

## APPENDIX 4C – 30 JUNE 2019 COMPANY UPDATE & QUARTERLY CASHFLOW REPORT

### Highlights:

- *Memorandum of Understanding (MOU) agreed with Water Corporation to collaborate on potential development of first Hazer low-emission hydrogen production facility. Discussions with potential offtake partners and funding partners for the proposed Commercial Demonstration Plant (CDP) continue to progress.*
- *Mineral Resources Limited (ASX: MIN) owned and operated Paddle Tube Reactor (PTR) Pilot Plant successfully commissioned and producing graphite. Graphite purity of >95% achieved in initial pilot plant test runs.*
- *Geoff Ward appointed as Managing Director and Mike Grey, Chief Operating Officer – Mining Services, Mineral Resources Ltd appointed as Non-Executive Director.*
- *Granted two Australian Patents and received acceptance of first international patent in South Africa.*
- *Cash reserves of A\$6.0 million as at 30 June 2019.*

**PERTH, AUSTRALIA; 31 JULY 2019:** Hazer Group Ltd (“Hazer” or “the Company”) (ASX: HZR) lodges the attached Appendix 4C Quarterly Cashflow Report for the 12-month period ended 30 June 2019.

### Activities update

Hazer had a productive quarter as it continued to progress its core development pathways for the Hazer Process of; (i) securing a Commercial Demonstration Plant (“CDP”) to fully demonstrate a working commercial hydrogen production facility based on the Hazer Process, and (ii) supporting Mineral Resources Limited (ASX: MIN) with the commissioning of a graphite focussed pilot plant developed under the Binding Collaboration Agreement between the Companies.

### **MoU agreed with Water Corporation to collaborate on development of Hazer’s first low-emission hydrogen production facility**

As advised in May, the Company entered into a Memorandum of Understanding with Water Corporation to collaborate on the development of a 100 ton per annum, low-emission hydrogen production facility based on Hazer’s proprietary production technology at the Woodman Point Wastewater Treatment Plant in Western Australia.

The Hazer Commercial Demonstration Plant (CDP) will be the first fully integrated, operational production facility based on the Hazer Process and represents the key next step in fully commercialising the Hazer technology.

Wastewater treatment plants are significant producers of biogas as they manage the reduction and safe disposal of organic wastes. The potential to use biogas as the feedstock to produce two high-value products (hydrogen and graphite) represents a significant opportunity to reduce emissions, increase the value of

waste-to-resource recovery and provide a valuable local source of renewable hydrogen as a transport fuel, industrial feedstock or source of renewable energy.

A Front-End Engineering and Design (FEED) study for the CDP has identified an effective process design that supports the scale-up and rollout of a fully functional, integrated Hazer plant based on the positive pilot results. The CDP is designed for a capacity of ~100 tpa of hydrogen (~375 tpa of graphite) and is estimated to have a capital cost of ~\$15 million (+/- 30% level).

Subsequent to the end of the quarter, Hazer appointed Primero Group Limited, as its preferred engineering partner under an Early Contractor Involvement (ECI) scope of work. This is a very positive step for the project and indicates our confidence in being able to secure further project agreements in the near term.

Discussions with potential hydrogen offtake partners and project funders are continuing, and the Company remains focussed on securing the necessary agreements to commit to full project development. In the coming quarter, the Company will focus on these agreements to support full project sanction.

### **Mineral Resources collaboration and Hazer Pilot Plant update**

Commissioning of the Mineral Resources Limited Paddle Tube Reactor (PTR) Pilot Plant is complete, and initial production runs have successfully produced high-quality graphite with a purity of >95% (Total Graphitic Carbon).

Mineral Resources will now undertake a detailed pilot plant test program to determine the capability of the PTR design and derive the engineering and performance data needed to establish the design and performance parameters of the commercial-scale plant envisaged in Stage 2 and Stage 3 of the Binding Co-Operation Agreement.

Looking ahead, the key focus of the Company's collaboration with Mineral Resources will be on the delivery and analysis of this pilot plant test program, and supporting Mineral Resources as required in taking their decision to continue to Stage 2 of the strategic partnership. Under Stage 2, Mineral Resources will design, construct and own an initial small-scale graphite plant (based on the Hazer Process) to supply graphite to initial commercial customers.

Subject to securing sufficient customer support, the plant will expand to a nominal target capacity of 10,000 tpa of graphite under Stage 3 of the Collaboration Agreement. As we progress to Stage 2, Hazer and Mineral Resources will agree the full commercial terms of the licensing agreement to use the Hazer Process, including details of the proposed royalty agreement.

A further test program is underway for the Hazer Fluidised Bed Reactor (FBR) Pilot Plant which is now co-located at the Mineral Resources site at Kwinana, Western Australian. The results of the test program will support the ongoing CDP and Commercial Scale Hazer Plant development studies.

### **Board appointments**

In April, the Company appointed Mr Geoff Ward, who has been the Company's Chief Executive Officer since 8 October 2018, as Managing Director.

Additionally, Mr Mike Grey, Chief Operating Officer – Mining Services, Mineral Resources Limited has replaced Mr Simon Rushton as Mineral Resources' nominated Director, following Mr. Rushton's resignation from Mineral Resources Limited.

The Company thanks Simon Rushton for his significant contribution to Hazer during his time as a Non-Executive Director. We look forward to continuing our collaborative relationship with Mike Grey who is well known to the Hazer team through his role as the Mineral Resources executive responsible for their PTR Pilot Plant project.

### **IP Update: Two Australian Patents granted and first international patent in South Africa accepted**

In April, Hazer was granted its first Australian Patent covering elements of the Hazer Process, "*A process for producing hydrogen and graphitic carbon from hydrocarbons*". In June, Hazer received its second Australian

Patent, "A process of controlling the morphology of graphite", and received acceptance of its first international patent in South Africa, "A process of controlling the morphology of graphite".

The Australian Patents, in conjunction with two previous Australian Innovation Patents, provide broad, enforceable protection for Hazer's core technologies in Australia. Remaining patent applications remain ongoing, pursuant to the normal procedures and timelines of the relevant patent organisations.

### **Cashflow commentary**

Cash reserves decreased by \$1.028 million to \$6.007 million during the quarter due to net operating cash outflows covering the Company's ongoing technical development, project development, research and development, and administration activities.

Looking ahead, the Company anticipates one-off expenditure costs under a contract for an Early Contractor Involvement (ECI) phase scope of work, with Primero Group. This cost will cover the initial detailed design activities needed to enable the CDP project to progress to full EPC contracting and procurement. This will result in moderately higher net operating cash outflow compared to recent quarters.

The Company remains well funded to execute its key strategic objectives and planned activities and progress towards a final investment decision on the CDP in 2H 2019.

**[ENDS]**

### **Forward Looking Statements**

This announcement may contain certain "forward looking statements" which may not have been based solely on historical facts, but rather are based on the Company's current expectations about future events and results.

Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis. However, forward looking statements are subject to risks, uncertainties, assumptions and other factors, which could cause actual results to differ materially to futures results expressed, projected or implied by such forward looking statements.

The Company does not undertake any obligation to release publicly any revisions to any "forward looking statements" to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under the applicable securities laws.

### **ABOUT HAZER GROUP LTD**

Hazer Group Limited ("Hazer" or "The Company") is an ASX-listed technology development company undertaking the commercialisation of the Hazer Process, a low-emission hydrogen and graphite production process. The Hazer Process enables the effective conversion of natural gas and similar methane feedstocks, into hydrogen and high quality graphite, using iron ore as a process catalyst.

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## Hazer Group Limited - Social Media Policy

Hazer Group Limited is committed to communicating with the investment community through all available channels. Whilst ASX remains the prime channel for market sensitive news, investors and other interested parties are encouraged to follow Hazer on Twitter (@hazergroupltd), LinkedIn, Google+ and YouTube.

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## Appendix 4C

### Quarterly report for entities subject to Listing Rule 4.7B

Introduced 31/03/00 Amended 30/09/01, 24/10/05, 17/12/10, 01/09/16

**Name of entity**

HAZER GROUP LIMITED

**ABN**

40 144 044 600

**Quarter ended ("current quarter")**

30 JUNE 2019

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (12 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers		
1.2 Payments for		
(a) research and development	(291)	(935)
(b) product manufacturing and operating costs		
(c) advertising and marketing		
(d) leased assets		
(e) staff costs including research and development staff	(561)	(2,146)
(f) administration and corporate costs	(205)	(1,241)
1.3 Dividends received (see note 3)		
1.4 Interest received	7	30
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
- R&D tax rebate		1,639
1.8 Other (provide details if material)		
- Net GST received / (paid)	22	44
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,028)</b>	<b>(2,609)</b>

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Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment		
(b) businesses (see item 10)		
(c) investments		
(d) intellectual property		
(e) other non-current assets		
2.2 Proceeds from disposal of:		
(a) property, plant and equipment		
(b) businesses (see item 10)		
(c) investments		
(d) intellectual property		
(e) other non-current assets		
2.3 Cash flows from loans to other entities		
2.4 Dividends received (see note 3)		
2.5 Other (provide details if material)		
<b>2.6 Net cash from / (used in) investing activities</b>	<b>0</b>	<b>0</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of shares		
3.2 Proceeds from issue of convertible notes		
3.3 Proceeds/(refund) from exercise of share options		2,451
3.4 Transaction costs related to issues of shares, convertible notes or options		(20)
3.5 Proceeds from borrowings		
3.6 Repayment of borrowings		
3.7 Transaction costs related to loans and borrowings		
3.8 Dividends paid		
3.9 Other (provide details if material)		
<b>3.10 Net cash from / (used in) financing activities</b>	<b>0</b>	<b>2,431</b>

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Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of quarter/year to date	7,035	6,185
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,028)	(2,609)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	0	0
4.4 Net cash from / (used in) financing activities (item 3.10 above)	0	2,431
4.5 Effect of movement in exchange rates on cash held	0	0
<b>4.6 Cash and cash equivalents at end of quarter</b>	<b>6,007</b>	<b>6,007</b>

5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	5,898	6,930
5.2 Call deposits		
5.3 Bank overdrafts		
5.4 Other – bank guarantee	109	105
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>6,007</b>	<b>7,035</b>

6. Payments to directors of the entity and their associates	Current quarter \$A'000
6.1 Aggregate amount of payments to these parties included in item 1.2	120
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	0
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	
- Director fees and superannuation paid to Directors (\$120k)	

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<b>7. Payments to related entities of the entity and their associates</b>	<b>Current quarter \$A'000</b>
7.1 Aggregate amount of payments to these parties included in item 1.2	0
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	0
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1 Loan facilities	0	0
8.2 Credit standby arrangements	0	0
8.3 Other (please specify)	0	0
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Research and development	(575)
9.2 Product manufacturing and operating costs	0
9.3 Advertising and marketing	0
9.4 Leased assets	0
9.5 Staff costs	(607)
9.6 Administration and corporate costs	(320)
9.7 Other (provide details if material)	0
<b>9.8 Total estimated cash outflows</b>	<b>(1,502)</b>

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10. Acquisitions and disposals of business entities (items 2.1(b) and 2.2(b) above)	Acquisitions	Disposals
10.1 Name of entity		
10.2 Place of incorporation or registration		
10.3 Consideration for acquisition or disposal		
10.4 Total net assets		
10.5 Nature of business		

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.



Sign here: .....  
(Company secretary)

Date: ..31 July 2019.....

Print name: .....Emma Waldon.....

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.

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