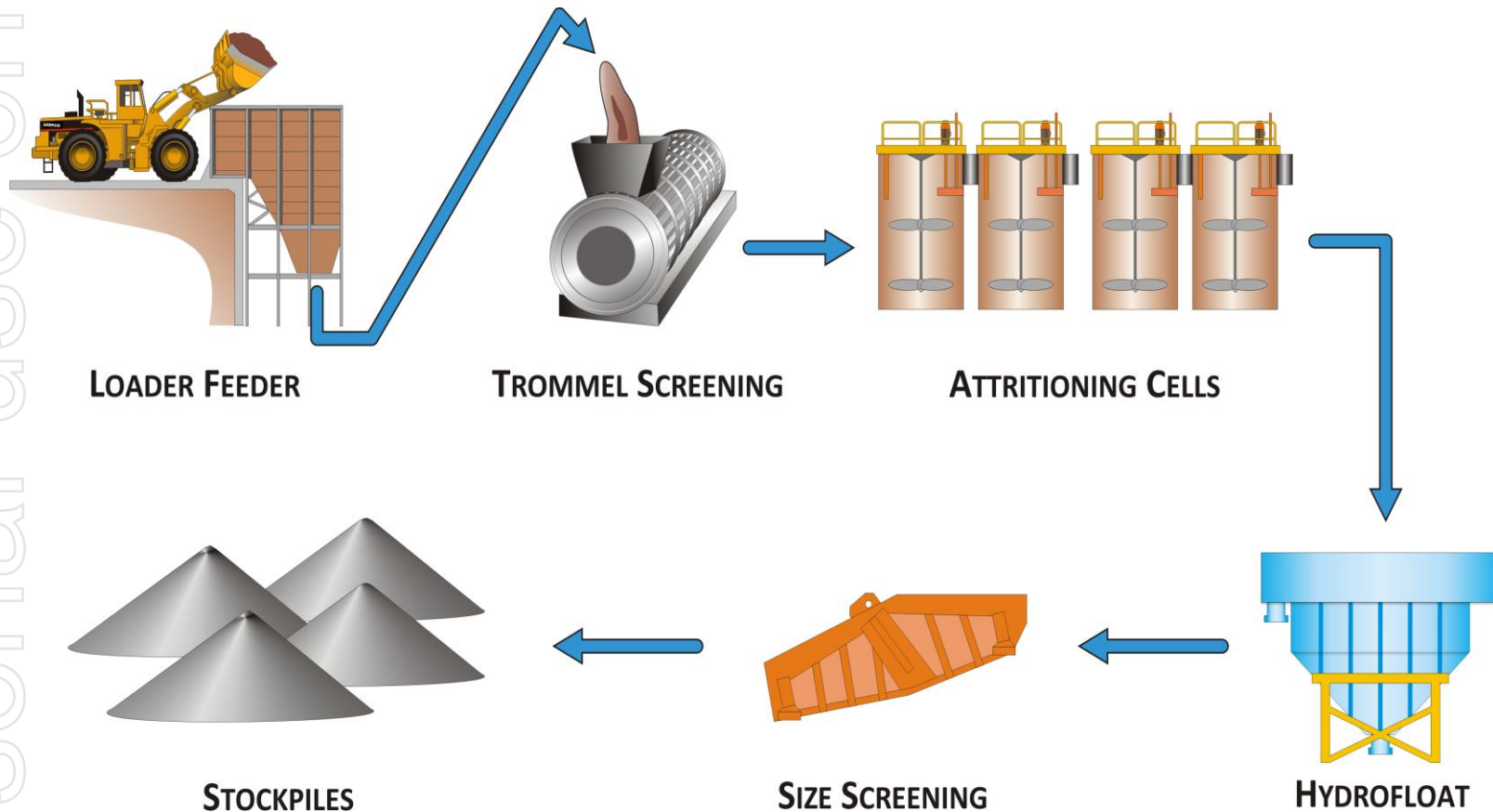




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# Processing Flowsheet

Simplified wet processing, multiple products, no dust, 2mtpa processing plant at each site



## Processing Plant Design



- Arrowsmith North, Arrowsmith Central and Muchea to each have 2 Mtpa processing capacity
- No toxic reagents required

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## Responsible Mining – the VRX Way

### A made-for-purpose mining method designed around continuous rehabilitation

- ❑ VRX has developed a unique and progressive mining method for its silica sand projects
- ❑ The Vegetation Direct Transfer (VDT) method provides a rapid and comprehensive regeneration of mined areas based on continuous rehabilitation as mining progresses
- ❑ The VDT method removes a 400mm-deep sod with topsoil containing the vast majority of native flora and invertebrate fauna remaining intact
- ❑ Root structures in the loose sand are relatively shallow at 200-300mm in depth





# Sustainability, Environmental, Social and Governance (ESG)

VRX is delivering on its ESG responsibilities aligned to the UN's Sustainable Development Goals

## SUSTAINABLE DEVELOPMENT GOALS



### CLEAN ENERGY

Utilising reliable, renewable modern energy

### ECONOMIC GROWTH

Enhancing economic and productive employment

### INDUSTRY INNOVATION

Building resilient infrastructure and fostering innovation

### SUSTAINABLE COMMUNITIES

Respecting heritage values

### RESPONSIBLE PRODUCTION

Employing sustainable mining methods

### CLIMATE ACTION

Reducing emissions from production

### REHABILITATION PLAN

Employing direct vegetation transfer as a unique rehabilitation method



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# Right Time, Right Place

**Opportunity for WA to capture its economic advantages of silica sand and gas reserves to build world-class glass manufacturing and downstream processing industries**

- Very long life, high-grade silica sand supply with combined 1.12 billion tonne Resource, 99.6% to 99.9% SiO<sub>2</sub> grade (see Appendix Summary of Mineral Resource Estimates)**
- WA domestic gas reserves and burgeoning hydrogen projects in mid-west**
- Long term supply of essential raw materials and green energy for glass manufacturing (gas/solar/hydrogen)**
- High-tech ultra-clear glass production capability from Muchea**
- Manufacturing of solar panels in WA for a huge and growing market in Australia**





**VRX**SILICA

Thank you

**Bruce Maluish**

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# Appendix

Project	Classification	Mt	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	Fe <sub>2</sub> O <sub>3</sub> %	TiO <sub>2</sub> %	LOI %
Muchea	Indicated	29	99.6	0.09	0.03	0.07	0.22
	Inferred	172	99.6	0.05	0.02	0.10	0.23
	Total	208	99.6	0.06	0.02	0.10	0.23
Arrowsmith North	Indicated	248	97.7	1.00	0.40	0.20	0.50
	Inferred	523	98.2	0.80	0.30	0.20	0.40
	Total	771	98.0	0.86	0.30	0.17	0.41
Arrowsmith Central	Indicated	28.2	96.6	1.70	0.40	0.20	0.70
	Inferred	48.3	96.9	1.50	0.40	0.20	0.70
	Total	76.5	96.8	1.50	0.40	0.20	0.70
Boyatup	Inferred	60	97.8	0.83	0.23	0.13	0.88
	Total	60	97.8	0.83	0.23	0.13	0.88
<b>Total Mineral Resources</b>		<b>1.116</b>	<b>Billion Tonnes</b>				

## Assumptions Underpinning Mineral Resources and Ore Reserves

The information in this document that relates to the estimation and reporting of the Mineral Resource and Ore Reserves for the Arrowsmith North, Arrowsmith Central and Muchea Silica Sand Projects is extracted from releases to ASX on 28 August 2019, 17 September 2019 and 18 October 2019, respectively. The Company confirms that it is not aware of any new information or data that materially affects the information included in this document and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.