Archer Materials Limited (ACN: 123 993 233)
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ASX Announcement (ASX: **AXE**) 12 May 2026

Archer strengthens pathway to quantum device manufacturing

Highlights

- Archer remains on track toward demonstrating a working qubit this year, representing a major milestone in the Company's quantum technology development program.
- The Company is now advancing beyond laboratory-scale devices and beginning to work towards wafer-scale manufacturing using semiconductor industry-standard processes, an important step toward scalability and future commercialisation.
- Archer has successfully completed multiple design, fabrication, and testing cycles, demonstrating growing capability to manufacture graphene-based quantum devices using repeatable and scalable fabrication methods.
- The same graphene and semiconductor technologies being developed for Archer's qubit program may also unlock commercial opportunities in high-growth markets, including AI infrastructure, quantum technologies, THz sensing, photonics, and advanced cloud computing systems.
- Archer's strategy is focused not only on building a qubit, but on developing manufacturable quantum technologies that can integrate into existing semiconductor supply chains and foundry environments.
- The Company's progress strengthens Archer's position as an emerging Australian quantum technology company developing advanced semiconductor devices with potential applications across AI/cloud infrastructure, computing, sensing, and next-generation electronics markets.

Archer Materials Limited ("Archer", the "Company", "ASX: AXE"), a quantum company developing technologies in computing, sensing, and medical diagnostics, is advancing towards wafer-scale manufacturing of its qubit technology, marking another key step in the Company's progress from laboratory-based development to scalable semiconductor production.

Building on a foundation of proven delivery

Archer continues to make strong progress in developing its qubit technology, with work advancing toward the Company's target of demonstrating a working qubit. Recent development efforts have focused on refining the underlying device structures and fabrication processes, increasing confidence in the technology's performance and manufacturability. Archer's development program is beginning to move from early-stage device validation to scalable production pathways.

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Over recent months, Archer has completed multiple device design, fabrication, and testing cycles, enabling the team to refine manufacturing processes and validate critical device components required for qubit operation. These activities have demonstrated encouraging progress in producing devices using processes compatible with larger-scale semiconductor manufacturing. The work also establishes a strong foundation for ongoing optimisation and performance improvements as the technology matures.

These achievements reinforce a clear pattern of delivery across Archer's quantum technology programs. The Company's strong track record—evidenced by milestones in chip design validation, device fabrication, and quantum signal detection—demonstrates its ability to meet technical and operational objectives. Investors can be confident that Archer's capability and sustained progress position the Company well to deliver on its next phase of work.

Advancing towards scalable quantum device manufacturing

Following the initial qubit demonstration, Archer's development efforts will increasingly focus on transferring fabrication processes into foundry-compatible manufacturing environments and implementing a continuous improvement program to enhance qubit performance.

This next stage is intended to support both the technical advancement of the qubit technology and the establishment of scalable manufacturing capabilities that are important for future commercial applications in quantum computing and related technologies. This is an important step because it signifies an important progression in Archer's roadmap towards scalable quantum device production compatible with established semiconductor manufacturing infrastructure.

By transitioning to wafer-scale processes, Archer expects to achieve:

- Improved device consistency and reproducibility across multiple fabrication runs
- Higher throughput and efficiency in device manufacturing
- Enhanced scalability and compatibility with industrial foundry environments

These outcomes are essential to producing quantum devices at a scale that supports long-term commercial integration into global semiconductor supply chains.

Leveraging cross-technology expertise

Recent work has focused on characterising graphene materials and fabricated devices to generate data for optimising future qubit designs and wafer-scale processing methods. These activities are helping Archer refine fabrication approaches that are intended to improve device consistency, manufacturability, and long-term scalability as the Company advances toward foundry-based production of qubit devices.

Importantly, the same graphene fabrication and device capabilities being developed for Archer's qubit program may also support additional commercial opportunities in areas such as THz sensing, photonic devices, AI infrastructure, cloud technologies, and other quantum-enabled applications. This approach allows Archer to leverage its quantum technology development program across multiple potential high-growth markets while continuing to advance its core qubit objectives.

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Commenting on the qubit and graphene development progress, Dr. Simon Ruffell, CEO of Archer, said:

“Our progress towards wafer-scale manufacturing represents an important technical and strategic milestone for Archer. It demonstrates our consistent delivery and our ability to advance toward scalable manufacturing using industry-standard processes.

Importantly, the technologies and fabrication capabilities being developed through our qubit program may also support broader opportunities across sensing, photonics, AI infrastructure, and advanced semiconductor applications. Archer’s strategy is to develop quantum technologies that can ultimately integrate into scalable manufacturing environments and existing semiconductor supply chains.

Archer’s track record of achieving its technological milestones gives investors' confidence in our capability to deliver results. The foundations we have built position us strongly as we continue developing quantum devices that can integrate within the global semiconductor ecosystem."

The Board of Archer authorised this announcement to be given to ASX.

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About Archer

Archer is a quantum technology company that operates within the semiconductor industry. The Company is developing advanced semiconductor devices, including chips relevant to quantum computing, sensing, and medical diagnostics. Archer utilises its global partnerships to develop these technologies for potential deployment and use across multiple industries. www.archerx.com.au