

ASX Announcement ([ASX: AXE](#))

12 May 2025

Archer extends partnership with Queen Mary University of London to advance qubit development

Highlights

- Archer has extended its partnership with QMUL to advance qubit development.
 - The six-month project will build on the earlier work that demonstrated single electron isolation via Coulomb blockade.
 - The goal of the project is to be able to electrically probe and measure the single electron spin states in devices made from Archer's carbon material.
 - This work is critical for developing the readout architecture and schemes for Archer's qubit technology.
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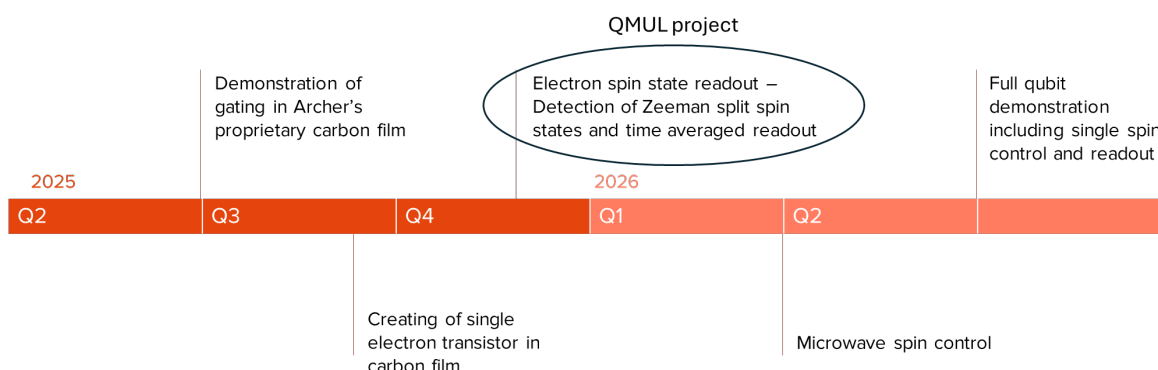
Archer Materials Limited ("Archer", the "Company", "ASX: AXE"), a semiconductor company advancing the quantum technology and medical diagnostics industries, has extended its relationship with Queen Mary University of London (QMUL) to build on critical milestone work for qubit demonstration as part of Archer's quantum technology program. The cost of the six-month extension is estimated at around A\$279,000 or £136,000.

Work already completed with QMUL has been a key part of Archer's development program (see ASX announcement 30 October 2024). The work being done with QMUL, combined with Archer's demonstration of coupling of spins to superconducting resonator micro-devices, provides the first building blocks for both readout and control of the electron spins in a qubit.

The new program of work will demonstrate key technical milestones related to qubit development. Initially, development on the single electron transistor devices will work towards identifying electron spin states in the electrical data from the devices. Later, this will allow the spin state to be readout from the qubit.

Advanced pulsed gating will then be used to measure spin relaxation measurements on the single electron devices. Again, this information is required to optimise the qubit architecture.

Intellectual property generated during the work will vest with Archer.



Timeline and key milestones towards a qubit demonstration in 1H2026. The work with QMUL will contribute to the electron spin readout milestone in Q4 of this year.

Commenting on the QMUL partnership, Simon Ruffell, CEO of Archer, said,

“Archer has already made important progress with the team at QMUL including with the Coulomb blockade; the phenomenon that allows the precise control of electrons down to a single electron.

“The work being done with QMUL bolsters the development work of quantum devices and will ultimately lead to readout. Control and readout are the key milestones we must meet in advancing towards a qubit demonstration.”

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

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About Archer

Archer is a 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.
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