

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

26 February 2025

## Archer makes significant progress on <sup>12</sup>CQ quantum project and Biochip; opens new revenue path

1H FY25 interim results and Appendix 4D.

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### Key Highlights

#### <sup>12</sup>CQ quantum project

- Enhanced control (the input of data to the qubit) of the <sup>12</sup>CQ quantum project by creating new device architecture which allows the reliable manipulation of individual electrons.
- Improved the readout (the out of data from a semiconductor) by creating two proof-of-concept superconducting circuit devices.
- Extended the quantum spin coherence lifetimes of its carbon nanosphere material and its newly developed manufacturable carbon films. while improving the films' reproducibility from sample-to-sample.
- Launched bespoke Tunnelling Magnetoresistance (TMR) sensors that uses quantum for industrial applications to open earlier pathways to revenue.

#### Biochip

- Initiated experiments for the detection of chronic kidney disease with the Biochip graphene field effect transistor (gFET). Moved closer to feasibility stages, while boosting testing accuracy for chronic kidney disease.
- Bolstered the foundry readiness and reduced the cost of manufacture by fabricating a smaller Biochip gFET design.
- Enhanced the gFET's scalability and performance, while advancing its complementary metal-oxide semiconductor (CMOS) integration, through a multi-project wafer (MPW) run at a foundry partner.

#### Corporate

- Continued implementation of an updated corporate strategy that accelerates the commercialisation roadmap of Archer's technologies.
  - Technical team expanded with new hires and collaborations with external advisors and universities.
  - Cash position of \$16.8 million and no debt to fund R&D and activities for further technology development and commercialisation of the product suite.
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Archer Materials Limited (“Archer”, the “Company”, “ASX: AXE”), a semiconductor company advancing the quantum technology and medical diagnostics industries, provides its interim results and Appendix 4D for the six months ended 31 December 2024 (“half year”).

### **Commenting on 1H FY25 activities, Greg English, Executive Chairman of Archer, said**

“Archer has made pivotal developments this half across its existing technology portfolio, while also expanding it to new and earlier potential revenue streams.

“Readout and control are important when creating a qubit, or the output and input of data, respectively. The team was able to make significant progress on both fronts for the <sup>12</sup>CQ quantum project through achieving the Coulomb Blockade phenomenon at room temperature, creating two proof-of-concept superconducting circuit devices, and extending spin coherence lifetimes for Archer’s carbon nanosphere material and its newly developed carbon films.

“The quantum sensing research has enabled the creation of bespoke TMR sensors for customers across a range of industrial applications, with the aim of replacing traditional sensing technology. The TMR sensors potentially open an earlier revenue opportunity for Archer.

“Archer’s Biochip team also advanced this technology by targeting the at-home testing of chronic kidney disease for the gFET. The Company has already made progress for the detection of chronic kidney disease with the gFET by moving closer to feasibility stages and improving its testing accuracy.

“The Archer team continues to grow as we progress our quantum and biochip projects. Over the past six months, Archer has continued to strengthen and grow under our leadership team’s strategic direction. This period of transition has reinforced what we’ve always known—our success is driven by the depth of talent, innovation, and execution across the organisation.

“These milestones were accomplished as a result of implementing Archer’s new corporate strategy to boost the pathway towards the commercialisation of its technologies. The Company’s strong balance sheet is helping facilitate the steps needed to get to bring these technologies to market.”

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

#### **Investor enquiries**

Howard Marks  
+61 402 438 019  
[howard.marks@automicgroup.com.au](mailto:howard.marks@automicgroup.com.au)

#### **Media enquiries**

Dylan Mark  
+61 475 783 675  
[dylan.mark@automicgroup.com.au](mailto:dylan.mark@automicgroup.com.au)

### **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.  
[www.archerx.com.au](http://www.archerx.com.au)

## 1. Company Details

Name of entity:	Archer Materials Limited
ABN:	64 123 993 233
Reporting period:	For the half year ended 31 December 2024
Previous period:	For the half year ended 31 December 2023

## 2. Results for announcement to the market

	31 December 2024 \$	31 December 2023 \$	Variance \$	Variance %
Revenue from ordinary activities	-	-	-	-
Profit/(loss) from ordinary activities after tax attributable to members	-	-	-	-
Net profit/(loss) for the period attributable to members	(4,416,493)	(2,809,855)	(1,606,638)	-57%

### Dividends

No dividends have been paid or proposed during the current reporting period.

### Key notes

The net loss of the Group for the half year ended 31 December 2024 was \$4,416,493 (31 December 2023: \$2,809,855) and includes:

- Share based payments expense of \$1,665,576 representing the expense for the 6-month period to 31 December 2024, associated with unlisted option vesting during the period (31 December 2023: \$1,174,271).
- Direct expenditure on quantum and biochip technology research activities (including allocation of direct personnel costs) of \$2,523,985 (31 December 2023: \$2,083,003).
- Net unrealised loss of \$510,095, associated with revaluation of Archer's financial assets as at 31 December 2024 (31 December 2023: gain of \$97,455).

The above expense items are offset by:

- \$1,150,000 of 'other income' associated with the estimated research and development tax incentive receivable based on associated expenditure for the half year to 31 December 2024 (31 December 2023: \$1,030,792); and
- Interest income of \$381,706 (31 December 2023: \$481,214).

**3. Net tangible assets**

	31 December 2024 (cents)	31 December 2023 (cents)	Variance (cents)	Variance
Net tangible assets per share	7.2 cents	9.3 cents	(2.1 cents)	(22%)

The net tangible assets calculation does not include rights-of-use assets of \$23,141 (31 December 2023: \$159,639) or intangible assets of \$606,089 (31 December 2023: \$392,976) but includes the lease liabilities of \$23,141 (31 December 2023: \$159,639).

**4. Control gained over entities**

Not applicable.

**5. Loss of control over entities**

Not applicable.

**6. Dividends**

No dividends have been paid or proposed during the current or prior reporting period.

**7. Dividend reinvestment plans**

Not applicable.

**8. Details of associates and joint venture entities**

Not applicable.

**9. Foreign entities**

*Details of origin of accounting standards used in compiling the report:*

Not applicable.

**10. Audit qualification or review**

*Details of audit/review dispute or qualification (if any):*

The Financial Report of Archer Materials Limited for the half year ended 31 December 2024 accompanying notes have been reviewed by Grant Thornton Audit Pty Ltd and the Directors do not expect any disputes or qualifications.

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## 11. Attachments

*Details of attachments (if any):*

The Financial Report of Archer Materials Limited for the half year ended 31 December 2024 is attached.

This information should be read in conjunction with the 2024 Annual Report.

Additional information supporting the Appendix 4D disclosure requirements can be found in the Director's Report and the consolidated financial statements for the half year ended 31 December 2024.

## 12. Signed

As authorised by the Board of Directors

A handwritten signature in black ink, appearing to read "Greg English".

Signed \_\_\_\_\_

Date 26 February 2025

Greg English  
Executive Chairman  
Adelaide



**ARCHER**

# **FINANCIAL REPORT**

For the half-year ended  
31 December 2024

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## About this Report

This report has been prepared for Archer stakeholders in line with statutory and regulatory obligations. It summarises the Group's operations, performance and financial position as at and for the half year ended 31 December 2024.

All references to Archer, the Group, the Company, we, us, and our, refer to Archer Materials Limited (ABN 64 123 993 233) and its subsidiaries. All dollar figures are in Australian currency unless otherwise stated. All references to half year refer to the six-month period ending 31 December 2024.

This report should be read in conjunction with the Group's Annual Report for the year ended 30 June 2024 and any public announcements made by the Group during the half year ended 31 December 2024 and up to the date of this report.

The laboratory plant and equipment shown in the photos and images in this report are not assets of the Company.

## Directors' Report

Your Directors present this report for the half year ended 31 December 2024.

### Directors

The Directors of Archer during the half year and until the date of this report are as follows:

Gregory English (Executive Chairman)

Kenneth Williams (Non-Executive Director)

Bernadette Harkin (Non-Executive Director)

### Principal activities

Archer is a technology company that operates within the semiconductor industry. The Group is working on developing advanced semiconductor devices, including technology relevant to quantum computing, quantum sensing, and medical diagnostics.

During the half year, the principal activities of the Group were:

- Progressing its technology development, including its quantum qubit ("12CQ Project") and 'lab-on-a-chip' biochip technology ("Biochip") for the potential at-home testing of chronic kidney disease.
- Launching its tunnelling magnetoresistance (TMR) sensor for possible application in artificial intelligence, data centres, automotive industries, and the Internet of Things.
- Utilising semiconductor technology development infrastructure and facilities, R&D, people and IP, to support research activities.
- Protecting key intellectual property assets (e.g. patents and international patent applications).
- Establishing and strengthening commercial partnerships.

### Summary of financial performance

The net loss of the Group for the half year ended 31 December 2024 was \$4,416,493 (31 December 2023: \$2,809,855) and includes:

- Share based payments expense of \$1,665,576 representing the expense for the 6-month period to 31 December 2024, associated with unlisted option vesting during the period (31 December 2023: \$1,174,271).
- Direct expenditure on quantum and biochip technology research activities (including allocation of direct personnel costs) of \$2,523,985 (31 December 2023: \$2,083,003).
- Net unrealised loss of \$510,095, associated with revaluation of Archer's financial assets to fair value as at 31 December 2024 (31 December 2023: gain of \$97,455).

The above expense items are offset by:

- \$1,150,000 of 'other income' associated with the estimated research and development tax incentive receivable based on associated expenditure for the half year to 31 December 2024 (31 December 2023: \$1,030,792).
- Interest income of \$381,706 (31 December 2023: \$481,214).

During the reporting period the Group's net cash position (which includes short term cash deposits) decreased by \$1,342,421 from \$18,209,820 (1 July 2024) to \$16,867,399 (31 December 2024). The Group has no corporate debt.

This decrease in cash was predominantly influenced by cash outflows associated with:

- Direct expenditure on quantum and biochip technology research activities (\$2,523,985).
- Intellectual property assets and plant and equipment (\$133,379).
- Corporate, administration and wages (net of allocations to advance materials & technology activities) expenditure (\$1,480,618).

These outflows were offset by inflows associated with:

- Research and development tax incentive in respect of the claim for the year ended 30 June 2024 (\$2,189,556).
- Interest income receipts (\$644,605).
- Receipts from sale of plant and equipment and financial assets (\$47,568).

### **Dividends**

No dividends were paid, recommended or declared during the current or previous reporting period.

### **Key risks and uncertainties**

The following are key risks that may impact Archer's financial and operating results in the future:

- The inability to successfully develop and ultimately commercialise the <sup>12</sup>CQ, Biochip and TMR sensor technologies.
- Access to suitable financing and funding arrangements.
- Dependency on the services of key service providers (e.g. foundries).
- Unfavourable changes to market or operating conditions.
- External cyber-attacks and failure to protect our information.
- Inability to access suitable laboratories and staff in Australia and overseas.
- Early termination of key agreements such as the <sup>12</sup>CQ Licence Agreement with the University of Sydney.

The half-year financial report does not include all financial risk management information and disclosures required in the annual report and as such, should be read in conjunction with the Group's most recent Annual Report released to the ASX. Readers should review and have regard to these Risks when considering the information contained in this report.

### **Risk management**

Archer has an Audit and Risk Management Committee to ensure, amongst other things, that risks are identified and assessed in a consistent manner. The Audit and Risk Management Charter is available on our website at: [archerx.com.au/corporate-governance](http://archerx.com.au/corporate-governance).

## Review of Operations

Archer Materials is creating semiconductor technologies for potential commercialisation in several high-growth industries. The Company is progressing its  $^{12}\text{CQ}$  quantum qubit, TMR sensors, and a Biochip targeting at-home testing of chronic kidney disease.

### Technology development and commercialisation activities

#### $^{12}\text{CQ}$ Project - Quantum technology development:

During the half year, Archer advanced its  $^{12}\text{CQ}$  quantum computing qubit by improving readout (the output of data on the qubit) and control (the input of data on the qubit) to enhance the operational potential of the  $^{12}\text{CQ}$  quantum technology. The quantum team achieved this by developing two proof-of-concept superconducting circuit devices that are capable of simultaneously reading outputs from up to eight separate spin materials, while enhancing its manufacturability. This work, conducted with the University of New South Wales (UNSW) and Sonnet Precision Electromagnetics, is a step toward precise quantum measurement.

The team also improved spin coherence lifetimes during the half year. Archer did this through its carbon films, which exceeded previous measurements on carbon nano-onions (CNOs). These films, created using a proprietary chemical vapor deposition process, support scalability and manufacturability goals for CNOs. Alongside this, research done with École Polytechnique Fédérale de Lausanne further extended quantum coherence spin lifetimes using the pulsed electron spin resonance (p-ESR) chip. Optimised synthesis conditions extended spin coherence lifetimes beyond 800 nanoseconds, while ensuring reproducibility across samples.

Archer improved control in collaboration with the Queen Mary University of London (QMUL) by developing a novel device architecture employing graphene electrode technology. This new architecture achieved the Coulomb Blockade phenomenon at room temperature, enabling precise control over electron behaviour. Archer and QMUL are continuing efforts to optimise the electrical and quantum properties of these devices.

#### TMR Sensors

Archer commenced the development of TMR sensor technologies, leveraging quantum phenomena to detect subtle magnetic field changes. Archer's TMR sensors aim to provide a performance edge for applications in artificial intelligence, data centres, automotive industries, and the Internet of Things, compared to traditional sensors. The Company's foundry partner, MultiDimension Technology, supplied Archer with prototype TMR sensors and is working to create bespoke sensors tailored to customer needs.

#### Biochip Development

Archer's Biochip team initiated experiments targeting chronic kidney disease detection using its graphene field-effect transistor (gFET) sensor. Initial tests successfully prepared graphene surfaces to detect ions such as potassium, a key chemical marker for renal health. This paves the way for future at-home monitoring solutions of chronic kidney disease.

The Biochip team also verified processes which enable direct graphene growth for superior device performance, avoiding earlier wafer transfer methods. Testing demonstrated the stability of devices over extended periods, even in normal air conditions.

Archer completed a multi-project wafer (MPW) run of the Biochip gFET through VTT Technical Research Centre of Finland, which advanced its complementary metal-oxide semiconductor (CMOS) integration and enhanced its performance and scalability.

Archer also fabricated a whole four-inch wafer run, through its foundry partner Applied Nanolayers, to significantly miniaturise the gFET chips, reducing the size by 97% and increasing wafer production efficiency. The wafers were then diced and assembled at AOI Electronics.

The transition to feasibility testing has yielded improved device operation and measurement accuracy, through the team creating a first version electrical conditioning procedure that sets individual gFETs to a condition of high test-to-test repeatability. The new electrical conditioning procedure enhanced measurement repeatability by a factor of ten.

## Archer's technology patents and patents pending

The below tables detail Archer's patents and patents pending for the Quantum and Biochip technologies at the date of this report.

### Quantum technology

Priority Date & Stage	Title & Summary	
3 Dec 2015	<b>A quantum electronic device</b>	
Granted	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Japan	JP 6809670
	South Korea	KR 10-2288974
	China	CN 4606612
	United States of America	US 11,126,925
	Australia	AU 2016363118
	Hong Kong	HK 1256636
	Europe (validated states):	EP 3383792
	Belgium, Switzerland, Germany, Spain, France, United Kingdom, Republic of Ireland, Italy, Netherlands, Sweden, Turkey.	
9 Jun 2023	<b>Electron spin containing materials and methods for producing said materials</b>	
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia	PCT/AU2024/050606

### Biochip technology

Priority Date & Stage	Title & Summary	
15 Feb 2019	<b>Graphene complexes and compositions thereof</b>	
Granted	<i>Patent Office</i>	<i>Patent/Application Number</i>
	United States of America	US 12,202,730
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia	AU 2020220236
31 Mar 2022	<b>Fabrication and processing of graphene electron devices on silicon with a SiO<sub>2</sub> passivation layer</b>	
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia	AU 2023242796
	Canada	CA 3246577
	China	CN 202380038942.6
	Europe	EP 23777508.5
	Japan	JP 2024-557938
	Korea	KR 10-2024-7036460
	USA	US 18/850,697
17 Oct 2022	<b>Nanofabrication of electronic device components</b>	
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia	PCT/AU2023/051025
1 Dec 2021	<b>Detection and quantification of nucleic acids</b>	
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia	AU 2022401057
	China	CN 202280080331.3
	Europe	EP 22899651.8
	Japan	JP 2024-533095
	USA	US 18/715,693
11 Nov 2022	<b>A device, system, and method for sensing an electronic property of fluid sample</b>	
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia	PCT/AU2023/051141
23 Dec 2022	<b>Methods for fabrication of graphene field effect transistors with a liquid top-gate and associated componentry</b>	
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia	PCT/AU2023/051357
21 June 2024	<b>Graphene field effect transistors and methods for their production</b>	
Pending	<i>Patent Office</i>	<i>Patent/Application Number</i>
	Australia (provisional)	AU 2024901889

## Changes in equity

The following changes in equity took place during the half-year period:

- 17,250,000 unlisted options to acquire fully paid ordinary shares in the Company (Options) were issued to Directors and employees of Archer following shareholder approval at the Company's Annual General Meeting held on 20 November 2024. Options are exercisable at \$0.5340 each on or before 30 June 2028. Options not exercised before 30 June 2028 will lapse.
- 6,000,000 unlisted options with an exercise price of \$1.79 and expiring on 31 May 2025, lapsed in accordance with the terms of which they were issued.

There were no changes in equity during the reporting period.

## Significant changes to the state of affairs

The Company announced to ASX on 12 July 2024 that Dr Choucair would step down from the CEO role on 17 January 2025 to ensure a smooth transition and handover. Subsequently, on 14 October 2024, the Group announced to ASX that Dr Choucair and the Company mutually agreed for Dr Choucair to step down from the CEO role with immediate effect from that date.

The Directors are not aware of any significant changes in the state of affairs of the Group occurring during the half-year ended 31 December 2024, other than as disclosed in this half year report.

## Events subsequent to the end of reporting date

On 22 January 2025, the Company announced the granting a key patent in the United States of America ("US Patent") associated with Archer's Biochip technology, protecting the Company's related intellectual property ("IP") rights in the US. The US Patent (Patent No. 12202730) represents the work done in Archer's development of the biosensing chip for graphene complexes and their compositions that can be used in biomolecular sensing. The Company considers the US as a critical strategic jurisdiction to protect and potentially commercialise its Biochip IP. Patent protection in the US is required for any future commercialisation operations in the US, and also provides Archer with access to the world's largest economy<sup>1</sup> to exploit IP rights related to the Biochip.

The Directors are not aware of any other matter or circumstance that has arisen since the end of the half year that has significantly affected, or may significantly affect the operations of the Group, the results of those operations, or the state of affairs of the Group in future financial years.

## Auditor's Declaration

The auditor's independence declaration as required under section 307C of the Corporations Act 2001 is set out on page 8 and forms part of the director's report for the financial half-year ended 31 December 2024.

This report is signed in accordance with a resolution of the Board of Directors.



**Greg English**  
Executive Chairman

Adelaide

Dated this 26<sup>th</sup> day of February 2025

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<sup>1</sup> <https://www.weforum.org/reports/the-global-competitiveness-report-2020>

## Auditor's Independence Declaration



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Grant Thornton Audit Pty Ltd  
Grant Thornton House  
Level 3  
170 Frome Street  
Adelaide SA 5000  
GPO Box 1270  
Adelaide SA 5001  
T +61 8 8372 6666

## Auditor's Independence Declaration

### To the Directors of Archer Materials Limited

In accordance with the requirements of section 307C of the *Corporations Act 2001*, as lead auditor for the review of Archer Materials Limited for the half-year ended 31 December 2024. I declare that, to the best of my knowledge and belief, there have been:

- a no contraventions of the auditor independence requirements of the *Corporations Act 2001* in relation to the review; and
- b no contraventions of any applicable code of professional conduct in relation to the review.

A stylized blue signature of Grant Thornton.

GRANT THORNTON AUDIT PTY LTD  
Chartered Accountants

A blue ink signature of J L Humphrey.

J L Humphrey  
Partner – Audit & Assurance

Adelaide, 26 February 2025

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## Statement of Profit or Loss and Other Comprehensive Income

(For the half-year ended 31 December 2024)

		CONSOLIDATED GROUP	
	NOTES	31 December 2024	31 December 2023
		\$	\$
<b>REVENUE</b>			
Revenue from ordinary activities		-	-
Research and development tax concession		1,209,556	1,036,728
Other income	3	381,706	578,669
		<b>1,591,262</b>	<b>1,615,397</b>
<b>EXPENSES</b>			
Depreciation expense		(106,602)	(48,080)
Amortisation of intangibles		(19,079)	(12,712)
Quantum and biochip technology research expenditure		(2,523,985)	(2,083,003)
Employee benefits expense		(615,711)	(567,399)
Share based payments expense	10	(1,665,576)	(1,174,271)
ASX listing and share registry expense		(103,391)	(103,617)
Corporate consultants / public relations expenses		(239,854)	(254,545)
Fair value loss on financial assets		(510,095)	-
Other expenses		(223,462)	(181,625)
<b>LOSS BEFORE INCOME TAX EXPENSE</b>		<b>(4,416,493)</b>	<b>(2,809,855)</b>
Income tax benefit		-	-
<b>LOSS ATTRIBUTED TO MEMBERS OF THE PARENT ENTITY</b>		<b>(4,416,493)</b>	<b>(2,809,855)</b>
Other comprehensive income		-	-
<b>TOTAL COMPREHENSIVE INCOME ATTRIBUTABLE TO MEMBERS OF THE PARENT ENTITY</b>		<b>(4,416,493)</b>	<b>(2,809,855)</b>
<b>LOSS PER SHARE</b>		Cents	Cents
Basic and diluted loss per share		(1.73)	(1.10)
<b>LOSS PER SHARE FOR CONTINUING OPERATIONS</b>			
Basic and diluted loss per share		(1.73)	(1.10)

The accompanying notes should be read in conjunction with the financial statements.

## Statement of Financial Position

(As at 31 December 2024)

	NOTES	CONSOLIDATED GROUP	
		31 December 2024	30 June 2024
		\$	\$
<b>ASSETS</b>			
<b>CURRENT ASSETS</b>			
Cash and cash equivalents	4	784,649	2,838,675
Term deposits – short term	4	16,082,750	15,371,145
Trade and other receivables	5	1,349,232	2,575,930
Other financial assets	6	18,232	567,259
Prepayments		708,804	761,236
Total current assets		18,943,667	22,114,245
<b>NON-CURRENT ASSETS</b>			
Intangible assets	7	606,089	502,754
Property, plant and equipment		126,734	163,931
Right-of-use asset – Office lease		23,141	109,309
Total non-current assets		755,964	775,994
<b>TOTAL ASSETS</b>		19,699,631	22,890,239
<b>CURRENT LIABILITIES</b>			
Trade and other payables		417,124	614,090
Lease Liability		16,335	94,335
Employee entitlements		187,925	342,237
Total current liabilities		621,384	1,050,662
<b>NON-CURRENT LIABILITIES</b>			
Lease Liability		6,806	14,974
Employee entitlements		22,178	24,423
Total non-current liabilities		28,984	39,397
<b>TOTAL LIABILITIES</b>		650,368	1,090,059
<b>NET ASSETS</b>		19,049,263	21,800,180
<b>EQUITY</b>			
Issued capital	8	47,799,119	47,799,119
Reserves	9	11,322,703	14,219,548
Accumulated losses		(40,072,559)	(40,218,487)
<b>TOTAL EQUITY</b>		19,049,263	21,800,180

The accompanying notes should be read in conjunction with the financial statements.

## Statement of Changes in Equity

(For the half-year ended 31 December 2024)

	Issued Capital \$	Accumulated Losses \$	Share Based Payments Reserve \$	Total \$
<b>BALANCE AT 1 JULY 2023</b>	47,799,119	(37,170,716)	15,371,834	26,000,237
Expense associated with unlisted option vesting during the period (refer Note 10)	-	-	1,174,271	1,174,271
Transactions with owners	47,799,119	(37,170,716)	16,546,105	27,174,508
Total comprehensive loss for the period	-	(2,809,855)	-	(2,809,855)
<b>BALANCE AT 31 DECEMBER 2023</b>	<b>47,799,119</b>	<b>(39,980,571)</b>	<b>16,546,105</b>	<b>24,364,653</b>
	Issued Capital \$	Accumulated Losses \$	Share Based Payments Reserve \$	Total \$
<b>BALANCE AT 1 JULY 2024</b>	47,799,119	(40,218,487)	14,219,548	21,800,180
Expense associated with unlisted option vesting during the period	-	-	1,665,576	1,665,576
Transactions with owners	47,799,119	(40,218,487)	15,885,124	23,465,756
Transfer of share-based payments reserve to accumulated losses	-	4,562,421	(4,562,421)	-
Total comprehensive loss for the period	-	(4,416,493)	-	(4,416,493)
<b>BALANCE AT 31 DECEMBER 2024</b>	<b>47,799,119</b>	<b>(40,072,559)</b>	<b>11,322,703</b>	<b>19,049,263</b>

The accompanying notes should be read in conjunction with the financial statements.

## Statement of Cash Flows

(For the half-year ended 31 December 2024)

		CONSOLIDATED GROUP	
		31 December	31 December
		2024	2023
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		\$	\$
Payments to suppliers and employees		(1,480,618)	(1,914,006)
Payments for quantum and biochip technology research activities		(2,523,985)	(2,083,003)
Research & development tax concession		2,189,556	1,455,936
Interest received		644,605	878,875
<b>NET CASH USED IN OPERATING ACTIVITIES</b>	11 (a)	<b>(1,170,442)</b>	<b>(1,662,198)</b>
<b>CASH FLOWS FROM INVESTING ACTIVITIES</b>			
Net (deposit)/redemption from short term deposits		(711,605)	1,474,000
Payments for intellectual property		(129,402)	(24,391)
Payment for plant and equipment		(3,977)	(37,510)
Proceeds from sale of property, plant and equipment		8,636	-
Proceeds from sale of financial assets		38,932	-
<b>NET CASH (USED IN) / PROVIDED BY INVESTING ACTIVITIES</b>		<b>(797,416)</b>	<b>1,412,099</b>
<b>CASH FLOWS FROM FINANCING ACTIVITIES</b>			
Repayment of lease liability		(86,168)	(31,458)
<b>NET CASH USED IN FINANCING ACTIVITIES</b>		<b>(86,168)</b>	<b>(31,458)</b>
Net decrease in cash held		(2,054,026)	(281,557)
Cash at beginning of period		2,838,675	772,317
<b>CASH AT THE END OF THE PERIOD</b>		<b>784,649</b>	<b>490,760</b>

The accompanying notes should be read in conjunction with the financial statements.

## Notes to the Financial Statements

(For the half-year ended 31 December 2024)

### NOTE 1 - STATEMENT OF SIGNIFICANT ACCOUNTING POLICIES

#### Basis of Preparation

These general purpose interim financial statements for the half-year reporting period ended 31 December 2024 have been prepared in accordance with the requirements of the *Corporations Act 2001* and Australian Accounting Standards including AASB 134: Interim Financial Reporting. Compliance with Australian Accounting Standards ensures that the financial statements and notes also comply with International Financial Reporting Standards.

This interim financial report covers Archer Materials Limited and its controlled entities (the Group). The financial statements do not include all of the information required for full annual financial statements and should be read in conjunction with the annual financial statements of the Group for the year ended 30 June 2024, together with any public announcements made during the half-year.

#### Significant Accounting Policies

The interim financial statements have been prepared in accordance with the same accounting policies adopted in the Group's last annual financial statements for the year ended 30 June 2024 unless otherwise stated.

#### New or amended Accounting Standards and Interpretations adopted.

The consolidated entity has adopted all of the new or amended Accounting Standards and Interpretations issued by the Australian Accounting Standards Board ('AASB') that are mandatory for the current reporting period.

Any new or amended Accounting Standard or Interpretations that are not yet mandatory have not been early adopted.

### NOTE 2 - SEGMENT REPORTING

The Directors have considered the requirements of AASB 8 - Operating segments and the internal reports that are reviewed by the chief operating decision maker (the Board) in allocating resources have concluded at this time there are no separately identifiable segments. The Group operates in one segment being materials technology research and development.

NOTE 3 - INCOME	CONSOLIDATED GROUP	
	6 months to 31 December 2024	6 months to 31 December 2023
	\$	\$
Interest income	381,706	481,214
Net fair value gain on financial assets (refer Note 6)	-	97,455
<b>TOTAL INCOME</b>	<b>381,706</b>	<b>578,669</b>

### NOTE 4 - CASH AND CASH EQUIVALENTS

	CONSOLIDATED GROUP	
	31 December 2024	30 June 2024
	\$	\$
Cash at bank and cash on hand	784,649	2,838,675
Short term deposits	16,082,750	15,371,145
<b>TOTAL CASH AT BANK AND ON HAND</b>	<b>16,867,399</b>	<b>18,209,820</b>

Short term bank deposits are at call with 30 days' notice.

## NOTE 5 – TRADE AND OTHER RECEIVABLES

	CONSOLIDATED GROUP	
	31 December 2024	30 June 2024
	\$	\$
Research and development tax receivable – FY24 claim	-	2,130,000
Research and development tax receivable – HY25 estimate	1,150,000	-
Accrued interest	109,737	372,636
Other receivables	89,495	73,294
	<b>1,349,232</b>	<b>2,575,930</b>

## NOTE 6 – OTHER FINANCIAL ASSETS

	31 December 2024	30 June 2024
	\$	\$
Financial assets designated at fair value through profit or loss		
- Listed Investment in Volatus Capital Corp (“Volatus”)	18,232	8,952
- Listed Investment in ChemX Materials Ltd (“ChemX”) – shares <sup>1</sup>	-	555,414
- Listed Investment in ChemX Materials Ltd (“ChemX”) - options <sup>1</sup>	-	2,893
	18,232	567,259
<i>Reconciliation</i>		
Reconciliation of the fair values at the beginning and end of the current and previous period are set out below:		
Opening fair value	567,259	874,879
Disposals - consideration for sale of listed shares in ChemX	(38,932)	-
Revaluation decrements	(510,095)	(307,620)
Closing fair value	18,232	567,259

<sup>1</sup> ChemX Materials Limited (ASX: CMX) was suspended from official quotation on ASX on 16 December 2024 and remained in suspension at 31 December 2024. On 2 January 2025, CMX announced that it had appointed voluntary administrators, as disclosed in their ASX release dated the same day. As at 31 December 2024 Archer Materials Limited holds 10,397,806 fully paid ordinary shares and 2,892,780 listed options in CMX. The Company has written down the fair value of its investment at in CMX to zero at 31 December 2024

### *Financial assets at fair value through profit or loss*

Financial assets not measured at amortised cost or at fair value through other comprehensive income are classified as financial assets at fair value through profit or loss. Typically, such financial assets will be either: (i) held for trading, where they are acquired for the purpose of selling in the short-term with an intention of making a profit, or a derivative; or (ii) designated as such upon initial recognition where permitted. Fair value movements are recognised in profit or loss.

The fair value of listed investments (publicly traded equity securities) is based on quoted market prices at the end of the reporting period.

## NOTE 7 – INTANGIBLE ASSETS

	31 December 2024 \$	30 June 2024 \$
Patents, licences and trademarks - at cost	696,618	574,204
Accumulated amortisation	(90,529)	(71,450)
	<b>606,089</b>	<b>502,754</b>
<b>Movements in carrying amounts:</b>		
Balance at the beginning of the period	502,754	353,694
Additions	122,414	176,231
Amortisation	(19,079)	(27,171)
<b>Balance at the end of the period</b>	<b>606,089</b>	<b>502,754</b>

## NOTE 8 – ISSUED CAPITAL

	31 December 2024 \$	30 June 2024 \$
254,847,013 (30 June 2024: 254,847,013) fully paid ordinary shares	47,799,119	47,799,119
<b>Six months to 31 December 2024</b>		
	Number of shares	31 December 2024 \$
<b>Movements in fully paid shares</b>		
Balance as at 1 July 2024	254,847,013	47,799,119
Shares issued	-	-
Balance as at 31 December 2024	254,847,013	47,799,119

## NOTE 9 – RESERVES

### a) Share-based payments reserve

	31 December 2024 \$	30 June 2024 \$
Share based payment reserve	11,322,703	14,219,548
<b>Movement associated with Options during the period:</b>		
Opening balance	14,219,548	15,371,834
Granted – expense associated with vesting during the year	1,665,576	1,874,384
Exercised	-	-
Forfeited	-	(1,271,291)
Lapsed	(4,562,421)	(1,755,379)
Closing Balance	11,322,703	14,219,548

The share-based payments reserve records items recognised as an expense on the valuation of Options or performance rights. Refer Note 10 for further details regarding the movement in Options during the reporting period.

## NOTE 10 – SHARE BASED PAYMENTS

### UNLISTED OPTIONS (“Options”)

#### Six months ended 31 December 2024

The number of Options and weighted average exercise prices are as follows for the reporting period:

	Number of Options	31 December 2024 \$	Weighted average exercise price per Option
Opening Balance (1 July 2024)	18,700,000	14,219,548	\$1.79
Granted - expense related to vesting of options issued during the period	17,250,000	1,665,576	\$0.534
Lapsed	(6,000,000)	(4,562,421)	\$1.79
<b>Closing Balance (31 December 2024)</b>	<b>29,950,000</b>	<b>11,322,703</b>	<b>\$1.067</b>

Weighted average remaining contractual life of Options at 31 December 2024 is 2.19 years.

Options are unlisted and are exercisable into fully paid ordinary shares in the Company on a one for one basis.

#### Options granted during the period to 31 December 2024

On 20 November 2024, 17,250,000 unlisted options were issued to Archer's directors and employees following shareholder approval at the Company's Annual General Meeting held on 20 November 2024 (“Options”). The Options have an exercise price of \$0.534 each and expiry of 30 June 2028. The Options were granted at no cost to the recipient and vest as follows:

- 13,000,000 Options issued to Directors and the Company Secretary vest on 1 January 2025; and
- 4,250,000 Options issued to other employees vest 50% on 1 January 2026 and 50% on 1 January 2027.

The total fair value at the grant date for the 17,250,000 Options was \$2,207,135, and this amount is being expensed to the Statement of Profit or Loss and Other Comprehensive Income under ‘share based payments expense’ over the vesting periods applicable to the options. Accordingly, an amount of \$1,665,576 has been included in the Statement of Profit or Loss and Other Comprehensive Income under ‘share based payments expense’ for the six-month period ended 31 December 2024 (31 December 2023: \$1,174,271)

The Options were granted pursuant to the Company's Performance Rights and Share Option Plan, which was approved by shareholders at the Annual General Meeting held on 29 November 2023.

Details of the Options granted during the six-month period to 31 December 2024 are set out below:

ISSUED TO	GRANT DATE	ISSUE DATE	NUMBER OF OPTIONS GRANTED	OPTION EXERCISE PRICE	1 <sup>st</sup> VESTING DATE	2 <sup>nd</sup> VESTING DATE	EXPIRY DATE
Directors and Company Secretary	20/11/2024	20/11/2024	13,000,000	\$0.534	01/01/2025	-	30/06/2028
Employees	20/11/2024	20/11/2024	4,250,000	\$0.534	01/01/2026	01/01/2027	30/06/2028

All Options are unlisted and are exercisable into fully paid ordinary shares in the Company on a one for one basis.

The fair value of the Options issued was calculated by using a Black-Scholes option pricing model and was estimated on the date of the grant using the following assumptions:

	<b>Director and Employee Options</b>
Share price at date of grant (\$)	0.31
Historic volatility (%)	72.7
Risk free interest rate (%)	4.077
Expected life of Options (days)	1318

Historical volatility has been the basis for determining expected share price volatility as it is assumed that this is indicative of future tender, which may not eventuate.

The life of the Options is based on the historical exercise patterns, which may not eventuate in the future.

Options exercised during the period to 31 December 2024

No options were exercised during the period to 31 December 2024

Options lapsed during the period to 31 December 2024

6,000,000 unlisted share options with an exercise price of \$1.79 and expiring on 31 May 2025, lapsed in accordance with the terms of which they were issued.

An amount of \$4,562,421 was written-back to retained losses for the period ended 31 December 2024, relating to prior period share-based payments expense associated with the options that lapsed during the reporting period.

**NOTE 11 - CASH FLOW INFORMATION**

a) Reconciliation of cash flows from continuing operations with loss after income tax	31 December 2024 \$	31 December 2023 \$
Loss after income tax	(4,416,493)	(2,809,854)
Depreciation	106,602	48,080
Amortisation of intangibles	19,079	12,712
Net fair value loss / (gain) on financial assets (Note 6)	510,095	(97,455)
Share based payments	1,665,576	1,174,271
Loss on sale of property, plant and equipment	9,713	-
Changes in assets and liabilities:		
- Decrease in prepayments, trade and other receivables	1,279,131	422,564
- Decrease in trade and other payables	(187,588)	(330,348)
- Increase in employee entitlements	(156,557)	(82,168)
<b>Net cash used in operating activities from continuing operations</b>	<b>(1,170,442)</b>	<b>(1,662,198)</b>

**b) Non-Cash Financing and Investing Activities**

There were no non-cash investing or financing activities undertaken during reporting period.

## NOTE 12 – CONTINGENT ASSETS, LIABILITIES & COMMITMENTS

### Sugarloaf Land Option

In November 2018 Archer announced the sale of its Sugarloaf farmland for \$1.35 million. The transaction settled on 1 July 2019 with Archer receiving the \$1.35 million sale proceeds in July 2019. The purchaser of the farmland has granted Archer an option to buy back approximately 30% of the Sugarloaf farm land, which may be required for the construction of the Sugarloaf Graphite Processing Facility (“Land Option”). The Land Option may be exercised by Archer any time before 4 December 2028. The Land Option was not assigned to iTech Minerals Ltd.

### ChemX Materials Limited – royalty

In June 2021 Archer announced the completion of the sale of tenements to ChemX Materials Limited. In addition to the consideration already received, Archer is also entitled to a 2% Net Smelter Return royalty on the value of all minerals (excluding graphite) extracted from the tenements sold to ChemX.

As noted, previously, ChemX Materials Limited (ASX: CMX) was suspended from official quotation on ASX on 16 December 2024 and remained in suspension at 31 December 2024. On 2 January 2025, ChemX Materials Limited (ASX: CMX) announced that it had appointed voluntary administrators, as disclosed in their ASX release dated the same day. The appointment of administrators to CMX may impact Archer’s potential entitlement to a Net Smelter Return royalty. The future operations of CMX remain uncertain and Archer’s potential future entitlement to a Net Smelter Return royalty will depend on the outcome of the administration process.

### Leigh Creek Project bonus payment

In August 2020, the Company sold the Leigh Creek Magnesite Project (“Project”) to Magmetal Tech Pty and Witchimag Pty Ltd (“Witchimag”). Under the terms of the Project sale agreement, Archer is entitled to a bonus payment if Witchimag lists on a stock exchange after completion. The bonus payment is equal to 5% of the value of the consideration paid to the owners of Witchimag under the listing (“bonus payment”).

Canadian Stock Exchange listed Crest Resources Inc (“Crest”) announced that it had negotiated to purchase 100% of the Leigh Creek Magnesite Project. If Crests acquisition of Leigh Creek Magnesite Project completes, then the Company may become entitled to the bonus payment. On 9 September 2024, Crest changed its name to Mineral Road Discovery Inc.

The Group did not have any further contingent assets or liabilities as at 31 December 2024.

## NOTE 13 – EVENTS SUBSEQUENT TO REPORTING DATE

The following events have occurred since the reporting date:

On 22 January 2025, the Company announced the granting a key patent in the United States of America (“US Patent”) associated with Archer’s Biochip technology, protecting the Company’s related intellectual property (“IP”) rights in the US. The US Patent (Patent No. 12202730) represents the work done in Archer’s development of the biosensing chip for graphene complexes and their compositions that can be used in biomolecular sensing. The Company considers the US as a critical strategic jurisdiction to protect and potentially commercialise its Biochip IP. Patent protection in the US is required for any future commercialisation operations in the US, and also provides Archer with access to the world’s largest economy<sup>2</sup> to exploit IP rights related to the Biochip.

The Directors are not aware of any other matter or circumstance that has arisen since the end of the half year that has significantly affected, or may significantly affect the operations of the Group, the results of those operations, or the state of affairs of the Group in future financial years.

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<sup>2</sup> <https://www.weforum.org/reports/the-global-competitiveness-report-2020>

## Directors' Declaration

The Directors of the Company declare that:

1. The Financial Statements and Notes, as set out on pages 9 to 18 are in accordance with the *Corporations Act 2001*, including:
  - a) complying with Accounting Standard AASB 134 Interim Financial Reporting, and
  - b) giving a true and fair view of the consolidated entity's financial position as at 31 December 2024 and of its performance for the half-year ended on that date.
2. In the Director's opinion there are reasonable grounds to believe that the Company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors.



**Greg English**  
Executive Chairman

**Adelaide**

Dated this 26<sup>th</sup> day of February 2025

## Independent Auditor's Review Report



Grant Thornton Audit Pty Ltd  
Grant Thornton House  
Level 3  
170 Frome Street  
Adelaide SA 5000  
GPO Box 1270  
Adelaide SA 5001  
T +61 8 8372 6666

## Independent Auditor's Review Report

### To the Members of Archer Materials Limited

#### Report on the half year financial report

##### Conclusion

We have reviewed the accompanying half year financial report of Archer Materials Limited (the Company) and its subsidiaries (the Group), which comprises the consolidated statement of financial position as at 31 December 2024, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the half year ended on that date, including material accounting policy information, other selected explanatory notes, and the directors' declaration.

Based on our review, which is not an audit, we have not become aware of any matter that makes us believe that the accompanying half-year financial report of Archer Materials Limited does not comply with the *Corporations Act 2001* including:

- a giving a true and fair view of the Group's financial position as at 31 December 2024 and of its performance for the half year ended on that date; and
- b complying with Accounting Standard AASB 134 *Interim Financial Reporting* and the *Corporations Regulations 2001*.

##### Basis for Conclusion

We conducted our review in accordance with ASRE 2410 *Review of a Financial Report Performed by the Independent Auditor of the Entity*. Our responsibilities are further described in the *Auditor's Responsibilities for the Review of the Financial Report* section of our report. We are independent of the Company in accordance with the auditor independence requirements of the *Corporations Act 2001* and the ethical requirements of the Accounting Professional and Ethical Standards Board's *APES 110 Code of Ethics for Professional Accountants (including Independence Standards)* (the Code) that are relevant to our audit of the annual financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

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**Directors' responsibility for the half-year financial report**

The Directors of the Company are responsible for the preparation of the half-year financial report that gives a true and fair view in accordance with Australian Accounting Standards and the *Corporations Act 2001* and for such internal control as the Directors determine is necessary to enable the preparation of the half-year financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

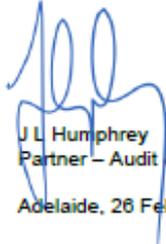
**Auditor's responsibility for the review of the financial report**

Our responsibility is to express a conclusion on the half-year financial report based on our review. We conducted our review in accordance with Auditing Standard on Review Engagements ASRE 2410 *Review of a Financial Report Performed by the Independent Auditor of the Entity*, in order to state whether, on the basis of the procedures described, we have become aware of any matter that makes us believe that the half year financial report is not in accordance with the *Corporations Act 2001* including giving a true and fair view of the Group's financial position as at 31 December 2024 and its performance for the half-year ended on that date, and complying with Accounting Standard AASB 134 *Interim Financial Reporting* and the *Corporations Regulations 2001*.

A review of a half-year financial report consists of making enquiries, primarily of persons responsible for financial and accounting matters, and applying analytical and other review procedures. A review is substantially less in scope than an audit conducted in accordance with Australian Auditing Standards and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.



GRANT THORNTON AUDIT PTY LTD  
Chartered Accountants



J L Humphrey  
Partner – Audit & Assurance

Adelaide, 26 February 2025

## Corporate directory

### DIRECTORS

Greg English – Executive Chairman  
Kenneth Williams – Non-Executive Director  
Bernadette Harkin – Non-Executive Director

### COMPANY SECRETARY

Damien Connor

### REGISTERED OFFICE

Lot Fourteen, Frome Road  
ADELAIDE SA 5000

Telephone: 08 8272 3288  
Email: [hello@archerx.com.au](mailto:hello@archerx.com.au)

### SHARE REGISTRY

Computershare Investor Services Pty Ltd  
Level 5, 115 Grenfell Street  
ADELAIDE SA 5000

### AUDITORS

Grant Thornton Audit Pty Ltd  
Level 3, 170 Frome Street  
ADELAIDE SA 5000

### AUSTRALIAN SECURITIES EXCHANGE

The Company is listed on the Australian Securities Exchange.

### ASX CODE: AXE

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