

MARKET REPORT

Australian Quartz & High-Purity Silica

Export Opportunities to China

A Focus on the Caloola Quartz Project, Bathurst, NSW

Prepared August 2026

Compiled from Caloola project technical materials, Geoscience Australia and NSW Geological Survey publications, industry pricing data, and public market research

This report is for general informational purposes only and does not constitute investment, legal, or financial advice. It has not been prepared by, and is not endorsed by, any project operator or listed company named herein. Figures drawn from third-party sources should be independently verified before use in commercial or investment decisions.

Contents

Executive Summary

1. Introduction

2. The Caloola Quartz Project

3. The Global High-Purity Quartz and Silica Sand Market

4. China: Market Structure, Demand and Trade Access

5. Competitive Landscape

6. Positioning Caloola for Export to China

7. Risks and Considerations

8. Conclusions and Recommendations

Sources

Executive Summary

Australia is the world's second-largest exporter of silica sand, shipping roughly US\$216 million of material annually into an Asia-Pacific technology supply chain in which China is the single largest buyer, primarily for solar photovoltaic (PV) glass and float glass manufacturing, alongside Japan (semiconductor and precision electronics) and Taiwan (chip foundry and AI hardware). Demand for high-purity silica (HPS) and high-purity quartz (HPQ) is being pulled upward by the global energy transition and by geopolitical concern over supply-chain concentration, most visibly exposed when Hurricane Helene disrupted the Spruce Pine, North Carolina mines in late 2024 — the source of the great majority of the world's ultra-high-purity quartz used in semiconductor and solar crucibles.

Within this context, the Caloola quartz deposit near Bathurst, New South Wales, has been identified by Geoscience Australia and the NSW Geological Survey as one of the two most promising hydrothermal-vein HPS prospects in the state (alongside Clarkes Quartz Reef). Recent sampling under method ME-PKG85 averaged 99.89% SiO₂, with individual results up to 99.94%, and historical assays have reached 99.8% SiO₂ — placing Caloola credibly within reach of industrial and, with further beneficiation and impurity characterisation, high-purity specifications. Inferred resources are estimated at approximately 370,000 t (Vein A) and 50,000 t (Vein B), with at least five outcropping veins mapped across the deposit.

This report finds that Caloola's most realistic pathway into the China market is tiered and sequential rather than a single product play: (1) an immediate, low-capital domestic revenue stream from decorative quartz gravel and landscaping boulders, which does not depend on export approval or processing capacity; (2) a medium-term opportunity to supply beneficiated silica sand and intermediate HPQ (3N5–4N) feedstock into China's very large — but currently oversupplied and margin-thin — glass and metallurgical silicon markets; and (3) a longer-term, capital- and qualification-intensive opportunity in ultra-high-purity HPQ (4N7 and above) for solar crucible and semiconductor applications, where pricing is an order of magnitude higher but where China is itself investing heavily to reduce import dependence, arguing for a diversified customer base across China, Japan, Taiwan, Korea, the United States and Europe rather than reliance on China alone at the top of the value pyramid.

China remains the indispensable market for the base and middle of that value chain, and Bathurst's proximity to Sydney-region ports gives Caloola a logistics advantage over more remote Australian HPQ prospects. But the project is still an early-stage exploration asset without a defined JORC-compliant resource in the public record, and the commercial case depends on beneficiation test work, contaminant (Fe, Al, Ti, Li, B) characterisation, and the 12–36 month customer qualification cycles that dominate this industry more than geology does.

1. Introduction

This report examines the market opportunity for exporting Australian quartz and silica sand products to China, with a specific focus on the Caloola Project near Bathurst, New South Wales. It draws on three source materials describing the Caloola deposit and the current high-purity quartz (HPQ) pricing environment, on Geoscience Australia's 2026 national-scale assessment of high-purity silica (HPS) mineral systems, on the NSW Department of Primary Industries and Regional Development's 2025 study of high-purity silica in NSW, and on current public market research into global and China-specific demand for silica sand and HPQ products.

“Quartz and silica sand” in this context spans a wide value chain — from bulk decorative gravel and float-glass sand at the lower-value, high-volume end, through solar glass sand and specialty/EMC glass sand in the middle, to intermediate, high-grade, ultra-high and hyper-pure HPQ feedstock at the top, where prices can exceed US\$20,000 per tonne. Understanding where a given deposit and its likely processed products sit on this pyramid is central to assessing its China export potential, because the market dynamics, competitors, customers and qualification barriers differ sharply by tier.

2. The Caloola Quartz Project

2.1 Location and Geological Setting

The Caloola quartz deposit is located approximately 20 km south of Bathurst, New South Wales, in the Lachlan Orogen. It comprises at least five outcropping quartz veins hosted by Silurian felsic metavolcanic and volcanoclastic rocks of the Bells Creek Volcanics and Campbells Formation, with minor metamorphosed mudstone, chert and carbonate. The deposit is classified geologically as a mesothermal hydrothermal vein system, believed to have formed under temperatures in the order of 250–450°C. Veins A and B are the largest and most continuous, with Vein C possibly a continuation of Vein A; combined, these veins exceed 500 m of strike length.

Geoscience Australia's national HPS mineral systems assessment (Record 2026/28) and the NSW Geological Survey's 2025 statewide reconnaissance study both identify Caloola, together with the Clarkes Quartz Reef deposit near Glen Innes in the New England Orogen, as the two best-established and highest-quality HPS-prospective deposits sampled in NSW to date. The deposit's proximity to Bathurst — itself roughly 200 km west of Sydney via the Great Western Highway and Main Western rail line — is a meaningful logistics advantage relative to many competing Australian HPQ prospects located in remote parts of Western Australia, Queensland or the Northern Territory.

2.2 Resource and Purity Results

Public technical data on Caloola remains at reconnaissance/exploration stage; no JORC-compliant resource statement was identified in the course of this research. Indicative (inferred) tonnages and assay results reported in the source materials are summarised below.

Parameter	Reported Result
Inferred resource, Vein A	~370,000 t
Inferred resource, Vein B	~50,000 t
Combined strike length, Veins A–C	>500 m
Historical ME-XRF26n assays (best)	up to 99.80% SiO ₂
This-study ME-PKG85 average (n=3)	99.89% SiO ₂
This-study ME-PKG85 best result	99.94% SiO ₂ (operator-reported)
Single ME-XRF26n sample	99.74% SiO ₂

Parameter	Reported Result
Operator dataset average (Quartz Resources Pty Ltd, n≈33)	99.59% SiO ₂

Source: McGovern et al. 2026, *Geoscience Australia Record 2026/28*; Forster et al. 2025, *NSW High-Purity Silica report*; Caloola project technical documentation.

For comparison, the Clarkes Quartz Reef deposit — the other priority NSW site — returned ME-XRF26n averages of 99.31% SiO₂ (n=21) and ME-PKG85 averages of 99.63% SiO₂ (peak 99.83%), with total contaminants varying widely (378 to over 15,000 ppm), likely reflecting host-rock contamination. By contrast, the NSW study describes Caloola as having returned “several samples with >99.8% SiO₂ (HPS quality) and <2,000 ppm key impurities” under the ME-PKG85 method, and notes the quartz is “very deformed and fractured” with abundant strained fluid inclusions, but “clear and mostly free of mineral inclusions.” Ongoing LA-ICPMS and petrological work is characterising the extent to which impurities are lattice-bound (difficult to remove by processing) versus associated with fractures (which can aid acid-leach digestion of reactive species such as Fe and Ca).

Impurity habit, not bulk SiO₂ grade, is the key unresolved technical question for Caloola. The gap between 99.6–99.9% SiO₂ (industrial/intermediate grade) and the >99.95–99.999% SiO₂ with sub-100 ppm trace elements required for high-value HPQ product is typically closed through beneficiation, not exploration — and the difficulty of that step depends on whether contaminants sit in fractures/inclusions (removable) or within the crystal lattice (largely not).

2.3 Product Potential Across the Value Chain

Field mapping has also confirmed a large resource of massive white quartz suitable, with only simple crushing and screening (low capital and operating cost, including via contract crushing), for decorative gravel and landscaping feature boulders. This material is not an export product in its current form but is relevant to this report because it establishes an immediate, low-risk domestic cash-flow stream that can fund exploration and beneficiation test work aimed at the export-grade tiers discussed below. Decorative white quartz gravel wholesales through eastern Australian landscape supply outlets at roughly A\$200–300 per tonne, commanding a premium over comparable basalt product, and large feature boulders excavated from Vein D and elsewhere can command a high price for feature walls and landscaping projects.

- Tier 0 (near-term, domestic): decorative gravel and landscaping boulders — immediate cash flow, low capex/opex, no export or qualification pathway required.
- Tier 1 (float/solar glass sand, 99.5–99.7% SiO₂): achievable with conventional crushing, washing, magnetic separation and classification; largest addressable China volume but thin margins.
- Tier 2 (EMC/optical/specialty glass and intermediate HPQ, 99.8–99.95% SiO₂): requires more intensive beneficiation (acid leaching, tighter impurity control); meaningfully higher pricing.
- Tier 3 (high-grade to hyper-pure HPQ, ≥99.99% SiO₂): requires thermal purification and, at the top end, plasma/advanced refinement plus multi-year customer qualification; highest value but longest, most capital-intensive pathway and the tier where China's own supply ambitions are most direct.

3. The Global High-Purity Quartz and Silica Sand Market

3.1 Market Structure: The Silica Value Pyramid

A 2026 industrial minerals pricing update (Stratum, 2026) frames the market as a pyramid: as purity requirements rise, addressable market volume collapses, technical and qualification barriers multiply, and price rises non-linearly. The indicative 2026 structure is summarised below.

Type / Application	SiO ₂ min %	Total other oxides max %	Trace elements max (ppm)	Market size (Mtpa)	Typical price (US\$/t, FOB)
Clear float glass sand	99.5	0.5	5,000	80–90	25–40
Solar glass sand (low-iron)	99.7	0.3	2,500	45–55	35–70
EMC, LCD & optical glass	99.8	0.2	2,000	2–3	180–450
Intermediate HPQ (3N5–4N)	99.95	0.05	500	~1.0	350–800
High-grade HPQ (4N)	99.99	0.01	100	0.3–0.4	700–1,200
Ultra-high HPQ (4N7–4N8)	99.997	0.003	30	<0.15	6,000–12,000
Hyper-pure HPQ (5N minus)	99.999	0.001	<10	<0.1	15,000–30,000+

Source: Stratum 2026 industrial minerals pricing update, indicative bulk FOB-mine ranges reflecting Asia-Pacific and global trends. Spot pricing for constrained ultra-high and hyper-pure material can trade well above the ranges shown in tight years.

The report identifies five 2026 market observations of particular relevance: solar glass demand has become structurally larger than in prior benchmarks, driven by continued Asian capacity expansion (China, Vietnam, Malaysia, India); clear float glass remains volume-driven and margin-thin, moving mainly with freight and energy costs; the intermediate HPQ market has broadened toward roughly 1 Mtpa equivalent on the back of silicon-metal feedstock qualification, fused quartz components and indirect semiconductor-crucible routes; pricing at the ultra-high and hyper-pure tiers has widened further, with ex-China supply carrying a clear premium and qualification barriers now dominating price more than geology; and the effective bottleneck across the whole industry is not mining but beneficiation, thermal processing, qualification and the 12–36-month customer validation cycles that follow.

3.2 Demand Drivers

Structural demand growth is underpinned by the global shift to clean technologies. Achieving net-zero targets by 2050 is projected to quadruple overall mineral demand by 2040, and quartz feedstock demand specifically for solar energy applications has been projected to increase roughly 40-fold by 2050. Modern buyers increasingly specify individual impurity elements rather than bulk SiO₂ alone — commonly Fe₂O₃ (often under 50 ppm for solar, under 10 ppm for HPQ), Al₂O₃, TiO₂, lithium, boron and phosphorus — reflecting how sensitive downstream processes (crucible thermal behaviour, wafer yield, glass optical clarity) are to trace contamination.

3.3 Supply-Side Dynamics and the Spruce Pine Disruption

The global ultra-high-purity quartz market has historically been dominated by a small number of mines near Spruce Pine, North Carolina (operated principally by Sibelco and The Quartz Corp), which for decades supplied the great majority of the world's semiconductor- and solar-crucible-grade quartz. In late September and October 2024, Hurricane Helene caused significant damage in the region and halted production at these mines, exposing what analysts described as a critical single-source vulnerability in the global semiconductor and solar supply chain. The episode sharpened buyer and government interest in diversifying ultra-high-purity quartz supply away from a single geographic source — a dynamic directly relevant to Australian HPQ prospects such as Caloola, though it should be read as a signal of strategic buyer interest in qualification rather than a guarantee of near-term Australian market entry, given the multi-year qualification cycles the industry requires.

4. China: Market Structure, Demand and Trade Access

4.1 China as a Buyer of Australian Silica Sand

Australia is the world's second-largest exporter of silica sand and quartz sand, shipping approximately US\$216 million of product annually. China is the dominant destination within this trade, purchasing primarily for large-scale solar panel and photovoltaic glass manufacturing — reflecting China's position producing more than 80% of the world's solar panels. Japan and Taiwan are the other principal buyers of Australian material, sourcing higher-purity product for semiconductor/precision electronics and advanced chip foundry/AI hardware applications respectively. Commentary on this trade frames Chinese demand as “both an opportunity and a challenge”: it provides a large, stable market, but Australian material tends to enter a highly concentrated downstream value chain in which most of the processing margin is captured in China, and there is a policy argument (from Australian trade and critical-minerals commentators) for tying government support to further domestic beneficiation and processing capability rather than remaining a low-value bulk raw-material supplier.

4.2 China's Downstream Industries: Solar Glass, Semiconductors and Specialty Glass

China's PV glass sector is dominated by a small number of very large producers, including Xinyi Solar Holdings and Flat Glass Group (Zhejiang), which together account for a substantial share of national capacity. This sector is the largest single addressable China market for silica/silica sand by volume (solar glass sand: 45–55 Mtpa globally per the 2026 pricing table above), but it is currently oversupplied: major producers began idling furnace capacity through “cold repair” maintenance from mid-2024, with daily capacity reductions in the order of 12,000 tonnes and industry discussion of coordinated cuts of up to 30% of national capacity. This is a near-term cyclical headwind for solar glass sand feedstock volumes and pricing even though the underlying multi-decade demand trend for solar remains strongly positive.

At the high-purity end, China's semiconductor and solar-crucible industries have historically relied heavily on imported ultra-high-purity quartz, spending more than US\$1.5 billion annually on HPQ sand imports, the large majority sourced from the Spruce Pine mines. This import dependence is the single clearest “wedge” opportunity for a credible non-US HPQ supplier, including a beneficiated Australian product, though buyers in this segment apply the industry's most demanding qualification standards.

4.3 China's Push for Domestic Self-Sufficiency

China is actively working to reduce this import dependence. In 2025 China's Ministry of Natural Resources identified major new high-purity quartz deposits — including one near Qinling, Henan province, and another in the Altay region of Xinjiang — reported to total more than 35 million tonnes combined, and China has separately moved to classify high-purity quartz as a distinct mineral species to support domestic industry development. Analysts covering the discoveries suggest that successful domestic development could lower Chinese quartz crucible costs by roughly 20–30% and reduce silicon wafer manufacturing costs by US\$0.01–0.02 per unit, materially pressuring foreign suppliers, including the Spruce Pine mines, at the top of the value pyramid over time.

The practical implication for Caloola and comparable Australian HPQ prospects is that China should be treated as a large and durable market for the base and middle of the value pyramid (float and solar glass sand, intermediate HPQ), where domestic Chinese supply is unlikely to fully displace imports for years, but as a less certain long-term market at the ultra-high-purity, semiconductor-grade top of the pyramid, where Chinese state and industry strategy is explicitly aimed at import substitution. This argues for treating Japan, Taiwan, South Korea, the United States and Europe as co-equal target markets for any Caloola product that reaches 4N7 and above, rather than planning around China as the primary buyer at that tier.

4.4 Trade Policy and Logistics

Trade in Australian minerals into China is governed by the China-Australia Free Trade Agreement (ChAFTA), under which China set tariffs at zero for more than 85% of Australian exports (by 2015 value) at entry into force, rising toward 98% coverage on full implementation. Silica sand and quartz sand fall under HS heading 2505 (natural sands) and quartz/quartzite products under HS 2506; as with any commodity, the applicable duty and VAT treatment should be confirmed against the current China tariff schedule (via the DFAT FTA Portal or a customs broker) for the specific processed form and HS subheading the project intends to export, since duty treatment can differ between raw sand, crushed/screened quartz, and further-processed HPQ product.

On logistics, Bathurst sits inland, connected to Sydney by the Great Western Highway and the Main Western rail line. The nearest deep-water bulk export gateways are the Sydney basin ports (Port Botany) and Port Kembla, roughly 200–250 km from site, both of which handle bulk mineral trades with established rail links; Newcastle is a further alternative for bulk export further north. Actual port and rail contracting, haulage cost, and berth/vessel-size suitability for the specific product form (bulk sand versus bagged/containerised HPQ) would need to be confirmed with logistics providers as the project matures, but in relative terms Caloola's inland-NSW location compares favourably on transport distance with HPQ prospects in remote Western Australia, Queensland or the Northern Territory.

5. Competitive Landscape

Caloola would compete, at different tiers of the value pyramid, against an existing Australian HPS industry and a small number of internationally significant HPQ sources.

Operation	Location	Status / product	Relevance to Caloola
Cape Flattery	Queensland, Australia	~1.8 Mtpa high-grade silica sand, incl. solar panel and display glass feedstock	Established Australian competitor at the solar/specialty glass sand tier

Operation	Location	Status / product	Relevance to Caloola
Noondine Chert (Simcoa)	Moora, Western Australia	Operating since 1989; >99.4% SiO ₂ feedstock to Simcoa's Kemerton silicon refinery	Domestic silicon-metal feedstock benchmark; vertically integrated model
Spruce Pine district (Sibelco / The Quartz Corp)	North Carolina, USA	Historic source of the large majority of global ultra-high-purity (4N7+) quartz	Dominant incumbent at the top of the pyramid; 2024 hurricane disruption exposed single-source risk
Henan (Qinling) and Xinjiang (Altay) discoveries	China	State-identified deposits, >35 Mt combined, targeted at import substitution	Long-term competitor/substitute for Australian HPQ into China's own semiconductor/solar crucible demand

This landscape suggests Caloola's most defensible competitive position in the near term is not head-to-head against Spruce Pine-grade material, but as a credible, geographically well-located Australian source of intermediate-grade product feeding China's (and the broader Asia-Pacific's) very large glass and metallurgical silicon demand, with optionality to move up the value pyramid as beneficiation test work and customer qualification progress.

6. Positioning Caloola for Export to China

6.1 A Phased, Multi-Tier Product Strategy

Given the geological, processing and qualification realities set out above, a phased approach is likely to de-risk the project financially while building toward higher-value export product:

- Phase 1 – Domestic cash flow: contract crushing/screening of decorative gravel and feature boulders into the existing eastern-Australian landscape supply market (A\$200–300/t), funding further drilling, resource definition and beneficiation test work without export or qualification risk.
- Phase 2 – China bulk/intermediate export: development of a beneficiated silica sand or intermediate HPQ (3N5–4N) product targeting China's float/solar glass and metallurgical silicon buyers, where volumes are large but pricing and margins are the thinnest in the pyramid, and China is likely to remain the natural first export market given proximity and existing trade flows.
- Phase 3 – Diversified high-purity export: subject to confirming impurity habit (lattice-bound versus removable) and securing thermal/advanced processing capability, pursuit of high-grade to ultra-high HPQ qualification with a diversified customer set spanning China, Japan, Taiwan, Korea, the US and Europe, reflecting China's own stated ambitions to reduce import reliance at this tier.

6.2 Beneficiation and Qualification Pathway

Industry experience summarised in the 2026 pricing update frames this as a three-stage gate: geology (necessary but not sufficient — Caloola's SiO₂ grades and generally low bulk contaminants clear this gate encouragingly, though impurity habit remains to be fully characterised); beneficiation and processing (the capital gate — crushing/classification, magnetic separation, acid leaching, and, for higher tiers, thermal or

plasma/advanced refinement, where capex rises sharply and yield losses begin to matter); and customer qualification (often the least visible but most decisive stage, requiring 12–36 months of batch-to-batch consistency testing, thermal-behaviour validation and contamination-free logistics before large-tonnage supply contracts are typically awarded, particularly for solar-crucible and semiconductor buyers).

6.3 Why China, Specifically

China's combination of scale (the largest single buyer of Australian silica sand), proximity (shorter bulk shipping routes from NSW ports than to Europe or the Americas), and existing trade infrastructure (ChAFTA tariff preferences, established bulk mineral shipping lanes) makes it the logical first export market for Caloola's mid-tier product once beneficiation capacity is established. The most durable case for China exposure sits in float/solar glass sand and intermediate HPQ, where China's own high-purity discoveries and PV glass overcapacity are least likely to displace imports in the near-to-medium term. The case for treating China as the primary buyer of Caloola's eventual highest-value product (ultra-high or hyper-pure HPQ) is weaker, given China's explicit, well-funded strategy to substitute imports at that tier — reinforcing the case for a diversified, ex-China-inclusive customer strategy once the project can produce qualification-grade material.

7. Risks and Considerations

- Early-stage exploration status: no JORC-compliant resource for Caloola was identified in the public record; inferred tonnages (~370,000 t Vein A, ~50,000 t Vein B) and purity averages are indicative, not a defined economic resource, and further drilling and metallurgical test work are required before a mine plan or export volumes can be committed.
- Impurity habit uncertainty: ongoing LA-ICPMS and petrological studies have not yet fully resolved whether key trace contaminants are lattice-bound (difficult/costly to remove) or fracture/inclusion-associated (more amenable to acid leaching) — this materially affects which product tiers are realistically achievable and at what processing cost.
- China PV glass oversupply: China's solar glass industry is mid-cycle in a capacity-cut phase (furnace “cold repairs,” proposed ~30% industry-wide reductions), which is likely to soften near-term demand and pricing for the largest-volume tier (solar/float glass sand) even as the long-run solar demand trend remains positive.
- China's self-sufficiency drive at the high-purity tier: state-identified 35+ Mt HPQ discoveries in Henan and Xinjiang, and moves to formally classify HPQ as a strategic mineral, signal a deliberate long-term reduction in China's HPQ import reliance, which is a headwind specifically for any Caloola strategy that relies on China as the primary buyer of ultra-high-purity product.
- Capital intensity and qualification timelines: moving up the value pyramid requires progressively larger capital investment in beneficiation/thermal processing and multi-year (12–36 month) customer qualification cycles; the industry view summarised in the 2026 pricing update is that processing and qualification, not mining, is the real bottleneck to monetising HPQ discoveries.
- Trade policy and classification risk: duty, VAT and any non-tariff measures applicable to the specific processed product form and HS classification should be confirmed with a customs broker or via the

DFAT FTA Portal before commercial planning, as treatment can differ between raw sand, crushed quartz and higher-purity processed product.

- Corporate/identification risk: the project operator is referred to in source materials as Quartz Resources Pty Ltd; this is a distinct entity from the ASX-listed Australian Silica Quartz Group Ltd (ASX: ASQ), which was not found to hold or reference a Caloola project in its public disclosures. Readers should independently confirm current ownership, tenement status and corporate structure before relying on this report for transactional purposes.

8. Conclusions and Recommendations

The Caloola quartz deposit combines encouraging purity results (recent sampling averaging 99.89% SiO₂, with a best result of 99.94%), a favourable inland-NSW logistics position relative to most competing Australian HPQ prospects, and immediate optionality for low-capex domestic cash flow through decorative gravel and boulder sales. These are genuine advantages in a global HPQ/silica sand market where China alone anchors a very large and growing downstream glass and electronics manufacturing base, and where recent supply shocks (the Spruce Pine hurricane disruption) and geopolitical dynamics have sharpened buyer interest in supply diversification.

However, the project's China export case is strongest at the base and middle of the value pyramid — silica sand and intermediate HPQ into China's glass and metallurgical silicon industries — where China's scale and trade proximity are decisive advantages, notwithstanding a near-term cyclical glut in Chinese solar glass capacity. The case is considerably more qualified at the ultra-high-purity, semiconductor/solar-crucible tier, where the highest prices are available but where China's own well-funded push for domestic HPQ self-sufficiency argues for building a diversified, multi-country customer base (Japan, Taiwan, Korea, the United States, Europe) rather than a China-only strategy.

Recommended next steps for the project include: completing resource definition drilling to a reportable (JORC-compliant) standard; commissioning beneficiation and impurity-habit test work (including LA-ICPMS lattice analysis) to determine realistic achievable product tiers; initiating early-stage discussions with Chinese float/solar glass and metallurgical silicon buyers for mid-tier product, in parallel with exploratory conversations with ex-China semiconductor/solar-crucible buyers for any eventual high-purity product; confirming HS classification and duty/VAT treatment for the specific intended product forms; and using near-term decorative gravel and boulder sales to fund this work without dependence on export timing.

Sources

Project and Technical Documents Provided

- Caloola project documentation: Highlights from National-scale mineral potential assessment of high purity silica mineral systems in Australia, Record 2026/28, Geoscience Australia (McGovern, J., Senior, A., Ford, A., Jennings, A., Richards, S. and Guerin, K., 2026). DOI: 10.26186/151195.
- Forster, D., Stefani, G., Talbot, L., Cathers, G. and Hill, S. 2025. High-purity silica in New South Wales. NSW Department of Primary Industries and Regional Development / Geological Survey of NSW.
- 2026 Price Guide: Silica Sand and High Purity Quartz Products (Stratum, 2026 industrial minerals pricing update) — provided Caloola project price and product guide.

Public Research

- Australian Institute of International Affairs, “Australia's Silica Sand Problem: Why It Belongs in Indo-Pacific Supply-Chain Strategy,” Australian Outlook.
- CNBC, Tom's Hardware, NBC News and IndustryWeek coverage of Hurricane Helene's impact on Spruce Pine, North Carolina quartz mines, October 2024.
- South China Morning Post, pv magazine International and Indian Defence Review coverage of China's Henan (Qinling) and Xinjiang (Altay) high-purity quartz deposit discoveries and self-sufficiency strategy, 2025.
- Yicai Global, “Big Chinese Solar Glass Makers Confirm Output Cuts Amid Supply Glut,” and “China Adds High-Purity Quartz to Nation's List of Mineral Species, Boosting Self-Sufficiency.”
- Australian Government Department of Foreign Affairs and Trade, ChAFTA guidance materials and FTA Portal.
- Australian Silica Quartz Group Ltd (ASX: ASQ) public investor materials (referenced for competitive-landscape context; note this company was not found to be associated with the Caloola project).
- Geoscience Australia, “New insights into Australia's unknown potential for high-purity quartz resources.”

This report was compiled by Claude (Anthropic) from the documents supplied by the user and from publicly available web sources as of August 2026. Market sizing, pricing and forecast figures are third-party estimates and should be independently verified before being relied upon for investment, financing or transactional decisions.