



2 September 2025

## Environmental Approval for Arrowsmith North Silica Sand Project

### Highlights:

- WA Minister for Environment grants environmental approval for 100%-owned Arrowsmith North Silica Sand Project
- Significant milestone that clears pathway for binding offtakes, financing and project development
- First production targeted for H2 2026
- Arrowsmith North is a globally significant, high-quality and long-life silica sand project for foundry, container glass and flat-glass markets in Asia

VRX Silica Limited (**VRX** or **Company**) is pleased to announce it has received Western Australian Ministerial approval under Part IV of the Environmental Protection Act 1986 (**Act**) for the proposed development of its 100%-owned Arrowsmith North Silica Sand Project (**Arrowsmith North**), through the issue of a *Statement That A Proposal May Be Implemented* (**Statement 1252**), signed by the Hon Matthew Swinbourn MLC, Minister for the Environment.

This follows confirmation in late June that the Minister had determined the Environmental Protection Authority of Western Australia's (**EPA**) assessment of Arrowsmith North was adequate, and further assessment is not required.

State environmental approval paves the way for VRX to secure remaining ancillary approvals and finalise project infrastructure agreements, binding offtake and financing. In early August the Western Australian Department of Mines, Petroleum and Exploration (**DMPE**) approved VRX's Mining Proposal for Arrowsmith North, allowing for the commencement of mining operations at the project subject to standard mining and closure conditions including environmental approval.

Conditions attached to State environmental approval include staged mining, achievement of specified environmental outcomes, rehabilitation and ongoing reporting, which have been previously agreed and align with VRX's commitment to safe, sustainable and responsible operations at Arrowsmith North.

### ASX: VRX

#### Capital Structure

Shares on Issue:

747 million

Options on issue:

34.2 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.

#### Geothermal Energy

**Dandaragan Geothermal Energy Permit**, 145km north of Perth, WA

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

Arrowsmith North, 270km north of Perth, contains a globally significant deposit of high-quality silica sand underpinning a mining project that will enable long term production for the foundry, container glass and flat-glass markets in Asia. As detailed in the updated bankable feasibility study announced to ASX in March 2024, Arrowsmith North has a JORC-compliant Proved and Probable Ore Reserve of 221Mt @ 99.5% SiO<sub>2</sub> and VRX is proposing for Arrowsmith North to ramp-up from approx. 1Mtpa to produce more than 2Mtpa of silica sand for decades.<sup>1</sup> Extensive product testing by prospective customers has confirmed the attractiveness of Arrowsmith North silica sand.

Globally, the silica sand market is experiencing strong growth, driven by rising demand in the construction sector — particularly for flat glass used in windows — and for automobile glass in Asia's growing automotive industry. The foundry market is also experiencing strong growth, driven by increasing demand in established markets in South Korea, Japan and China and emerging markets in Thailand and India amid an industry wide expansion and diminishing supplies across Asia.

Australia is currently the largest exporter of silica sand in the Asia-Pacific region. Exports are dominated by multi-national groups with exports last year exceeding 3.3 million tonnes.

For Arrowsmith North, other permitting and approvals processes have run in parallel to the State environmental approvals process and State remaining approvals are expected to follow in coming weeks. These include a Part V Works Approval from the Department of Water and Environmental Regulation (**DWER**) for construction of the processing plant and a Groundwater Abstraction Licence also from DWER. Significantly, approval for the Mining Proposal from DMPE was granted in early August.<sup>2</sup> Federal environmental approval under the accredited assessment regime from the Department of Climate Change, Energy, the Environment and Water is expected in 6 to 8 weeks.

VRX is now focusing on finalising binding offtake agreements, project infrastructure agreements including logistics and transport, mining services, power supply and construction contracts and project finance. First production is targeted for H2 2026 with discussions on all fronts being advanced.

Bruce Maluish, VRX Managing Director, said, *"We are delighted to receive approval from the Minister for the Environment for the development of the Arrowsmith North Silica Sand Project. This is a significant milestone for VRX and clears the pathway to finalise remaining approvals and permitting. It has been a rigorous and at times exhaustive approvals process that followed due process to ensure the right and responsible outcomes."*

*"We now look forward to maintaining engagement with all our Arrowsmith North stakeholders as we move towards commencement of construction followed by mining. VRX is now actively focused on finalising infrastructure solutions for the project, binding offtake agreements and project finance, with a goal of first production in 2026."*

*"Arrowsmith North presents an opportunity for Western Australia to host an environmentally responsible, high-quality silica sand operation that can service the growing glass and foundry markets in Asia and underpin the establishment of a new long-life export industry in the State's Mid West region."*

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<sup>1</sup> Updated bankable feasibility study released to ASX (ASX announcement "Arrowsmith North Updated BFS" dated 6 March 2024). See also Resource and Reserve table and Compliance Statement in the appendix to this announcement.

<sup>2</sup> ASX announcement "DMPE Approves Mining Proposal for Arrowsmith North Silica Sand Project" dated 8 August 2025.

In January 2025, the Company announced that the EPA had published its assessment report for the Arrowsmith North proposal and recommended to the Minister for the Environment that the proposal may be implemented, subject to conditions that had been accepted by VRX following consultation with the EPA. In late January 2025, an appeal against the content and recommendations in the EPA report was lodged with the Office of the Appeals Convenor (**OAC**). Following a thorough investigation, the OAC submitted its report into the appeal to the Minister in early May 2025 and the Minister confirmed in June 2025 that the EPA's assessment of Arrowsmith North was adequate, and further assessment is not required. Following this, the Minister consulted with key decision-making authorities and has determined that the proposal may be implemented subject to the conditions set out in Statement 1252, which can be found at the following website:

<https://www.epa.wa.gov.au/proposals/arrowsmith-north-silica-sand-project>

The issue of the Statement 1252 by the Minister constitutes Ministerial approval for VRX.

Arrowsmith North has the potential to support a new, long-term industry in Western Australia's Mid West region and deliver benefits including long-term direct and indirect employment and royalties. VRX has considerable support from a range of stakeholders, including local Indigenous groups, local shires, the Mid West Development Commission, the Mid West Chamber of Commerce & Industry and State and Federal Governments.

This announcement has been approved for release by the Managing Director.

#### **Further information:**

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VRX Silica's interactive InvestorHub

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WEST PERTH WA 6005

## About VRX's target silica sand markets

### *Glassmaking*

Silica sand is the primary component of all types of standard and specialty glass. It provides the essential  $\text{SiO}_2$  component of glass formulation and its chemical purity is the primary determinant of colour, clarity and strength in glass. Silica sand is used to produce flat glass for building and automotive use, container glass for foods and beverages, and tableware. In its pulverised form, ground silica is required in the production of fibreglass insulation and for reinforcing glass fibres. Specialty glass applications include test tubes and other scientific tools, incandescent and fluorescent lamps, television and computer LCD/LED monitors. Glassmaking physical specifications focus on particle size, as it significantly impacts melting efficiency. Uniform grain size is preferred to reduce energy use and ensure complete melting. In fibreglass production, over 99.5% of raw material grains are smaller than 0.045 mm (45 $\mu\text{m}$ ), and tighter limits are being considered. Coarse particles are hardest to melt and can cause defects. Grain shape also matters—if too many grains are coarser than specified, incomplete melting and poor product quality can result.

Refractory heavy minerals (RHM)—such as iron, zircon, corundum, chrome spinels, rutile, and staurolite—should generally be avoided in glassmaking because they do not melt at standard glass-making temperatures. This leads to solid inclusions or defects ("stones") in the final glass. Limits on RHM are typically based on their size and amount, with particles larger than 0.25 mm (10 mesh) being the most problematic. These may be restricted by weight percentage or particle count.

### *Foundry*

Silica sand is an essential part of both the ferrous and non-ferrous foundry industries. Metal parts ranging from engine blocks to sink faucets are cast in a sand-and-clay mould to produce their external shape, often using a resin coat to create the desired internal shape. Silica's high fusion point (1,760°C) and low rate of thermal expansion produce stable cores and moulds compatible with all pouring temperatures. Its chemical purity also helps prevent interaction with catalysts or affecting the curing rate of chemical binders, for that reason, customers are looking for high quality silica sand that meets their specifications for size and shape.

Another critical specification is the hardness of silica grains to deliver the required crush resistance to high pressure from molten metals.

Arrowsmith North is capable of producing multiple high quality sand products for the foundry industry as confirmed by potential offtake partners in Asia following extensive testwork.

## About VRX Silica Limited

**VRX Silica Limited (ASX: VRX)** is the most advanced pure-play silica sand company listed on the ASX, developing its 100% owned silica sand projects at Arrowsmith (North, Brand and Central), Muchea and Boyatup in Western Australia.

Silica sand is the most used commodity on the planet after air and water. It is the main ingredient in all types of glassmaking, including specialty solar panel and high-tech glass and foundry casting. It is a finite resource that is running out, with the Asia-Pacific region experiencing an ever-growing supply shortfall that is driving up prices.

Arrowsmith is located 270km north of Perth. Arrowsmith North boasts a minimum 25-year mine life capable of producing more than 2Mt tonnes per year of high-grade (99.7% SiO<sub>2</sub>)\* silica sand for export to the foundry, container glass and flat glass markets in Asia, with permitting well advanced, and will lead production.

Muchea, located 50km north of Perth, is an ultra-high-grade (99.9% SiO<sub>2</sub>)\* silica sand project capable of producing sand required for ultra-clear glass for solar panels and other high-tech glass applications.

Boyatup, located 100km east of Esperance, is under development and capable of producing sand for the glass market.



\*Information relating to grades are extracted from releases to ASX on 28 August 2019, 11 November 2022 and 6 March 2024 (Arrowsmith North) and 18 October 2019 (Muchea). The company is not aware of any new information or data that materially affects this information.

## Appendix

### Arrowsmith North Ore Reserves and Grades

Project	Classification	Product	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 %
Arrowsmith North	Proved	AFS20	0.8	99.5	0.25	0.07	0.05	0.1
		AFS35	3.9	99.5	0.5	0.06	0.05	0.1
		AFS55	2.7	99.2	0.5	0.1	0.05	0.1
		Local	1.8					
	<b>Proved Ore Reserve</b>		<b>9.2</b>	<b>Million Tonnes</b>				
	Probable	AFS20	24.2	99.5	0.25	0.07	0.05	0.1
		AFS35	102.5	99.5	0.5	0.06	0.05	0.1
		AFS55	51.1	99.2	0.5	0.1	0.05	0.1
		Local	34.1					
	<b>Probable Ore Reserve</b>		<b>212</b>	<b>Million Tonnes</b>				
	<b>Total Ore Reserves</b>		<b>259</b>	<b>Million Tonnes</b>				

### **Compliance Statement – Ore Reserves and Grades**

The information in this document that relates to the estimation and reporting of the Ore Reserves for the Arrowsmith North silica sand project is extracted from releases to ASX on 28 August 2019, 11 November 2022 and 6 March 2024. 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 in those releases continue to apply and have not materially changed.

### **Compliance Statement – Production Target**

The information in this document that relates to the Company's production target for the Arrowsmith North silica sand project is extracted from releases to ASX on 6 March 2024. 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 underpinning the production target continue to apply and have not materially changed.

The Company also confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the relevant original market announcements.