U.S. SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-K/A

(Amendment No. 1)

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): February 1, 2023

ADVANCED EMISSIONS SOLUTIONS, INC.

(Name of registrant as specified in its charter)

Delaware	**001-37822**	**27-5472457**
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification Number)

8051 E Maplewood Ave, Suite 210, Greenwood Village, CO 80111
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code: **(720) 598-3500**

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Class	**Trading Symbol**	**Name of each exchange on which registered**
Common stock, par value $0.001 per share	ADES	Nasdaq Global Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Explanatory Note

This Current Report on Form 8-K/A filed by Advanced Emissions Solutions, Inc. ("ADES" or the "Company") amends Item 9.01 of the Current Report on Form 8-K filed by the Company on February 1, 2023 (the "Report") to include the audited and unaudited financial statements required by Item 9.01(a) and the pro forma financial information required by Item 9.01(b) of Form 8-K as required for the Company's acquisition all of the direct and indirect equity interests of Arq Limited, a company incorporated under the laws of Jersey ("Arq") on February 1, 2023, which was previously reported in the Report.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
23.1	Consent of Ernst & Young LLP, UK
99.1	Audited consolidated financial statements of Arq Ltd as of December 31, 2021 and December 31, 2020 and for each of the two years in the years then ended, and the notes thereto
99.2	Unaudited condensed consolidated interim financial statements of Arq Ltd as of September 30, 2022 and for the nine months ended September 30, 2022 and September 30, 2021, and the notes thereto
99.3	Unaudited pro forma combined balance sheet as of September 30, 2022 and the notes thereto, unaudited pro forma combined statement of operations for the nine months ended September 30, 2022 and the notes thereto, and unaudited pro forma combined statement of operations for the year ended December 31, 2021 and the notes thereto
104	Cover Page Interactive Data File

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: March 2, 2023

Advanced Emissions Solutions, Inc.
Registrant

/s/ Greg Marken

Greg Marken
Chief Executive Officer

Exhibit 23.1

CONSENT OF INDEPENDENT AUDITORS

We consent to the use of our report dated 19 October 2022, with respect to the consolidated financial statements of Arq Limited included in Amendment No.1 to the Current Report on Form 8-K/A dated 2 March 2023 of Advanced Emissions Solutions, Inc.

/s/ Ernst & Young LLP
London, United Kingdom
2 March 2023

Exhibit 99.1

ARQ LIMITED
Consolidated Financial Statements
For the years ended 31 December 2021 and 2020

Report of Independent Auditors

To the Board of Directors of Arq Limited

Opinion

We have audited the consolidated financial statements of Arq Limited (the Company), which comprise the consolidated balance sheets as of 31 December 2021 and 2020, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for the years then ended, and the related notes (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Company at 31 December 2021 and 2020, and the results of its operations and its cash flows for the years then ended in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB).

Basis for Opinion

We conducted our audits in accordance with auditing standards generally accepted in the United States of America (GAAS). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the Company and to meet our other ethical responsibilities in accordance with the relevant ethical requirements relating to our audits. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Substantial Doubt About the Company's Ability to Continue as a Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has suffered recurring operating losses and has reported negative cash flows from operations, and has stated that substantial doubt exists about the Company's ability to continue as a going concern. Management's evaluation of the events and conditions and management's plans regarding these matters are also described in Note 2b. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.

Restatement of 2020 Financial Statements

As discussed in Note 2 to the consolidated financial statements, the 2020 consolidated financial statements have been restated to correct misstatements, which resulted in the inclusion of the 1 January 2020 balance sheet.

Responsibilities of Management for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRS as issued by the IASB, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free of material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for one year after the date that the financial statements are available to be issued.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free of material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery , intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS, we:

• Exercise professional judgment and maintain professional skepticism throughout the audit.

• Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.

• Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, no such opinion is expressed.

• Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.

• Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

/s/ Ernst & Young LLP
London, United Kingdom
19 October 2022

ARQ LIMITED
Consolidated Income Statement and Other Comprehensive Income
For the years ended 31 December 2021 and 2020

	Notes	2021 $'000	2020 $'000
Plant operating expenses	6	96,172	3,765
Research and development expense		4,003	3,005
Administration expenses	7	15,794	26,336
Operating loss		**(115,969)**	**(33,106)**
Finance expense	8	(699)	(517)
Finance and other income		51	168
Other expense		(22)	(30)
Loss before tax		**(116,639)**	**(33,485)**
Income tax income	9	915	663
Net loss for the financial year		**(115,724)**	**(32,822)**
Other comprehensive income		—	—
Total comprehensive loss for the financial year		**(115,724)**	**(32,822)**
Attributable to Equity shareholders of the company		**(115,724)**	**(32,822)**

ARQ LIMITED
Consolidated Balance Sheet
As at 31 December 2021

	Notes	2021 $'000	2020 $'000	At 1 January 2020 $'000
Assets				
Non-current assets				
Property, plant and equipment	**10**	93,392	153,722	128,407
Receivables and prepayments	**11**	2,391	1,741	1,361
Total non-current assets		**95,783**	**155,463**	**129,768**
Current assets				
Inventory		340	340	289
Receivables and prepayments	**11**	1,637	2,122	2,096
Cash and cash equivalents	**12**	7,013	27,455	55,268
Total current assets		**8,990**	**29,917**	**57,653**
Total assets		**104,773**	**185,380**	**187,421**
Equity and liabilities				
Equity				
Called up share capital	**13**	15,716	15,710	15,707
Share premium	**13**	278,069	277,896	277,792
Other capital reserve	**13**	97,366	92,445	76,824
Retained deficit		(400,296)	(284,572)	(251,750)
Equity attributable to equity shareholders of the company		**(9,145)**	**101,479**	**118,573**
Current liabilities				
Trade and other payables	**15**	7,529	5,460	3,687
Current portion of long-term borrowing	**16**	84,303	400	229
Current portion of provisions	**17**	—	891	—
Total current liabilities		**91,832**	**6,751**	**3,916**
Non-current liabilities				
Long-term borrowing, net of current portion	**16**	17,910	74,026	61,625
Provisions	**17**	4,176	3,124	3,307
Total non-current liabilities		**22,086**	**77,150**	**64,932**
Total liabilities		**113,918**	**83,901**	**68,848**
Total equity and liabilities		**104,773**	**185,380**	**187,421**

The financial statements of Arq Limited on pages 4 to 27 were approved by the Directors and authorised for issue on 19 October 2022. They were signed on its behalf by:

/s/ Julian McIntyre
Julian McIntyre
Director
19 October 2022

ARQ LIMITED
Consolidated Statement of Changes in Equity
For the years ended 31 December 2021 and 2020

	Notes	Called up share capital $'000	Share premium $'000	Other capital reserve $'000	Retained Deficit $'000	Total $'000
At 1 January 2020		**15,707**	**276,867**	**80,897**	**(265,004)**	**108,467**
Adjustments	**2a**	—	925	(4,073)	13,254	10,106
At 1 January 2020 (restated)		**15,707**	**277,792**	**76,824**	**(251,750)**	**118,573**
Total comprehensive loss for the year		—	—	—	(32,822)	(32,822)
Issuance of shares		3	104	—	—	107
Share-based compensation	**13, 14**	—	—	15,621	—	15,621
At 31 December 2020		**15,710**	**277,896**	**92,445**	**(284,572)**	**101,479**
Total comprehensive loss for the year		—	—	—	(115,724)	(115,724)
Issuance of shares	**13**	6	173	—	—	179
Share-based compensation	**13, 14**	—	—	4,921	—	4,921
At 31 December 2021		**15,716**	**278,069**	**97,366**	**(400,296)**	**(9,145)**

ARQ LIMITED
Consolidated Statement of Cashflows

For the years ended 31 December 2021 and 2020

	Notes	2021 $'000	2020 $'000
Operating Activities			
Loss before tax		(116,639)	(33,485)
Adjustment to reconcile loss before tax to net cash flows			
Share-based payment expense		5,100	15,728
Depreciation of property, plant and equipment		710	240
Impairment loss	**6**	90,070	—
Finance income		(50)	(168)
Finance cost	**8**	699	517
Loss on disposal of fixed assets		16	—
Working capital adjustments			
Increase in trade and other payables		2,576	2,061
Increase in inventory		—	(52)
Increase in other receivables and prepayments		(795)	(288)
Income tax received		689	658
Net cash outflows from operating activities		**(17,624)**	**(14,789)**
Investing activities			
Purchase of property, plant and equipment		(7,109)	(12,421)
Interest received		50	168
Net cash outflows from investing activities		**(7,059)**	**(12,253)**
Financing activities			
Proceeds from bank loan	**16**	6,230	—
Transaction costs		(705)	(83)
Repayment of borrowings	**16**	(1,105)	(688)
Interest paid		(179)	—
Net cash inflows (outflows) from financing activities		**4,241**	**(771)**
Cash and cash equivalents at 1 January	**12**	27,455	55,268
Net decrease in cash and cash equivalents		(20,442)	(27,813)
Cash and cash equivalents at 31 December	**12**	**7,013**	**27,455**

1 Description of the Organisation

Arq Limited ("Company"), is a limited company domiciled in Jersey and incorporated on December 30, 2010 under the Companies (Jersey) Law 1991. The Company and its subsidiaries at 31 December 2021 comprise the Arq Group ("Group"). The registered office is located at Level 1 IFC 1 Esplanade St Helier Jersey JE2 3BX.

The Group uses proprietary and proven technologies to remediate waste land (typically former coal mine sites) and create specialty carbon products, with a broad range of applications, from pollution control to supporting the energy transition. This is achieved by the Group's core business, a novel processing technology which uses coal mining waste as its feedstock. The combination of the Group's technology and facilities enables the production of a micro-fine hydrocarbon powder ("Arq powder") which can be used as a feedstock or as a direct product in large, diverse and global markets.

The end-product, Arq powder, is a substitute for existing carbon or hydrocarbon products, typically produced from petroleum or coal. Given ongoing environmental pressures on these industries, Arq powder is expected to deliver environmental benefit to customers while minimising the impact on operational performance. Potential end-markets for Group's products include two key areas:

- **Materials**: Arq powder can be used to produce activated carbon, carbon filler for carbon black rubber composite, as a component of asphalt, and with a longer-term goal of expanding into other carbon products, such as synthetic graphite.
- **Power and Transportation**: Arq powder can be used as a blending component in residual fuel oil ("RFO") for marine and utility fuels, which are expected to have a lower cost and improved environmental footprint.

2 Summary of Significant accounting policies

a) Basis of preparation

The Group consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and applicable requirements of Jersey law.

The consolidated financial statements have been prepared on a historical cost basis, except where otherwise noted.. The consolidated financial statements are presented in US dollars and all values are rounded to the nearest thousand ($'000), except when otherwise indicated.

Prior year adjustment

In the process of finalising these financial statements the following adjustments have been identified in relation to the prior years.

Adjustment 1

Capitalised interest had been under-capitalised in the opening property, plant and equipment balance. This is due to an incorrect method being used in prior period calculations.

In line with IFRS, where funds are borrowed as part of a general pool, the eligible amount is determined by applying a capitalisation rate to the expenditure on that asset. This has the effect of increasing opening property, plant and equipment by $14.2 million and decreasing the opening retained deficit by $14.2 million as shown below. This adjustment does not impact either the income statement of cashflow statement.

Adjustment 2

The rehabilitation cost for the Mine Four property was incorrectly recorded in the opening property, plant and equipment balance. It should have been impaired in prior periods. This has the effect of reducing opening property, plant and equipment by $1.0 million and increasing the opening retained deficit by $1.0 million as shown below. This adjustment does not impact either the income statement or cashflow statement.

Adjustment 3

The fair value for a number of warrants had been incorrectly valued within other capital reserves. This is due to an incorrect method in prior period calculations.

This has the effect of decreasing opening other capital reserves by $0.9 million and increasing the opening share premium by $0.9 million as shown below. This adjustment does not impact either the income statement of cashflow statement.

Adjustment 4

The fair value of options issued to a supplier providing sales and marketing services had been incorrectly recognised in prepayments and other capital reserves. This is due to an incorrect method in prior period calculations.

This has the effect of decreasing opening other capital reserves by $3.1 million and decreasing prepayments by $3.1 million as shown below. This adjustment does not impact either the income statement of cashflow statement.

	Restated	Adjustment 1	Adjustment 2	Adjustment 3	Adjustment 4	Balance at 1 January 2020 as previously reported
	$'000	$'000	$'000	$'000	$'000	$'000
Property, plant and equipment	128,407	14,234	(980)	—	—	115,153
Receivables and prepayments - due within 1 year	2,096	—	—	—	(3,148)	5,244
Retained Deficit	(251,750)	14,234	(980)	—	—	(265,004)
Other Capital Reserve	76,824	—	—	(925)	(3,148)	80,897
Share Premium	277,792	—	—	925	—	276,867

b) Going concern

The Group has evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about the Group's ability to continue as a going concern within one year after the date the consolidated financial statements are issued.

The Group is not currently revenue generating and hence from its inception through 31 December 2021, has incurred significant operating losses and has reported negative cash flows from operations. At 31 December 2021, the Group has unrestricted cash of $6.0 million and net current liabilities of $82.8 million. Subsequent to the year-end, the Group renegotiated a number of key supplier and employee contracts to reduce costs, agreed payment plans with a number of key suppliers, agreed that the York preferred units will be converted into Company's ordinary shares and raised $6.9 million in secured convertible loan notes ("Convertible Loan Notes"). The Group forecasted that it has sufficient funding through to the first quarter of 2023. The future viability of the Group is dependent on its ability to raise additional capital to finance its operations.

In August 2022, the Group entered into an agreement with Advanced Emissions Solutions, Inc. ("ADES"), a US listed activated carbon producer, whereby ADES will acquire 100% of the outstanding share capital of the Company in exchange for ADES shares ("merger transaction"). The combination of ADES and the Group (together, "combined group"), will have a secure integrated supply chain to produce granular activated carbon ('GAC') using Arq powder that creates significant competitive advantages. The production of GAC using Arq powder has shown to have a higher performance in certain market applications and are expected to have a lower emissions profile and lower costs. ADES and the Group have prepared a combined business plan which involves using Arq powder from our Corbin plant, and then drying, pelletising and charring the Arq powder to produce GAC. This will involve upgrading the plant at Corbin and building a micro- pellet and charring plant at ADES's Red River facility.

The merger transaction is planned to be completed in the first quarter of 2023, when the combined group will have access to the following finance:

- Approximately $50 million of cash that is forecast to be on ADES's balance sheet at completion.
- A committed $10 million senior secured debt facility to the combined group.
- A committed $20 million private equity investment into the combined group from existing Company shareholders.

The Group has received a letter from ADES that subject to the completion of the merger transaction, ADES will provide financial support to the Group.

Upon completion of the merger transaction between ADES and the Group, the new combined group will have a minimum cash balance of approximately $80 million, and the Group will have sufficient funds through to 31 October 2023.

The completion of the merger is subject to some customary conditions precedents, including the filing of all required documents with the United States Securities and Exchange Commission, ADES shareholder approval, and court approval of the Scheme of Arrangement under Jersey law. To reduce the risk of delays in the completion of the merger, the Group obtained irrevocable consents from the Company's shareholders holding 75% of the Company's shares to vote in favour of the Scheme of Arrangement.

Based on the recurring losses incurred by the company, the company's forecasts whereby additional capital will be required beyond the first quarter of 2023 and the merger is still subject to conditions and shareholder approval, the Group has concluded that there is substantial doubt about its ability to continue as a going concern.

Taking into account the transaction and the combined group's business plan up to 31 October 2023, the Directors believe it is reasonable to adopt the going concern basis of accounting in preparing the consolidated financial statements therefore, the accompanying consolidated financial statements do not include the adjustments that might result if the Group were unable to continue as a going concern.

c) Basis of consolidation

The consolidated financial statements comprise the financial statements of the Company and its subsidiaries as of the reporting date each year.

Control is achieved when an investor is exposed, or has rights, to variable returns from its involvement with the investee and has the ability to affect those returns through its power over the investee. Specifically, the Group controls an investee if, and only if, the Group has:

- Power over the investee
- Exposure, or rights, to variable returns from its involvement with the investee
- The ability to use its power over the investee to affect its return

The Group re-assesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control. Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Assets, liabilities, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated income statement and other comprehensive income from the date the Group gains control until the date when the Group cease to control the subsidiary.

Profit or loss and comprehensive income are attributed to the owners of the Group. Total comprehensive income of subsidiaries is attributed to the owners of the Group. All intra-group transactions, balances, income and expenses are eliminated on consolidation.

If the Group ceases to retain control over a subsidiary, it derecognises the related assets, liabilities, and other components of equity, while any resultant gain or loss is recognised in the income statement.

d) Property, plant and equipment

Property, plant and equipment held for use in the production or supply of goods or services, or for administrative purposes, are stated in the consolidated balance sheet at cost less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

Depreciation is charged to write off the cost to their residual values based on the following methods by asset class:

Mineral asset	Unit of production
Plant and equipment	Straight-line over estimated useful lives of 5 to 20 years

The gains and losses arising on the disposal or retirement of an asset is determined as the differences between the sales proceeds and the carrying amount of the asset and is recognised in the consolidated income statement and other comprehensive income.

Work in progress is an asset under construction that has not yet been put into use. The asset is not subject to depreciation while in the construction phase status. Once the asset is fully developed and available for use, depreciation will start accordingly.

The cost of mineral assets includes the present value of the expected cost for the decommissioning of an asset after its use if the recognition criteria for a provision are met (see accounting policy l) plus the excess of the cost of acquisition over the fair value of the identifiable assets and liabilities when acquiring mining assets.

e) Right-of-use assets

Leased right-of-use assets are included within property, plant and equipment, and are recognised on inception of the lease. Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities. The cost of right-of-use assets includes the amount of lease liabilities recognised, initial direct costs incurred, and lease payments made at or before the commencement date less any lease incentives received. The right-of-use asset is depreciated on a straight-line basis over the term of the lease.

If ownership of the leased asset transfers to the Group at the end of the lease term or the cost reflects the exercise of a purchase option, depreciation is calculated using the estimated useful life of the asset.

f) Impairment of property, plant and equipment

At each reporting date, the Group reviews the carrying amounts of its property, plant and equipment to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication of impairments exists, the recoverable amount of the asset is estimated to determine the extent of the impairment loss (if any). Where the asset does not generate cash flows that are independent from other assets, the Group estimates the recoverable amount of the cash-generating unit to which the assets belong.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimate of future cash flows has not been adjusted. In determining fair value less costs of disposal, recent market transactions are taken into account. If no such transactions can be identified, an appropriate valuation model or assessment is prepared by a third party. These calculations are corroborated by valuation multiples or other available fair value indicators

If the recoverable amount of an asset (or cash-generating unit) ("CGU") is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount and an impairment loss is recognised as an expense immediately.

Where an impairment loss subsequently reverses, the carrying amount of the asset (cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (cash-generating unit) in prior years. A reversal of an impairment loss is recognised as income immediately.

g) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective asset. All other borrowing costs are expensed in the period in which they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

h) Research costs

Research costs are expensed as incurred.

i) Taxes

Current income tax

Current income tax assets and liabilities are measured at the amount expected to be recovered from or paid to the taxation authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted at the reporting date in the countries where the Group operates and generates taxable income.

Deferred tax

Deferred tax is provided using the liability method on temporary differences between the tax bases of assets and liabilities and their carrying amounts for financial reporting purposes at the reporting date. Deferred tax liabilities are recognised for all taxable temporary differences, except when the deferred tax liability arises from the initial recognition of an asset or liability in a transaction that is not a business combination and, at the time of the transaction, affects neither the accounting profit nor taxable profit or loss.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary difference can be utilised.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is realised or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted at the reporting date.

j) Foreign currencies

The Group's consolidated financial statements are presented in US dollars, which is the Group's functional currency. For each subsidiary, the Group determines the functional currency and items included in the financial statements of each entity are measured using that functional currency. The Group uses the direct method of consolidation and on disposal of a foreign operation, the gain or loss that is reclassified to profit or loss reflects the amount that arises from using this method.

Transactions in foreign currencies are initially recorded by the Group's entities at their respective functional currency spot rates at the date the transaction first qualifies for recognition. Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Differences arising on settlement or translation of monetary items are recognised in the income statement.

k) Share-based payment transactions

The group employees and certain suppliers of research and development and marketing services receive compensation in the form of share-based payment transactions, whereby employees and suppliers render services as consideration for equity instruments (equity- settled transactions). The equity-settled transactions are measured at fair value at the date of grant and are expensed on a straight-line basis over the vesting period, based on the Group's estimate of shares that will eventually vest, with a corresponding increase in other capital reserves. For employees, the expense is recognised in salaries and wages. For suppliers, the expense is recognised in the applicable expense category.

The fair value of share options issued with non-market vesting conditions has been calculated using the Black Scholes model. For all other share awards, the fair value is determined by reference to the value of the services at the grant date. For all share schemes with non-market vesting conditions, the likelihood of vesting has been taken into account when determining the relevant charge. Vesting assumptions are reviewed during each reporting period to ensure they reflect current expectations.

When the terms of an equity-settled award are modified, the minimum expense recognised is the grant date fair value of the unmodified award, provided the original vesting terms of the award are met. An additional expense, measured at the date of modification, is recognised for any modification that increases the total fair value of the share-based payment transaction, or is otherwise beneficial to the employee.

Service and non-market performance conditions are not taken into account when determining the grant date fair value of awards, but the likelihood of the conditions being met is assessed as part of the Group's best estimate of the number of equity instruments that will ultimately vest.

l) Provisions

Provisions are recognised when the Group has a present obligation as a result of a past event and it is probable that the Group will be required to settle that obligation. Provisions are measured at the Group's best estimate of the expenditure required to settle the obligation at the reporting date, and are discounted to present value where the effect is material.

The Group records a provision for asset rehabilitation costs for reclaiming surface land, and support facilities at the underground and surface mines in accordance with federal and state reclamation laws as required by each mining permit. Rehabilitation costs are recorded at the present value of expected costs to settle the obligation using estimated cash flows and are recognised as part of the cost of the relevant asset. The cash flows are discounted at the current pre-tax rate that reflects the risks specific to the rehabilitation liability. The unwinding of the discount is expensed in the income statement as a finance cost. The estimated future costs of rehabilitation are reviewed annually and adjusted from the cost of the asset as appropriate.

m) Financial assets

Initial recognition and measurement

The Group's financial assets comprise tax and vendor receivables, deposits, and cash and cash equivalents. At initial recognition, these financial assets are measured at amortised cost. Financial assets at amortised cost are subsequently measured using the effective interest rate method ("EIR") and are subject to impairment. Gains and losses are recognised in the income statement when the asset is derecognised, modified or impaired.

Derecognition

Financial assets are derecognised only when the rights to receive cash flows from the assets have expired, or the Group has transferred its rights to receive cash flows from the asset.

Impairment of financial assets

The Group recognises an allowance for expected credit losses (ECLs) for all receivables and deposits. ECLs are based on the difference between the contractual cash flows due in accordance with the contract and all the cash flows that the Group expects to receive, discounted at an approximation of the original effective interest rate. ECLs are recognised in two stages. For credit losses for which there has not been a significant increase in credit risk since initial recognition, ECLs are provided for credit losses that result from default events that are possible within the next 12months (a 12-month ECL). For those credit losses for which there has been a significant increase in credit risk since initial recognition, a loss allowance is required for credit losses expected over the remaining life of the exposure, irrespective of the timing of the default (a lifetime ECL).

The Group considers a financial asset in default when internal or external information indicates that the Group is unlikely to receive the outstanding contractual amounts in full before taking into account any credit enhancements held by the Group. A financial asset is written off when there is no reasonable expectation of recovering the contractual cash flows.

n) Financial liabilities

The Group's financial liabilities include trade payables, accrued trade and payroll expenses, lease liabilities, York preferred units and bank loans. All financial liabilities are recognised initially at fair value and, in the case of loans and borrowings and payables, net of directly attributable transaction costs. For more information on the York preferred units, bank loan, and the lease liabilities see note 2o, note 2s, and note 16.

After initial recognition, trade payables and interest-bearing loans and borrowings are subsequently measured at amortised cost. The EIR method is used to calculate the amortization of interest-bearing loans and borrowings. Amortised cost is calculated based on any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortisation is included as finance costs in the income statement.

A financial liability is derecognised when the obligation under the liability is discharged or cancelled or expires.

o) York preferred units

In the year ending 31 December 2015, Arq Project Holding Company LLC ("Arq Project"), a subsidiary of the Group issued a number of preferred units to investment funds managed by York Capital Management ("York"). The terms of the preferred units are set out in note 16.

On issuance of the preferred units, the fair value of the liability component is determined using a market rate for an equivalent non- convertible instrument. This amount is classified as a financial liability measured at amortised cost (net of transaction costs) until it is extinguished on conversion or redemption.

The remainder of the proceeds are allocated to shares and warrants that were issued with the preferred units and are recognised in equity. Transaction costs are allocated between financial liabilities and equity based on the relative fair value of the shares, warrants, and preferred units.

A change in the terms of the preferred units is accounted for as an extinguishment when it results in a significant change in fair value. Any gain or loss from this extinguishment will be recognised in the income statement as other income or expense.

Conversion features added to the preferred units that result in a fixed number of shares issued are treated as equity instruments and are valued as the residual of the proceeds after deducting the fair value of the liability component.

p) Cash and cash equivalents

Cash and short-term deposits in the balance sheet comprise cash at banks and on hand and short-term deposits with a maturity of three months or less, which are subject to an insignificant risk of changes in value.

q) Inventory

Inventory is measured at the lower of cost and net realisable value. Inventory relates to the cost of purchasing raw material used in the production of Arq powder.

r) Prepayments

Prepayments comprise services that have been paid for in advance. The balance is expensed when the service has been delivered.

s) Lease liabilities

Lease liabilities recognised on balance sheet are recognised within borrowings. Upon inception, the lease liability is recognised as the present value of the expected future lease payments, calculated using the Group's incremental borrowing rate, adjusted to reflect the length of the lease and country of location. The lease liability is measured at amortised cost using EIR. It is remeasured when there is a change to the forecasted lease payments. When the lease liability is remeasured, an adjustment is made to the corresponding right-of-use asset.

t) Short-term leases and leases of low-value assets

The Group applies the short-term lease recognition exemption to its short-term leases of machinery and equipment (i.e., those leases that have a lease term of 12 months or less from the commencement date). It also applies the lease of low-value assets recognition exemption to leases of office equipment that are considered to be low-value. Lease payments on short term leases and leases of low-value assets are recognised as expense on a straight-line basis over the lease term.

u) New and amended standards and interpretations

The following amended standards and interpretations which come into effect in the period and have not had a significant impact on the Group's consolidated financial statements.

- Interest Rate Benchmark Reform – Phase 2: Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16
- Covid-19-Related Rent Concessions beyond 30 June 2021 Amendments to IFRS 16

v) Standards issued but not yet effective

Definition of Accounting Estimates - Amendments to IAS 8

In February 2021, the IASB issued amendments to IAS 8, in which it introduces a definition of 'accounting estimates'. The amendments clarify the distinction between changes in accounting estimates and changes in accounting policies and the correction of errors. The amendments are effective for annual reporting periods beginning on or after 1 January 2023 and apply to changes in accounting policies and changes in accounting estimates that occur on or after the start of that period. The amendments are not expected to have a material impact on the Group.

Disclosure of Accounting Policies - Amendments to IAS 1 and IFRS Practice Statement 2

In February 2021, the IASB issued amendments to IAS 1 and IFRS Practice Statement 2 Making Materiality Judgements, in which it provides guidance and examples to help entities apply materiality judgements to accounting policy disclosures. The amendments aim to help entities provide accounting policy disclosures that are more useful by replacing the requirement for entities to disclose their 'significant' accounting policies with a requirement to disclose their 'material' accounting policies and adding guidance on how entities apply the concept of materiality in making decisions about accounting policy disclosures. The amendments to IAS 1 are applicable for annual periods beginning on or after 1 January 2023. The Group is currently assessing the impact of the amendments to determine the impact they will have on the Group's accounting policy disclosures.

3 Significant accounting judgements, estimates and assumptions

The preparation of the Group's consolidated financial statements requires management to make judgements, estimates and assumptions that affect the reported amounts of revenues, expenses, assets and liabilities, and the accompanying disclosures, and the disclosure of contingent liabilities. Uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of asset or liability affected in future periods.

a) Judgements

Lease liabilities

The Group determines the lease term as the non-cancellable term of the lease, together with any periods covered by an option to extend the lease if it is reasonably certain to be exercised. For the leasing of land at Corbin, Kentucky, the Group has the option to extend the lease beyond 2025 and therefore management applies judgement in evaluating whether the lease will be renewed and has assumed it will be extended for a further 15 years based on the Group's business plan.

b) Estimates and assumptions

Rehabilitation provision

The Group has recognised a provision for rehabilitation obligations associated with assets at two sites relating to coal-based feedstock. In determining the fair value of the provision, estimates are made in relation to discount rates, the expected cost to dismantle and remove the plant from the site and the expected timing of those costs. The Group estimates that the costs would be realised in the next 4 years at one site, and 23 years at another site. The provision is calculated using a discounted cashflow method. The carrying amount of the provision as at 31 December 2021 and 2020 was $4.2 million and $4.0 million, respectively.

Impairment of property, plant and equipment

The Group determines whether property, plant and equipment is impaired where there are indicators of impairment. Where there are indicators of impairment, the Group assesses its recoverable amount of the Group's main assets, Corbin process facility and St Rose drying and blending facility, by taking the higher of the fair value less cost to sell and its value in use. If the recoverable amount of these assets is estimated to be less than its carrying amount, the carrying amount of these assets are reduced to its recoverable amount and an impairment loss is recognised as an expense immediately.

As a result of the planned merger between ADES and the Group, the Group has determined that the Corbin and St Rose facilities are two separate CGUs due to its plans to not use of any of the production from Corbin for the marine fuel market and terminate the construction of the St Rose drying and blending facility in the year ended 31 December 2021.

In the year ended 31 December 2021, the Group recognised an impairment loss of $73.4 million representing the write-down of certain property, plant and equipment and capitalised interest at the Corbin facility to its recoverable amount. The impairment loss was principally due to delays in upgrading the plant in order to start production and generate revenue. The recoverable amount of $92.3 million as at 31 December 2021 was based on the fair value less costs of disposal calculation for the Corbin facility and was estimated based on an external third-party valuation of the Corbin facility. The valuation was calculated using the Group's 5 year forecast, applying an EBITDA multiple based on publicly trading companies in similar industries which range between 5.8x and 12.9x, and then discounting the EBITDA multiple using a rate between 20% and 40% as a result of the Group being a private company. Since this valuation was performed using significant non-observable inputs, the fair value is classified as a Level 3 measurement. A 10% decrease in either the EBITDA or the applied EBITDA multiple would increase the impairment loss by $8.2 million.

In the year ended 31 December 2021, the Group recognised an impairment loss of $16.7 million representing the write-down of certain property, plant and equipment, capitalised interest and prepaid tank leases at the St Rose drying and blending facility as a result of the decision to terminate the construction of the facility. The recoverable amount of $nil as at 31 December 2021 was based on the fair value less costs of disposal of these assets.

Share-based payments and warrants

The Group estimates the number of options that are likely to vest in regards to the performance criteria included in the Group's management incentive plan.

The Group uses the Black-Scholes model in determining the fair value of options granted to employees under the Group's share schemes and warrants issued to investors. The determination of the fair value of options and warrants requires a number of assumptions. The alteration of these assumptions may impact charges to the income statement over the vesting period of the award and the total amount allocated to equity. Details of the assumptions for share-based payments and performance criteria are disclosed in note 14.

Fair value of loans and borrowings

The Group uses risk adjusted discount rates to calculate the fair value of loans and borrowing. The discount rates are taken from observable markets where possible, but where this is not feasible, a degree of judgement is required to establish the discount rate such as liquidity and credit risk. During the year ended 31 December 2021, a discount rate of 21.5% (2020: 21.5%) was used to calculate the fair value of the York preferred units.

Leases - Estimating the incremental borrowing rate

In circumstances where the Group cannot readily determine the interest rate implicit in the lease, the incremental borrowing rate (IBR) is used to measure lease liabilities. The IBR is the rate of interest that the Group would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment.). The Group estimates the IBR using observable inputs (such as market interest rates) when available.

4 Adjusted EBITDA

Adjusted EBITDA is calculated by adding back depreciation of property, plant and equipment, impairment loss and share-based compensation from operating loss included in the consolidated income statement and other comprehensive income.

Directors prepare adjusted EBITDA in order to assist with comparability between peers and to give what they consider to be a better indication of the underlying business.

	2021 $'000	2020 $'000
Operating loss	(115,969)	(33,106)
Depreciation	710	240
Impairment	90,070	—
Employee and contractor share-based payment expense	5,100	15,728
Adjusted EBITDA	(20,089)	(17,138)

In the year ended 31 December 2021, the Group recognised an impairment loss of $90.1 million (2020: $nil). Details of the impairment are set out in note 3b.

In the year ended 31 December 2021, share-based compensation includes $179,000 relating to shares issued to external suppliers (2020: $107,000).

5 Salaries and benefits

A breakdown of salaries and benefits for the Group during the year is as follows:

	2021 $'000	2020 $'000
Included in plant operating expenses		
Wages and salaries	476	353
Other employee based costs	81	38
Included in research and development expenses		
Wages and salaries	681	462
Other employee based costs	46	23
Included in administration expenses		
Wages and salaries	4,734	4,592
Other employee based costs	922	765
Share-based compensation	4,921	15,621
	11,861	21,854

6 Plant operating expenses

A breakdown of plant operating expenses for the Group during the year is as follows:

	2021 $’000	2020 $’000
Wages and salaries and other employee benefits	557	391
Contractors	1,922	1,087
Utility expenses	2,044	1,339
Impairment loss (note 3b)	90,070	—
Other operating expenses	1,579	948
	96,172	3,765

7 Administration expenses

A breakdown of administration expenses for the Group during the year is as follows:

	2021 $'000	2020 $'000
Wages and salaries and other employee benefits	5,656	5,357
Share-based compensation (note 14)	4,921	15,621
Business development and marketing fee	2,318	2,499
Professional fees	1,406	1,316
Other administrative expenses	1,493	1,543
	15,794	26,336

In year ended 31 December 2021, business development and marketing fee includes an accrued product marketing fees of $2.0 million (2020: $2.0 million) charged by Vitol S.A. ("Vitol"). This was converted into ordinary shares of the company in August 2022. See note 23.

8 Finance expenses

	2021 $'000	2020 $'000
Interest on debts and borrowing	546	383
Revaluation of provision	87	92
Unwinding of discount on provisions	66	42
	699	517

In the year ended 31 December 2021, the Group interest on debt and borrowings of $15.4 million (2020: $12.5 million), of which $14.9 million (2020 : $12.1 million) was capitalised in property, plant and equipment as part of the construction of the Corbin and St Rose facilities.

9 Taxation

The charge for the year can be reconciled to the loss before tax per the income statement and other comprehensive income as follows:

	2021 $'000	2020 $'000
Current tax	882	656
Adjustments in respect of current income tax of previous year	33	7
	915	663

	2021 $'000	2020 $'000
Loss before tax	(116,639)	(33,485)
Taxation at domestic rate for foreign subsidiaries	(28,476)	(3,476)
Tax effect of:		
Non- deductible expenses for tax purposes	694	398
Timing differences not recognised as deferred tax asset	26,261	1,772
Tax losses not recognised as deferred tax asset	1,521	1,306
Research and Development credit	882	656
Prior year research and development credit	33	7
	915	663

Profits arising in the Company are subject to Jersey income tax at the standard corporate income tax rate of 0%. Subsidiaries of the Group are subject to standard corporation rates ranging from 19% to 26.5%. No components of income tax affect other comprehensive income.

The Group has tax losses that arose in the US of approximately $37.0 million (2020: $33.4 million). These cumulative losses consist of $21.8 million which are expected to expire in years ranging from 2030 to 2033. Tax losses of $15.2 million (2020: $11.6 million) generated since 2018 can be carried forward indefinitely under the provision of new tax legislation. The Group has further tax losses in the UK of approximately $10.0 million (2020: $6.8 million) that are available indefinitely. Deferred tax assets of $12.3 million (2020: $10.1 million) have not been recognised in respect of these losses due to the startup nature of the Group. The Group will reevaluate whether a deferred tax asset should be recognised once the business nears profitability

10 Property, plant and equipment

	Mineral assets $'000	Plant and equipment $'000	Land and buildings $'000	Plant and equipment - Right of use $'000	Land and building - Right of use $'000	Work in progress $'000	Total $'000
Cost							
At 1 January 2020	**3,367**	**481**	**—**	**—**	**5,981**	**105,952**	**115,781**
Adjustments (see note 2a)	(980)	—	—	—	—	14,234	13,254
At 1 January 2020 (restated)	2,387	481	—	—	5,981	120,186	129,035
Additions	—	75	—	807	—	24,364	25,246
Disposal	—	(65)	—	—	(260)	—	(325)
Amendment to right of use	—	—	—	—	—	—	—
Change in rehabilitation provision	573	—	—	—	—	—	573
At 31 December 2020	**2,960**	**491**	**—**	**807**	**5,721**	**144,550**	**154,529**
Additions	—	136	—	6,820	696	21,659	29,311
Disposal	—	(74)	—	—	—	—	(74)
Transfer	—	71,663	70,184	—	—	(141,847)	—
Amendment to right of use	—	—	—	—	432	—	432
Change in rehabilitation provision	8	—	—	—	—	—	8
At 31 December 2021	**2,968**	**72,216**	**70,184**	**7,627**	**6,849**	**24,362**	**184,206**
Accumulated depreciation							
At 1 January 2020	**—**	**216**	**—**	**—**	**412**	**—**	**628**
Depreciation charge	—	69	—	60	375	—	504
Disposal	—	(65)	—	—	(260)	—	(325)
At 31 December 2020	**—**	**220**	**—**	**60**	**527**	**—**	**807**
Depreciation charge	—	81	—	434	481	—	996
Impairment	—	37,307	36,052	—	—	15,711	89,070
Disposal	—	(59)	—	—	—	—	(59)
At 31 December 2021	**—**	**37,549**	**36,052**	**494**	**1,008**	**15,711**	**90,814**
Net book value							
At 31 December 2021	**2,968**	**34,667**	**34,132**	**7,133**	**5,841**	**8,651**	**93,392**
At 31 December 2020	**2,960**	**271**	**—**	**747**	**5,194**	**144,550**	**153,722**

The Group started the construction of its new processing facility in Corbin, Kentucky in March 2016, which was commissioned as at 31 December 2021. The carrying amount of the Corbin processing facility at 31 December 2021 was $92.3 million (2020: $ 137.6 million). The Corbin processing facility and St Rose drying and blending facility is financed using a combination of third party borrowing and equity. The amount of borrowing costs capitalised during the year ended 31 December 2021 was $14.9 million (2020: $12.1 million). The rate used to determine the amount of borrowing costs eligible for capitalisation in the year ended 31 December 2021 was 19.7% (2020: 19.7%).

Depreciation charge for the year ended 31 December 2021 of $1.0m (2020: $0.5 million) includes depreciation expensed in the income statement of $0.7m (2020: $0.2 million) and depreciation of $0.3 million (2020: $0.3 million) relating to the Corbin right of use lease was capitalised in work in progress.

Mineral assets include rehabilitation costs at the Corbin facility The balance will be depreciated once production at its Corbin facility commences.

11 Receivables and prepayment

	2021 $'000	2020 $'000
Due within 1 year		
Prepayments	658	1,268
Other receivables	979	854
	1,637	**2,122**
Due after 1 year		
Deposit	2,391	1,741
	2,391	**1,741**

Deposits due after 1 year includes vendor deposits and surety bonds in regards to regulatory reclamation requirements on certain mining assets held by the Group.

12 Cash and cash equivalents

	2021 $'000	2020 $'000
Cash at bank and on hand	7,013	27,455
	7,013	27,455

At 31 December 2021, the Group held cash of $1.0 million (2020: $nil) which is restricted to payment of interest on its loan facility. Interest on the loan facility is deducted from this bank account. (See note 16).

13 Called up share capital and share premium

	2021 Thousands	2020 Thousands
Number of authorised shares		
Ordinary shares of $0.10 each	200,000	200,000
Ordinary shares of $0.001 each	6,000	6,000
Series B preferred shares of $0.10 each	150,000	150,000
Series C preferred shares of $0.01 each	350,000	350,000
	706,000	706,000

Preferred shares rank ahead of ordinary shares in event of liquidation and payment of dividends.

Movement in capital	Ordinary shares Thousands	Series B preferred shares Thousands	Called up share capital $'000	Share premium $'000	Capital reserve $'000
At 1 January 2020	**78,339**	**78,731**	**15,707**	**276,867**	**80,897**
Adjustment (see note 2a)	—	—	—	925	(4,073)
At 1 January 2020 (restated)	**78,339**	**78,731**	**15,707**	**277,792**	**76,824**
Share-based compensation	35	—	3	104	15,621
At 31 December 2020	**78,374**	**78,731**	**15,710**	**277,896**	**92,445**
Issuance of shares	58,000	—	6,000	173,000	—
Share-based compensation	—	—	—	—	4,921
At 31 December 2021	78,432	78,731	15,716	278,069	97,366

The capital reserve includes the fair value of vested equity-settled share options and the fair value of equity settled warrants that have not been exercised. The reserve will be adjusted for the Group's best estimate of whether the warrants and options will ultimately vest based on non-market performance conditions.

Equity-settled warrants

Each equity-settled warrant converts into one ordinary share of the Company on exercise. All warrants vest immediately except for 1,701,788 warrants that include a performance condition requiring the Group to meet certain sales targets before the warrants can vest. Once the warrants have vested, they can be exercised prior to the end of their contractual life. No change was made to the terms of the warrants in the year ended 31 December 2021. See note 23 for changes in the terms of certain warrants subsequent to 31 December 2021.

	Ordinary share warrants Thousands	Weighted average exercise price $
At 1 January 2020	**22,329**	3.51
At 31 December 2020	**22,329**	**3.51**
Expired	(15,755)	4.45
At 31 December 2021	**6,574**	**1.26**

14 Shared-based payments

Equity-settled share option scheme

The Group introduced a share option programme in 2015 to grant share options as an incentive for directors, employees and consultants of the Group. Each share option converts into one ordinary share of the Company on exercise. No amounts are paid or payable by the recipient on receipt of the option and the Group has no legal obligation to repurchase or settle the options in cash. The options carry neither rights to dividends nor voting rights prior to the date on which the options are exercised. Options may be exercised at any time from the date of vesting to the date of expiry. During the year ended 31 December 2020, the Group introduced a management incentive scheme whereby vesting of options is in accordance with the achievement of certain performance conditions with 5% of options vesting based on the commissioning of Corbin and St Rose, 5% vesting based on the Company entering into a fixed priced contract for St Rose construction and commissioning, a further 40% vesting based on meeting certain sales and production targets, and the remaining 50% vesting based on financing and designing of a second plant meeting certain production criteria. In the year ended 31 December 2021, as a result of terminating the construction of the St Rose drying and blending facility, the Group adjusted its estimate of the number of options issued in the management incentive scheme that will ultimately vest.

In July 2018, as part of entering into a marketing agreement with Vitol, the Company issued an option to acquire 18,656,716 ordinary shares with an exercise price of $0.80 per share (amended to options over 1,865,672 ordinary shares at an exercise price of $4.63 per share following the 10:1 share consolidation and rights issue in 2019). The option will vest if Vitol sells more than 75% of production from the Corbin Plant during the first 180 days of commercial production. The Company issued a second option to acquire 18,656,716 ordinary shares with an exercise price of $2.00 per share (amended to options over 1,865,672 ordinary shares at an exercise price of $11.57 per share following the 10:1 share consolidation and rights issue in 2019). The option will vest if Vitol sells more than 2 million tonnes of Arq Fuel. Both sets of options have a one year term from the vesting date. Both options were cancelled in August 2022.

See note 23 for changes in the terms of the Vitol options and share option scheme subsequent to 31 December 2021. Movements in the number of share options outstanding and their related weighted average exercise prices are as follows:

	Employee incentive options	Weighted average exercise price	Other incentive options	Weighted average exercise price
	Thousands	$	Thousands	$
At 1 January 2020	**13,427**	**1.76**	**3,731**	8.10
Additions	11,990	0.04	—	—
At 31 December 2020	**25,417**	**1.00**	**3,731**	**8.10**
At 31 December 2021	**25,417**	**1.00**	**3,731**	**8.10**

The number of options exercisable as at 31 December 2021 was 15,206,000 (2020: 14,786,000).

The weighted average remaining contractual life for the share options outstanding as at 31 December 2021 was 4.20 years (2020: 5.20 years).

The weighted average fair value of options granted in 2020 was $1.96 per option. No options were granted in the year ended 31 December 2021.

The range of exercise prices for options outstanding at the end of the year was $0.00 to $11.43 (2020: $0.00 to $11.43).

The following tables list the inputs using the Black Scholes model for the share option for the years ended 31 December 2021 and 2020.

	2021	2020
Weighted average fair values at the measurement date for options granted:		
Dividend yield (%)	— %	— %
Expected volatility (%)	93 %	93 %
Risk-free interest rate (%)	1.56 %	1.56 %
Expected life of share options (years)	3.06 years	3.06 years
Weighted average price of ordinary shares ($)	$ 2.06	$ 2.06

Expected volatility and expected life used in the model has been adjusted, based on management's best estimate, for the effects of non- transferability, exercise restrictions and behavioural considerations.

15 Trade and other payables

	2021	2020
	$'000	$'000
Trade payables	6279	4721
Accruals	1250	739
	7,529	5,460

16 Long-term borrowing

	2021 $'000	2020 $'000
Due within 1 year		
York preferred units	82,881	—
Lease liability	1,422	400
	84,303	**400**
Due after 1 year		
York preferred units	—	68,207
Bank Loan	5,721	—
Lease liability	12,189	5,819
	17,910	**74,026**

The table below summarises changes in borrowing:

	York preferred units $'000	Lease liability $'000	Bank loan $'000	Total $'000
At 1 January 2020	**56,135**	**5,719**	**—**	**61,854**
Cashflows	—	(688)	—	(688)
Additions	—	807	—	807
Accrued finance costs	12,070	381	—	12,451
At 31 December 2020	**68,205**	**6,219**	**—**	**74,424**
Cashflows	—	(1,105)	6,230	5,125
Additions	—	7,516		7,516
Accrued finance costs	14,676	549	—	15,225
Non cash movements	—	432	—	432
Transaction costs	—	—	(509)	(509)
At 31 December 2021	82,881	13,611	5,721	102,213

York preferred units

York entered into an agreement with the Group to become a preferred unit holder of Arq Project in 2015. The preferred units do not have voting rights and rank ahead of the common and ordinary shares of Arq Project.

The preferred units accrue interest of 15% per annum on the aggregate amount outstanding and mature in September 2022. The outstanding amount of principal and interest can be converted at any time into Series B preferred shares of the Company at a conversion price of $3.10 per share.

See note 23 for changes in the terms of the preferred units subsequent to 31 December 2021.

Lease liability

The Group has lease contracts for various items of mobile equipment, offices, rail cars and land used in its operations. Leases of mobile equipment, rail cars and offices generally have lease terms between 3 and 7 years. The Group also has a 10 year lease contract for land at its Corbin plant which includes an option to extend the lease. This allows the Group to use the land to extract the coal waste and build its plant facilities at Corbin to meet its overall business objectives.

The undiscounted potential future rental payments relating to periods following the exercise date of extension that are not in the lease term is $7.5 million (2020: $7.5 million).

Bank loan

In January 2021, the Group entered into a loan facility agreement with Community Bank Trust Inc., partly guaranteed by the US Department of Agriculture, whereby the Group can borrow up to $10 million up to January 2022 to invest in its demonstration plant and mini drying and blending facility at Corbin, Kentucky. The loan facility is secured on the property, plant and equipment at Corbin. The loan facility interest rate is the higher of 6% and US Prime Rate + 2.75%. Loan repayments will start at the beginning of the third year, with the loan facility being fully repaid by January 2036. At 31 December 2021, the Group has drawn down $6.2 million of the loan facility. The Group's cash and cash equivalent includes $1.0 million which is restricted to paying interest on the loan facility up to January 2023. See note 23 for changes in the terms of the loan facility subsequent to 31 December 2021.

17 Provisions

	2021 $'000	2020 $'000
Asset rehabilitation costs		
At 1 January	4,015	3,307
Interest	66	43
Change in rehabilitation provision	**95**	**665**
At 31 December	**4,176**	**4,015**

The Group has an obligation to undertake rehabilitation work when disturbance is caused by the development or ongoing production of a mining property. As at 31 December 2021, $nil (2020: $0.9 million) is included in current liabilities.

The discount rate used in the calculation of the provision as at 31 December 2021 equaled 1.3% (2020: 0.8%).

18 Related party transactions

During the year ended 31 December 2021, the Group was charged rent and other office expenses at cost totaling $98,000 (2020: $257,000), by companies controlled by key management. At 31 December 2021, $1,000 (2020: $nil) was owed to companies controlled by key management. In 2021, an office lease was novated by the related party (a company controlled by key management) to the Group. In accordance with IFRS 16, an asset and liability of $0.2 million was recognised.

The remuneration of the directors and the executive leadership team during the year is as follows:

	2021 $'000	2020 $'000
Wages and salaries	2,676	2,528
Share-based payment expense	4,658	14,353
	7,334	**16,881**

Details of all related party transactions with York, a significant shareholder of the Company, are set out in Note 16 and 23.

19 Commitments

At 31 December 2021, the Group had capital commitments relating to the construction of Corbin facility of $1,269,000 (2020: $3,226,000).

20 Financial instruments

The Group's financial instruments comprise cash balances, receivables and payables that arise directly from its operations and borrowings. The table below sets out the carrying value of all financial instruments by category. The fair value of all financial assets and financial liabilities is not materially different to the book value.

	2021 $'000	2020 $'000
Financial assets		
Receivables	3,370	2,595
Cash and cash equivalent	7,013	27,455
	10,383	**30,050**
Financial liabilities		
Trade and other payables	7,529	5,460
Loans and borrowings	102,213	74,426
	109,742	**79,886**

The main risks the Group faces are foreign exchange risk, liquidity risk and capital risk. The board regularly reviews and agrees policies for managing each of these risks. The Group's policies for managing these risks are summarised below and have been applied throughout the period.

Foreign exchange risk

As a Group with office based in the UK and the US, the Group is exposed to foreign exchange risk as a result of operating expenses incurred in GBP. A strengthening of the US dollar against the GBP has a positive effect on the Group's earnings. The Group's policy is not to hedge such exposure.

Liquidity risk

Liquidity risk arises from the management of working capital, finance charges and principal repayments on its debt instruments.

Management's policy is to ensure that it will always have sufficient cash to allow it to meet its liabilities when they become due. Management also prepares 12 month cash flow projections as well as information regarding cash balances on a weekly basis.

The table below summarises the maturity profile of the Group's financial liabilities based on contractual undiscounted payments:

For the year ended 31 December 2021

	Less than 3 months $'000	3 to 12 months $'000	Between 1 and 5 years $'000	Greater than 5 years $'000
Trade and other payables	5,040	2,489	—	—
Loans and borrowing	469	87,118	8,587	6,297
	5,509	**89,607**	**8,587**	**6,297**

For the year ended 31 December 2020

	Less than 3 months $'000	3 to 12 months $'000	Between 1 and 5 years $'000	Greater than 5 years $'000
Trade and other payables	3,771	1,302	387	—
Loans and borrowings	197	591	75,809	—
	3,968	**1,893**	**76,196**	**—**

Capital risk

The group's objectives when managing capital are to safeguard the ability to continue as a going concern in order to provide returns for shareholders and benefits to other stakeholders and to maintain an optimal capital structure to reduce the cost of capital. The Group manages its capital structure and makes adjustments in light of changes in economic conditions and the requirements of the business to deliver its business plan. To maintain or adjust the capital structure, the Group may issue new shares or draw on other project finance.

21 Ultimate Controlling Party

In the opinion of the Directors, the Group does not have a single ultimate controlling party.

22 Investment in subsidiaries

The Group consolidated financial statements include the following subsidiaries:

			Equity Interest	
Name	**Country of incorporation**	**Principal activities**	**2021**	**2020**
Arq IP Limited	United Kingdom	Dormant	100%	100%
Arq Coal Technologies LLC	United States of America	Energy Technology	100%	100%
Arq UK Management Limited	United Kingdom	Energy Technology	100%	100%
Arq International Limited	United Kingdom	Dormant	100%	100%
Arq Project Holdings Company LLC	United States of America	Financing Company	100%	100%
Arq Fuel LLC	United States of America	Dormant	100%	100%
Arq Corbin Land LLC	United States of America	Energy Technology	100%	100%
Arq Corbin LLC	United States of America	Energy Technology	100%	100%
Corbin Project LLC	United States of America	Energy Technology	100%	100%
Wharncliffe Asset Management LLC	United States of America	Dormant	100%	100%
Glen Alum Management LLC	United States of America	Dormant	100%	100%
Mine Four LLC	United States of America	Dormant	100%	100%
Arq Series B LLC	United States of America	Financing Company	100%	100%
Arq St Rose LLC	United States of America	Energy Technology	100%	100%

23 Post Balance Sheet Events

In August 2022, the Group entered into an agreement with ADES, a US listed producer of activated carbon, whereby ADES will acquire 100% of the outstanding share capital of the Company on completion of the transaction by issuing ADES shares in exchange for the Company's outstanding share capital. The completion of the transaction is subject to some customary conditions precedents, including the filing of all required documents with the United States Securities and Exchange Commission, ADES shareholder approval, and the scheme of arrangement under Article 125 of the Companies (Jersey) Law 1991 (the "Scheme") becoming effective. In advance of entering into the transaction, the Group obtained irrevocable consents from the Company's shareholders holding 75% of the shares of the Company to vote in favour of the Scheme.

In advance of signing the agreement with ADES, the Group agreed to make a number of changes to its capital structure as set out below:

- All share options and warrants issued to York and Vitol SA were cancelled. The Group cancelled 3,731,344 equity- settled share options and 3,936,382 warrants.
- The Board approved that they will enter into a resolution upon completion of the transaction cancelling all remaining share options and warrants which have an exercise price greater than the value of ordinary shares or the performance criteria has not been met. It was also agreed to settle all "in the money" options and warrants for shares in the Company for equivalent value at the completion of the transaction.
- As at August 2022, the Group owed $5.0 million in accrued marketing fees to Vitol, a supplier and shareholder of the Company. It was agreed that the accrued marketing fee would be converted into 1,612,903 ordinary shares
- York agreed to forbear from taking any action against any claims arising from the non-payment of interest and principal amounts under the York preferred units until the earlier of (i) June 2023, (ii) the consummation of the transaction with ADES and (iii) the termination of the transaction agreement.

- The Group agreed with York that upon completion of the transaction, the York preferred units plus any accrued interest will be converted into 32,020,535 ordinary shares.
- York agreed to convert all its 37,086,998 Series B preferred shares into ordinary shares.
- The Group agreed to issue 2,250,000 ordinary shares to Community SPV GP LP for providing transactional advice.
- Upon the approval of resolutions which are to be circulated as part of a circular (the "Circular") sent to the Company's shareholders (with the Company having received irrevocable undertakings from 75% of its shareholders to approve such resolutions) it is intended that the outstanding Series B preferred shares will be converted into ordinary shares, the authorised ordinary share capital will be increased to 800,000,000 ordinary shares of $0.10 each. At the completion of the transaction, the Group will pay ordinary shares to option holders which have an exercise price below the value of the ordinary shares

In order to finance the working capital of the Group up to the completion of the transaction, the Group raised $6.9 million in secured convertible loan notes ("Convertible Loan Notes") in August 2022 from certain initial subscribers, with the option to increase to up to $8 million when the convertible loan notes are offered to all of the Company's shareholders on a pro-rata basis, pursuant to the Circular. The main terms of the loan note are as follows:

- Upon completion of the merger agreement, the convertible loan note will convert into ordinary shares of the Company. If the convertible loan note holder subscribes for their pro-rata share of a $20.0 million private investment into the new merged group of ADES and the Group, the convertible loan note conversion price will be c. 2.9 – 3.4 US cents per ordinary share (depending on the total funds raised under the Convertible Loan Notes). If the Convertible Loan Note holder does not subscribe to this further investment, the Convertible Loan Note conversion price will be c. 20.8 US cents per ordinary share.
- The convertible loan note is secured by a debenture granting security to the convertible loan notes via fixed and floating charges over the assets of the Company and Arq IP Limited.

In January 2022, the Group amended their loan facility agreement with Community Bank Trust Inc., allowing the Group to draw down the loan facility up to January 2023.

As a result of changes in the macroeconomic environment since 31 December 2021, EBITDA multiples for publicly traded companies in similar industries have decreased. This has resulted in a decrease in the recoverable amount of the Corbin facility, and the Group is forecasting an impairment loss in the range of $20.0 million and $30.0 million for the six months ended 30 June 2022.

Exhibit 99.2

ARQ LIMITED
Unaudited Condensed Consolidated Interim Financial Statements
For the nine months ended 30 September 2022 and 2021

ARQ LIMITED
Unaudited Consolidated Income Statement and Other Comprehensive Income

	Notes	9 months ended 30 September 2022 $'000	2021 $'000
Plant operating expenses	**5**	51,301	4,244
Research and development expenses		1,401	2,830
Administration expenses	**6**	11,317	13,048
Operating loss		**(64,019)**	**(20,122)**
Finance expense		(14,295)	(490)
Gain on changes to liabilities and debt	**7**	10,568	—
Other income		269	11
Other expenses		(20)	(26)
Loss before tax		**(67,497)**	**(20,627)**
Income tax income	**8**	352	701
Net loss and total comprehensive loss attributable to the shareholders of the company		**(67,145)**	**(19,926)**

Unaudited Consolidated Balance Sheet

	Notes	30 September 2022 $'000	31 December 2021 $'000
Assets			
Non-current assets			
Property, plant and equipment	**9**	42,929	93,392
Receivables and prepayments		1,867	2,391
Total non-current assets		44,796	95,783
Current assets			
Inventory		340	340
Receivables and prepayments		1,463	1,637
Cash and cash equivalents		5,860	7,013
Total current assets		**7,663**	**8,990**
Total assets		**52,459**	**104,773**
Equity and liabilities			
Equity			
Called up share capital	**10**	16,116	15,716
Share premium	**10**	278,250	278,069
Other capital reserve	**10**	99,204	97,366
Retained deficit		(467,441)	(400,296)
Equity attributable to equity shareholders of the company		**(73,871)**	**(9,145)**
Current liabilities			
Trade and other payables		5,831	7,529
Derivative liabilities	**11**	2,882	—
Current portion of long-term borrowing	**11**	94,780	84,303
Total current liabilities		**103,493**	**91,832**
Non-current liabilities			
Long-term borrowing, net of current portion	**11**	19,539	17,910
Provisions	**12**	3,298	4,176
Total non-current liabilities		**22,837**	**22,086**
Total liabilities		**126,330**	**113,918**
Total equity and liabilities		**52,459**	**104,773**

	Notes	Called up share capital	Share premium	Other capital reserve	Retained Deficit	Total
		$'000	$'000	$'000	$'000	$'000
At 1 January 2021		**15,710**	**277,896**	**92,445**	**(284,572)**	**101,479**
Total comprehensive loss for the period		—	—	—	(19,926)	(19,926)
Issuance of shares for services	**10**	4	110	—	—	114
Share-based compensation	**10**	—	—	5,232	—	5,232
At 30 September 2021		**15,714**	**278,006**	**97,677**	**(304,498)**	**86,899**
At 1 January 2022		**15,716**	**278,069**	**97,366**	**(400,296)**	**(9,145)**
Total comprehensive loss for the period		—	—	—	(67,145)	(67,145)
Issuance of shares for services	**10**	239	136	—	—	375
Issuance of shares for extinguish debt	**10**	161	45	—	—	206
Share-based compensation	**10**	—	—	1,838	—	1,838
At 30 September 2022		**16,116**	**278,250**	**99,204**	**(467,441)**	**(73,871)**

Unaudited Consolidated Statement of Cashflows

	Notes	9 months 30 September 2022 $'000	2021 $'000
Operating Activities			
Loss before tax		(67,497)	(20,627)
Adjustment to reconcile loss before tax to net cash flows			
Share-based payment expense		2,213	5,346
Depreciation of property, plant and equipment	**9**	3,678	366
Impairment loss	**9**	45,224	—
Gain on extinguishment of liability	**7**	(4,793)	—
Gain on modification of debt	**7**	(5,775)	—
Finance cost		14,295	516
Finance and other income		(269)	(11)
Working capital adjustments			
Increase in trade and other payables		3,500	1,566
Decrease/(increase) in other receivables and prepayments		1,051	(948)
Income tax received		—	689
Net cash outflows from operating activities		(8,373)	(13,103)
Investing activities			
Purchase of property, plant and equipment		(1,823)	(5,943)
Interest received and other income		43	11
Proceeds from disposal of property, plant and equipment		245	—
Net cash outflows from investing activities		(1,535)	(5,932)
Financing activities			
Proceeds from convertible loan note		6,891	—
Proceeds from bank loan		3,147	4,450
Transaction costs		—	(451)
Repayment of borrowings		(918)	(767)
Interest paid		(365)	(92)
Net cash inflows from financing activities		8,755	3,140
Cash and cash equivalents at 1 January		7,013	27,455
Net decrease in cash and cash equivalents		(1,153)	(15,895)
Cash and cash equivalents at 30 September		**5,860**	**11,560**

1 Description of the Organization.

Arq Limited ("Company"), is a limited company domiciled in Jersey and incorporated on December 30, 2010 under the Companies (Jersey) Law 1991. The Company and its subsidiaries at 30 September 2022 comprise the Arq Group ("Group"). The registered office is located at Level 1 IFC 1 Esplanade St Helier Jersey JE2 3BX.

2 Basis of preparation

These unaudited condensed consolidated interim financial statements for the nine month period ended 30 September 2022 have been prepared in accordance with International Accounting Standard IAS 34 Interim Financial Reporting as issued by the International Accounting Standards Board (IASB).

These unaudited condensed consolidated interim financial statements do not include all the notes of the type normally included in annual financial statements. Accordingly, this report is to be read in conjunction with the consolidated financial statements for the year ended 31 December 2021.

As noted in note 3, these interim financial statements are prepared on a basis other than going concern. Management has assessed that the accounting policies to be adopted are the same as those of the previous financial year and corresponding interim reporting period with the exception of the recoverable amount of property, plant & equipment, which has been recognized as the fair value on a realized basis. A number of amended standards became applicable for the current reporting period. The group did not have to change its accounting policies or make retrospective adjustments as a result of adopting these amended standards.

3 Going concern

The Group has evaluated whether there are conditions and events, considered in the aggregate, that raise substantial doubt about the Group's ability to continue as a going concern within one year after the date the consolidated financial statements are issued.

On February 1, 2023, the Company signed an agreement with Advanced Emissions Solutions, Inc. ("ADES"), a US listed activated carbon producer, whereby ADES will acquire 100% of the outstanding share capital of all of the Company's direct subsidiaries in exchange for shares of ADES's common stock and Series A Convertible Preferred Stock ("merger transaction") effectively immediately.

Immediately prior to the merger transaction, the Company's convertible loan note was converted into 238,218,926 ordinary shares of the Company, and the Company contributed certain assets, liabilities and contracts to its direct subsidiaries Arq UK Management Limited and Arq LLC. All related security and any guarantee provided by the Group were released.

Immediately after the merger transaction, the Company held 3,814,864 shares of ADES common stock, par value $0.001 per share, 5,294,462 shares of ADES Series A Convertible Preferred Stock, par value $0.001 per share, and $500,000 of cash. The Company had no trade or other liabilities immediately after the merger transaction.

On February 17 2023, the company bought back 87.9% of its outstanding ordinary shares in exchange for 3,370,865 ADES common stock and 4,364,131 Series A Convertible Preferred Stock

The Company's plan is to distribute the remaining ADES common stock and Series A Convertible Preferred Stock upon the liquidation of the Company. Taking into the account the transactions to liquidate the Company up to the 31 March 2024, the Directors believe that these financial statements should be prepared on a basis other than going concern. Management has assessed that it is appropriate to continue to apply the recognition and measurement criteria of IFRS, with the exception of the recoverable amount of property, plant & equipment. The recoverable amount of the property, plant and equipment has been determined to be the realized value through the transaction resulting in an impairment.

4 Adjusted EBITDA

In preparation of Adjusted EBITDA, the Directors exclude share-based compensation, depreciation of property, plant and equipment, and impairment in order to assist with comparability between peers and to give what they consider to be a better indication of the underlying business.

	9 months ended 30 September	
	2022	**2021**
	$'000	**$'000**
Operating loss	(64,019)	(20,122)
Depreciation	3,678	366
Share-based compensation	2,213	5,346
Impairment loss	45,224	—
Adjusted EBITDA	(12,904)	(14,410)

In the nine-month ended 30 September 2022, share-based compensation includes $375,000 relating to shares issued to external suppliers (2020: $114,000).

In the nine months ended 30 September 2022, the Group recognised an impairment loss of $45.2 million representing the write-down of certain property, plant and equipment at the Corbin facility to its recoverable amount as at 30 September 2022. The impairment loss was principally due to a change in the macroeconomic environment since 31 December 2021. The recoverable amount of $42.9 million as was based on the fair value less costs of disposal calculation, which was estimated based on the value through disposal.

5 Plant operating expenses

A breakdown of plant operating expenses for the Group during the nine months is as follows:

	9 months ended 30 September	
	2022	**2021**
	$'000	**$'000**
Wages and salaries and other employee benefits	544	380
Contractors	543	1,334
Utility expenses	814	1,520
Impairment loss	45,224	—
Depreciation	3,461	163
Other operating expenses	715	847
	51,301	4,244

6 Administration expenses

A breakdown of administration expenses for the Group during the nine months is as follows:

	9 months ended 30 September	
	2022	**2021**
	$'000	**$'000**
Wages and salaries and other employee benefits	4,678	4,116
Share-based compensation	2,213	5,232
Business development and marketing fee	1,142	1,757
Professional fees	2,094	800
Other administrative expenses	1,190	1,143
	11,317	13,048

7 Gain on changes to liabilities and debt

	9 months ended 30 September	
	2022	**2021**
	$'000	**$'000**
Gain on extinguishment of liability	4,793	—
Gain on modification of debt	5,775	—
	10,568	—

In August 2022, the Group agreed to fully settle an outstanding debt relating to accrued marketing fees totaling $5.0 million owed to Vitol, a supplier and shareholder of the Company, into 1,612,903 ordinary shares which had a fair value of $0.2 million. The fair value was estimated using the Group's 2025 EBITDA forecast, applying an EBITDA multiple of 1.6x and 8.6x. As a result, the Group made a gain on extinguishment of liability of $4.8 million.

In August 2022, the Group agreed with York that upon completion of the transaction, the York preferred units plus any accrued interest will be converted into 32,020,535 ordinary shares. The modification of the terms resulted in a change less than 10% in the fair value of the debt based on the conversion occurring in March 2023. As a result, the carrying value of the outstanding debt was adjusted with a gain on modification of $5.8 million in the nine months ended 30 September 2022.

8 Taxation

The income tax income represents the estimated research and development tax credits earned in the UK for the respective nine month periods reported.

9 Property, plant and equipment

	Mineral assets	Plant & equipment	Land and Buildings	Plant & Equipment - Right of use	Land & Building - Right of use	Work in progress	Total
	$'000	$'000	$'000	$'000	$'000	$'000	$'000
Cost							
At 1 January 2022	**2,968**	**72,216**	**70,184**	**7,627**	**6,849**	**24,362**	**184,206**
Additions	—	—	—	—	—	1,625	1,625
Disposal	—	—	—	(2,515)	—	—	(2,515)
Change in rehabilitation provision	(942)	—	—	—	—	—	(942)
Amendment to right of use	—	—	—	(3)	—	—	(3)
At 30 September 2022	**2,026**	**72,216**	**70,184**	**5,109**	**6,849**	**25,987**	**182,371**
Accumulated depreciation							
At 1 January 2022	**—**	**37,549**	**36,052**	**494**	**1,008**	**15,711**	**90,814**
Disposal	—	—	—	(275)	—	—	(275)
Impairment (see note 4)	—	22,999	22,225	—	—	—	45,224
Depreciation charge	—	1,598	1,142	572	367	—	3,679
At 30 September 2022	**—**	**62,146**	**59,419**	**791**	**1,375**	**15,711**	**139,442**
Net book value							
At 30 September 2022	**2,026**	**10,070**	**10,765**	**4,318**	**5,474**	**10,276**	**42,929**
At 1 January 2022	**2,968**	**34,667**	**34,132**	**7,133**	**5,841**	**8,651**	**93,392**

10 Called up share capital and share premium

The movement in capital during the nine months is as follows:

Movement in capital	Ordinary shares	Series B preferred shares	Called up share capital	Share Premium	Capital Reserve
	Thousand	Thousand	$'000	$'000	$'000
At 1 January 2021	**78,374**	**78,731**	**15,710**	**277,896**	**92,445**
Issuance of shares for services	—	—	4	110	—
Share-based compensation	—	—	—	—	5,232
At 30 September 2021	**78,374**	**78,731**	**15,714**	**278,006**	**97,677**
At 1 January 2022	**78,432**	**78,731**	**15,716**	**278,069**	**97,366**
Issuance of shares for services	2,400	—	239	136	—
Issuance of shares to extinguish debt (see note 7)	1,613	—	161	45	—
Share-based compensation	—	—	—	—	1,838
At 30 September 2022	**82,445**	**78,731**	**16,116**	**278,250**	**99,204**

In August 2022, the Group issued 2,250,000 ordinary shares to Community SPV GP LP for providing transactional advice. A further 149,588 ordinary shares were issued to consultants to provide technical engineering and research and development services in the nine months ending 30 September 2022.

11 Long-term borrowing

	30 September 2022	31 December 2021
	$'000	$'000
Due within 1 year		
York preferred units	90,054	82,881
Convertible loan note	4,411	—
Lease liability	315	1,422
	94,780	84,303
Due after 1 year		
Bank loan	8,895	5,721
Lease liability	10,644	12,189
Long-term borrowing	19,539	17,910

York preferred units

York entered into an agreement with the Group to become a preferred unit holder of Arq Project in 2015. The preferred units do not have voting rights and rank ahead of the common and ordinary shares of Arq Project.

The preferred units accrue interest of 15% per annum on the aggregate amount outstanding and have a maturity date of September 2022. The outstanding amount of principal and interest can be converted at any time into Series B preferred shares of the Company at a conversion price of $3.10 per share.

In August 2022, the Group agreed with York that upon completion of the merger agreement between ADES and the Group, the York preferred units plus any accrued interest will be converted into 32,020,535 ordinary shares. The modification of the terms resulted in the adjustment of the carrying value of the outstanding debt with a gain on modification of $5.8 million in the nine months ended 30 September 2022 (see note 7).

Lease liability

The Group has lease contracts for various items of mobile equipment, offices, rail cars and land used in its operations. Leases of mobile equipment, rail cars and offices generally have lease terms between 3 and 7 years. The Group also has a 10 year lease contract for land at its Corbin plant which includes an option to extend the lease. This allows the Group to use the land to extract the coal waste and build its plant facilities at Corbin to meet its overall business objectives. In February 2022, part of the rail car lease was disposed resulting in a reduction in the lease liability of $2.1 million and associated right of use asset of $2.0 million.

Bank loan

In January 2021, the Group entered into a loan facility agreement with Community Bank Trust Inc., partly guaranteed by the US Department of Agriculture, whereby the Group can borrow up to $10.0 million up to January 2023 to invest in its demonstration plant and mini drying and blending facility at Corbin, Kentucky. The loan facility is secured on the property, plant and equipment at Corbin. The loan facility interest rate is the higher of 6% and US Prime Rate + 2.75%. Loan repayments will start at the beginning of the third year, with the loan facility being fully repaid by January 2036. At 30 September 2022, the Group has drawn down $9.4 million of the loan facility.

Convertible loan note

In August 2022, the Group received $6.9 million in exchange for secured convertible loan notes from certain initial subscribers, with the option to increase to up to $8.0 million when the convertible loan notes are offered to all of the Company's shareholders on a pro-rata basis in October 2022. Upon completion of the merger agreement between ADES and the Group, the convertible loan note will convert into a fixed number of ordinary shares of the Company irrespective of how much the Group raises. If the convertible loan note holder subscribes for their pro-rata share of a $20 million private investment into the new merged group of ADES and the Group, the convertible loan note conversion price will be c. 2.9 – 3.4 US cents per ordinary share (depending on the total funds raised under the convertible loan notes). If the convertible loan note holder does not subscribe to this further investment, the Convertible Loan Note conversion price will be c. 20.8 US cents per ordinary share. The convertible loan note is secured by a debenture granting security to the convertible loan notes via fixed and floating charges over the assets of the Company and Arq IP Limited.

If the merger agreement between ADES and the Group does not complete, the convertible loan note will be redeemed plus a redemption premium of 15% at the earliest of the first anniversary of the loan note, the termination of the merger agreement, a breach of the merger agreement or ADES shareholders not approving the merger.

The conversion feature included in the convertible loan note that results in a variable conversion price is treated as a derivative financial instrument and initially recognised at fair value. As at 30 September 2022, the Group has recognized derivative liabilities of $2.9 million. The corresponding debt portion, including accrued interest, of $4.4 million is included in current portion of long-term borrowing.

The table below summarises changes in borrowing

	York preferred units $'000	Lease liability $'000	Bank loan $'000	Convertible loan note $'000	Total $'000
At 1 January 2021	**68,205**	**6,219**	**—**	**—**	**74,424**
Cashflows	—	(767)	4,450	—	3,683
Additions	—	7,516	—	—	7,516
Accrued finance costs	10,735	343	—	—	11,078
Other non-cash movements	—	432	—	—	432
Transaction costs	—	—	(516)	—	(516)
At 30 September 2021	**78,940**	**13,743**	**3,934**	**—**	**96,617**
At 1 January 2022	**82,881**	**13,611**	**5,721**	**—**	**102,213**
Cashflows	—	(918)	3,147	6,891	9,120
Reclassification of derivative liabilities	—	—	—	(2,882)	(2,882)
Disposal	—	(2,220)	—	—	(2,220)
Accrued finance costs	12,948	489	—	402	13,839
Other non-cash movements	(5,775)	(3)	27	—	(5,751)
At 30 September 2022	**90,054**	**10,959**	**8,895**	**4,411**	**114,319**

12 Provisions

	30 September 2022 $'000
Asset rehabilitation costs	
At 1 January	4,176
Interest	102
Change in rehabilitation provision	(980)
At 30 September	**3,298**

The Group has an obligation to undertake rehabilitation when environmental disturbance is caused by the development or ongoing production of a mining property. The discount rate used in the calculation of the provision as at 30 September 2022 equaled 4.2% (31 December 2021: 1.3%)

13 Financial instruments

The Group's financial instruments comprise cash balances, receivables and payables that arise directly from its operations and borrowings. The table below sets out the carrying value of all financial instruments by category. The fair value of all financial assets and financial liabilities is not materially different to the book value.

	30 September 2022 $'000	31 December 2021 $'000
Financial assets		
Receivables	3,191	3,370
Cash and cash equivalents	5,860	7,013
	9,051	10,383
Financial liabilities		
Trade and other payables	5,831	7,529
Derivative liabilities	2,882	—
Loans and borrowings	114,319	102,213
	123,032	109,742

14 Post Balance Sheet Events

Subsequent to 30 September 2022, the Group raised a further $1.1 million from the issuance of convertible loan notes and converted $0.2 million of deferred salaries into convertible loan notes.

On February 1, 2023, the Company signed an agreement with ADES, a US listed producer of activated carbon, whereby ADES will acquire 100% of the outstanding share capital of the Company's direct subsidiaries in exchange for 3,814,864 shares of ADES common stock, par value $0.001 per share, and 5,294,462 shares of ADES Series A Convertible Preferred Stock, par value $0.001 per share, effectively immediately. 833,914 shares of the ADES Series A Preferred Stock will initially be deposited into an escrow account and will be released upon the Company delivering a FIRPTA withholding certificate to ADES and the escrow agent, and the payment by ADES of any amount owed to the US Internal Revenue Services ("IRS") under the FIRPTA withholding certificate. The amount paid to the IRS, if any, will reduce the shares held in the escrow account based on a valuation of $4.00 per share, and the remaining shares will be distributed to the Company.

Immediately prior to the transaction with ADES, the Company executed the following transactions

- York preferred units plus any accrued interest were converted into 32,020,535 ordinary shares. Upon completion of the conversion, all related security and any guarantee provided by the Group was released.
- All share options that were out of the money or if the performance criteria had not been met were cancelled
- 1,725,922 share options there were in the money and the performance criteria had been met were exercised

- The Company's convertible loan note was converted into 238,218,926 ordinary shares of the Company. Upon completion of the conversion, all related security and any guarantee provided by the Group was released.
- The Company contributed certain assets, liabilities and contracts to its direct subsidiaries Arq UK Management Limited and Arq LLC.

On February 17, 2023, the company bought back 87.9% of its outstanding ordinary shares in exchange for 3,370,865 ADES common stock and 4,364,131 Series A Convertible Preferred Stock.

ADVANCED EMISSIONS SOLUTIONS, INC.
UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

Acquisition

On February 1, 2023 (the "Acquisition Date"), Advanced Emissions Solutions, Inc. ("ADES" or the "Company") entered into a Securities Purchase Agreement (the "Purchase Agreement") with Arq Limited, a company incorporated under the laws of Jersey ("Arq Ltd."), pursuant to which ADES acquired all of the direct and indirect equity interests of Arq Ltd's subsidiaries (the "Acquisition," and hereafter the Arq Ltd. subsidiaries referred to as "Arq") in exchange for consideration (the "Purchase Consideration") consisting of (i) 3,814,864 shares of common stock, par value $0.001 per share, of ADES (the "Common Stock") and (ii) 5,294,462 shares of Series A Convertible Preferred Stock, par value $0.001 per share, of ADES (the "Preferred Shares"). The fair value of the Purchase Consideration was $31.2 million and was represented by the estimated fair value on the Acquisition Date of the Common Stock shares issued, the Preferred Shares issued and contingent consideration for a contingent obligation of ADES to repurchase some of the Preferred Shares ("Contingent Consideration," and as further described in Note 4(l) below) in the amounts of $12.4 million, $18.3 million and $0.5 million, respectively. In connection with the issuance of the Preferred Shares pursuant to the Purchase Agreement, ADES filed the Certificate of Designations of Preferred Stock for the Series A Preferred Stock (the "Certificate of Designations") with the Secretary of State of the State of Delaware.

Series A Preferred Stock

Each Preferred Share will be automatically converted into a share of Common Stock upon approval by the holders of the percentage of Common Stock required to approve such conversion under the applicable rules of The Nasdaq Stock Market without the need for any action on the part of the holders of Preferred Shares (the "Conversion Approval"). Each Preferred Share is deemed to have an original issue price of $4.00 per share (the "Original Issue Amount"). The number of shares of Common Stock issued upon conversion of each Preferred Share shall be equal to the product of (i) the sum of (A) the Original Issue Amount *plus* (B) an amount equal to the cumulative amount of the accrued and unpaid dividends on such share at such time (regardless of whether or not declared or funds for their payment are lawfully available) *divided by* (ii) the Original Issue Amount, subject to adjustment as provided in the Certificate of Designations.

Holders of the Preferred Shares are entitled to receive cumulative dividends which will accrue quarterly on the last day of each applicable quarter (whether or not declared or funds for their payment are lawfully available) and will be payable quarterly, in arrears, on the earlier to occur of (a) the date any dividend is paid to holders of Common Stock with respect to such quarter and (ii) 30 days after the end of each quarter (the "Series A Quarterly Dividend") at the rate per Preferred Share equal to the greater of (i) if the Company declares a cash dividend on the Common Stock with respect to such quarter, the amount of the cash dividend that would be received by a holder of Common Stock in which such Preferred Share would be convertible on the record date for such cash dividend and (ii) an annual rate (the "Rate") of 8.0% of the Original Issue Amount per annum compounded quarterly (the "Coupon Dividend") with respect to such quarter. The Rate will increase by 2.0% on the first day of the first quarter ending on or after the 635th day following the closing date of the first issuance of the Preferred Shares and on each subsequent anniversary of such date.

The Series A Quarterly Dividend is payable in cash or in additional Preferred Shares (the "Series A PIK Shares"), at the option of the Company. The number of Series A PIK Shares to be issued shall be determined by dividing (i) the Series A Quarterly Dividend payable with respect to all Preferred Shares held by a holder thereof by (ii) the aggregate Original Issue Amount of all Preferred Shares held by a holder thereof, and each fractional Series A PIK Share will be rounded to the nearest whole Series A PIK Share (with 0.5 of a share being rounded down to 0.0).

In the event of the Company's liquidation, dissolution or winding up, after payment or provision for payment of the Company's debt and other liabilities, a holder of Preferred Shares will receive a liquidating distribution equal to the amount of the cumulative accrued but unpaid dividends on each Preferred Share held by such holder. After the payment to the holders of Preferred Shares of such liquidation preference, the holders of outstanding Preferred Shares will participate *pari passu* with the holders of Common Stock on an as-converted basis in any remaining distributions out of the Company's assets available for distribution to stockholders.

If the Conversion Approval has not been obtained by February 1, 2028, each outstanding Preferred Share will be redeemed by the Company for cash, at a redemption price equal to the sum of (i) the product of (x) 140% and (y) the Original Issue Amount, plus (ii) an amount equal to the cumulative amount of accrued and unpaid dividends on such Preferred Share.

Subscription Agreements

On February 1, 2023, the Company entered into Subscription Agreements (the "Subscription Agreements") with certain persons (the "Subscribers"), which included existing shareholders of Arq Ltd., pursuant to which the Subscribers subscribed for and purchased shares of Common Stock for an aggregate purchase price of $15.4 million and at a price per share of $4.00 (the "PIPE Price Per Share" and such transaction, the "PIPE Investment").

Loan Agreement

On February 1, 2023 (the "Closing Date"), ADES, as borrower, certain of its subsidiaries, as guarantors, and CF Global ("CFG"), as administrative agent and lender (the "Lender"), entered into a term loan in the amount of $10.0 million, less original issue discount of $0.2 million, (the "Term Loan") upon execution of a Term Loan and Security Agreement (the "Loan Agreement"). The Term Loan has a term of 48 months and bears interest at a rate equal to either (a) Adjusted Term SOFR (subject to a 1.00% floor and a cap of 2.00%) plus a margin of 9.00% paid in cash and 5.00% paid in kind or (b) Base Rate plus a margin of 8.00% paid in cash and 5.00% paid in kind, which interest on the Term Loan in each case shall be payable (or capitalized, in the case of in kind interest) quarterly in arrears. The Term Loan is secured by substantially all of the assets of ADES and its subsidiaries (including those acquired in the Acquisition), subject to customary exceptions. The Company incurred issuance costs of $1.3 million associated with the Loan Agreement.

The Loan Agreement also provides for the issuance of a warrant (the "Warrant") to CFG to purchase 325,457 shares of Common Stock, which represents 1% of the post-transaction fully diluted share capital (as defined in the Loan Agreement), at an exercise price of $0.01 per share. The Warrant has a term of 10 years and contains a cash-less exercise provision.

Unaudited Pro Forma Condensed Combined Financial Information

The following unaudited pro forma condensed combined financial information (the "unaudited pro forma financial statements") is based on the historical annual audited consolidated financial statements for the year ended December 31, 2021 of ADES and Arq Ltd. as well as the interim unaudited condensed consolidated financial statements as of and for the nine months ended September 30, 2022 of ADES and Arq Ltd. as adjusted to give effect to the Purchase Agreement, the PIPE Investment and the Term Loan (collectively, the "Transactions"). It should be noted that the Arq Ltd. historical financial statements have been prepared under International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board.

The unaudited pro forma condensed combined statements of operations (the "unaudited pro forma statements of operations") for the nine months ended September 30, 2022 and the year ended December 31, 2021 give effect to the Transactions as if they had occurred on January 1, 2021. The unaudited pro forma condensed combined balance sheet (the "unaudited pro forma balance sheet") as of September 30, 2022 gives effect to the Transactions as if they had occurred on September 30, 2022. In addition, certain historical assets of Arq Ltd. were not acquired and have been excluded in deriving the unaudited pro forma balance sheet. Additionally, certain operating expenses and finance costs pertaining to Arq Ltd. have been excluded in deriving the unaudited pro forma statements of operations.

The unaudited pro forma financial statements are based on and should be read in conjunction with:

- the accompanying notes to the unaudited pro forma financial statements;
- the historical annual audited consolidated financial statements of ADES as of and for the year ended December 31, 2021 and 2020, which are included in ADES' Annual Report on Form 10-K for the fiscal year ended December 31, 2021 and the unaudited condensed consolidated financial statements of ADES as of September 30, 2022 and for the nine months ended September 30, 2022 and 2021, which are included in ADES' Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2022.

- the historical annual audited consolidated financial statements of Arq Ltd. for the years ended December 31, 2021 and 2020, which are included in Exhibit 99.1 of this Form 8-K/A, and the interim unaudited condensed consolidated financial statements of Arq Ltd. as of September 30, 2022 and for the nine months ended September 30, 2022 and 2021, which are included in Exhibit 99.2 of this Form 8-K/A.

The unaudited pro forma financial statements are presented using the acquisition method of accounting, with ADES identified as the acquirer of Arq. Under the acquisition method of accounting, the purchase price is allocated to the underlying Arq tangible and intangible assets acquired and liabilities assumed based on their respective fair market values with any excess purchase price allocated to goodwill.

The unaudited pro forma combined financial statements are presented for informational purposes only and have been prepared in accordance with Article 11 of Regulation S-X of the SEC, and do not necessarily reflect what the combined company's financial position or results of operations would have been had the Transactions occurred as of the dates indicated herein, nor do they purport to project the future financial position and operating results of the combined companies. The pro forma financial statements also do not reflect the costs of any integration activities or cost savings or synergies expected to be achieved as a result of the Transactions, and, accordingly, do not attempt to predict or suggest future results.

The unaudited pro forma financial statements include "Transaction Accounting Adjustments" that are necessary to account for the Transactions as of the dates specified above. In addition, the unaudited pro forma financial statements include adjustments for the accounting differences between IFRS and generally accepted in the United States ("U.S. GAAP") as well as reclassifications of certain financial statement components in Arq Ltd's historical financial statements to conform to ADES' financial statement presentation.

The assumptions underlying all of the adjustments made in the unaudited pro forma financial statements are described in the accompanying notes. Adjustments are based on information available to us during the preparation of the unaudited pro forma financial statements and assumptions that we believe are reasonable and factually supportable. The adjustments, which are described in the accompanying notes, may be revised by us as additional information becomes available and is evaluated. Therefore, it is likely that the actual adjustments upon the completion of the Transactions will differ from these adjustments, and it is possible the differences may be material.

The unaudited pro forma condensed combined financial statements have been adjusted for the following transactions:

- The Acquisition, in which ADES acquired 100% of the equity interests of Arq in exchange for an aggregate number of 3,814,864 newly issued shares of Common stock, 5,294,462 Preferred Shares and the Contingent Consideration, which aggregate to $31.2 million based on the estimated fair values of the Preferred Shares, the Common Stock and the Contingent Consideration as of the Acquisition Date.
- The issuance of ADES shares of Common Stock pursuant to the PIPE Investment in exchange for $15.4 million of cash at the PIPE Price Per Share of $4.00.
- The Loan Agreement in the principal amount of $10.0 million for net cash proceeds of approximately $8.5 million, net of original issue discount and debt issuance costs, with issuance of the Warrant to purchase 325,457 shares of Common Stock.

ADVANCED EMISSIONS SOLUTIONS, INC.
UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET
AS OF SEPTEMBER 30, 2022

(in thousands)	ADES Historical	Arq Ltd. Historical Reclassified (Note 2)	IFRS to US GAAP Adjustments (Note 3)	Ref	Arq Ltd. Historical Reclassified US GAAP	Transaction Accounting Adjustments (Note 4)	Ref	ADES Pro Forma Combined
ASSETS								
Current assets:								
Cash	$ 75,823	$ 5,860	$ —		$ 5,860	$ 23,104	(f)	$ 104,787
Receivables, net	13,903	—	—		—	—		13,903
Inventories, net	15,261	340	—		340	—		15,601
Prepaid expenses and other current assets	7,653	1,463	—		1,463	—		9,116
Total current assets	112,640	7,663	—		7,663	23,104		143,407
Restricted cash, long-term	10,000	—	—		—	—		10,000
Property, plant and equipment, net	33,286	42,929	(11,244)	(b), (c), (d)	31,685	450	(g)	65,421
Other long-term assets, net	29,529	1,867	10,058	(b)	11,925	7,700	(g)	49,154
Total Assets	$ 185,455	$ 52,459	$ (1,186)		$ 51,273	$ 31,254		$ 267,982
LIABILITIES AND STOCKHOLDERS' EQUITY								
Current liabilities:								
Accounts payable and accrued expenses	$ 18,652	$ 5,831	$ —		$ 5,831	$ 10,065	(h), (i)	$ 34,548
Current portion of long-term debt	1,182	94,780	(90,368)	(a), (b)	4,412	(4,412)	(j)	1,182
Other current liabilities	5,361	2,882	1,782	(b)	4,664	(2,882)	(g),(j)	7,143
Total current liabilities	25,195	103,493	(88,586)		14,907	2,771		42,873
Long-term debt, net of current portion	3,731	19,539	(10,959)	(b)	8,580	8,809	(g), (k)	21,120
Other long-term liabilities	13,906	3,298	7,429	(b), (c)	10,727	(315)	(g)	24,318
Total Liabilities	42,832	126,330	(92,116)		34,214	11,265		88,311
Commitments and contingencies								
Temporary equity	—	—	126,628	(a)	126,628	(107,859)	(l)	18,769
Stockholders' equity:								
Preferred stock	—	—	—		—	—		—
Common stock	24	16,116	—		16,116	(16,108)	(m)	32
Treasury stock, at cost	(47,692)	—	—		—	—		(47,692)
Additional paid-in capital	103,175	377,454	(14,987)	(a), (e)	362,467	(333,993)	(n)	131,649
Retained earnings (deficit)	87,116	(467,441)	(20,711)	(a), (b), (c), (d), (e)	(488,152)	477,949	(o)	76,913
Total stockholders' equity	142,623	(73,871)	(35,698)		(109,569)	127,848		160,902
Total Liabilities and Stockholders' Equity	$ 185,455	$ 52,459	$ (1,186)		$ 51,273	$ 31,254		$ 267,982

ADVANCED EMISSIONS SOLUTIONS, INC.
UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2021

(in thousands)	ADES Historical	Arq Ltd. Historical Reclassified (Note 2)	IFRS to US GAAP Adjustments (Note 3)	Ref	Arq Ltd. Historical Reclassified US GAAP	Transaction Accounting Adjustments (Note 4)	Ref	ADES Pro Forma Combined
Revenues:								
Consumables	$ 85,882	$ —	$ —		$ —	$ —		$ 85,882
License royalties, related party	14,368	—	—		—	—		14,368
Other	44	—	—		—	—		44
Total revenues	100,294	—	—		—	—		100,294
Operating expenses:								
Consumables cost of revenues, exclusive of depreciation and amortization	65,576	—	—		—	—		65,576
Selling, general and administrative	24,635	25,189	2,253	(b), (e)	27,442	5,125	(p), (q), (r)	57,202
Depreciation, amortization, depletion and accretion	7,933	710	153	(c)	863	1,282	(s), (t)	10,078
Other operating expenses (income)	(2,702)	—	—		—	—		(2,702)
Impairment of long-lived assets	—	90,070	(61,307)	(a), (d)	28,763	—		28,763
Total operating expenses	95,442	115,969	(58,901)		57,068	6,407		158,917
Operating income (loss)	4,852	(115,969)	58,901		(57,068)	(6,407)		(58,623)
Other income (expense):								
Earnings from equity method investments	68,726	—	—		—	—		68,726
Gain on extinguishment of debt	3,345	—	—		—	—		3,345
Interest expense	(1,490)	(699)	656	(b), (c)	(43)	(2,244)	(u)	(3,777)
Other	640	29	—		29	915	(v)	1,584
Total other income	71,221	(670)	656		(14)	(1,329)		69,878
Income (loss) before income tax expense (benefit)	76,073	(116,639)	59,557		(57,082)	(7,736)		11,255
Income tax expense (benefit)	15,672	(915)	—		(915)	(12,393)	(v)	2,364
Net income (loss)	$ 60,401	$ (115,724)	$ 59,557		$ (56,167)	$ 4,657		$ 8,891

ADVANCED EMISSIONS SOLUTIONS, INC.
UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2022

(in thousands)	ADES Historical	Arq Ltd. Historical Reclassified (Note 2)	IFRS to US GAAP Adjustments (Note 3)	Ref	Arq Ltd. Historical Reclassified US GAAP	Transaction Accounting Adjustments (Note 4)	Ref	ADES Pro Forma Combined
Revenues:								
Consumables	$ 79,578	$ —	$ —		$ —	$ —		$ 79,578
Total revenues	79,578	—	—		—	—		79,578
Operating expenses:								
Consumables cost of revenue, exclusive of depreciation and amortization	62,992	—	—		—	—		62,992
Selling, general and administrative	20,481	15,117	2,896	(b), (e)	18,013	(3,592)	(r)	34,902
Depreciation, amortization, depletion and accretion	4,765	3,678	155	(c)	3,833	(2,339)	(s), (t)	6,259
Other operating expense	34	—	—		—	—		34
Impairment of long-lived assets	—	45,224	(1,286)	(d)	43,938	—		43,938
Total operating expenses	88,272	64,019	1,765		65,784	(5,931)		148,125
Operating loss	(8,694)	(64,019)	(1,765)		(65,784)	5,931		(68,547)
Other income (expense):								
Earnings from equity method investments	3,222	—	—		—	—		3,222
Interest expense	(259)	(14,295)	13,464	(a), (b), (c)	(831)	(1,328)	(r), (u)	(2,418)
Other	(19)	10,817	(5,771)	(a), (b)	5,046	352	(v)	5,379
Total other income	2,944	(3,478)	7,693		4,215	(976)		6,183
Loss (income) before income tax benefit	(5,750)	(67,497)	5,928		(61,569)	4,955		(62,364)
Income tax benefit	—	(352)	—		(352)	352	(v)	—
Net (loss) income	$ (5,750)	$ (67,145)	$ 5,928		$ (61,217)	$ 4,603		$ (62,364)

NOTES TO UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

1. Basis of Presentation

The accompanying unaudited pro forma financial statements are prepared from the historical consolidated financial statements of ADES and Arq Ltd. after giving effect to the Transactions and assumptions, reclassifications and adjustments as described in the accompanying notes. The unaudited pro forma combined balance sheet and the unaudited combined pro forma statements of operations give effect to the Transactions as if they had occurred on September 30, 2022 and January 1, 2021, respectively.

The historical annual audited consolidated financial statements and interim unaudited condensed consolidated financial statements of ADES are prepared in accordance with U.S. GAAP and the historical annual audited consolidated financial statements and interim unaudited condensed consolidated financial statements of Arq Ltd. are prepared in accordance with IFRS.

The unaudited pro forma financial statements do not necessarily reflect what the combined company's financial condition or results of operations would have been had the Transactions occurred on the dates indicated and also may not be useful in predicting the future financial condition and results of operations of the combined company. The actual financial position and results of operations may differ significantly from the pro forma amounts reflected herein due to a variety of factors.

Included in Revenues and Operating income for the year ended December 31, 2021 are License royalties, related party in the amount of $14.4 million which will not recur in ADES' statement of operations beyond 12 months after the effective date of the Transactions. Also included in Operating income for the nine months ended September 30, 2022 and for the year ended December 31, 2021 are Earnings from equity method investments of $3.2 million and $68.7 million, respectively, which will not recur in ADES's statement of operations beyond 12 months after the effective date of the Transactions.

ADES has accounted for the Transactions under the acquisition method, which requires recognizing and measuring the identifiable assets acquired and the liabilities assumed at fair value. Accordingly, ADES has used its best estimates and assumptions to assign fair value to the tangible assets acquired, identifiable intangible asset(s) and liabilities assumed as of the Acquisition Date. The value of the Purchase Consideration is based on the estimated fair value of Preferred Shares, as determined by a third party valuation firm, the closing price per share of Common Stock and the Contingent Consideration. All values were determined as of the Acquisition Date.

The fair values assigned to Arq's tangible and identifiable intangible assets acquired and liabilities assumed, as described in Note 4, are based on management's estimates and assumptions. ADES has estimated the fair value of Arq's assets acquired and liabilities assumed based on discussions with Arq's management, preliminary valuation studies, due diligence and information presented in Arq Ltd.'s historical audited and unaudited financial statements. The estimated fair values of these assets acquired and liabilities assumed are considered preliminary and represent management's best estimates of fair value and may be revised as additional information is received. Thus, the provisional measurements of fair value are subject to change.

The Transaction Accounting adjustments have been made solely for the purpose of providing the unaudited pro forma financial information presented herein.

2. Arq Ltd. Historical Financial Statements

Arq Ltd.'s historical balances were derived from Arq Ltd.'s historical consolidated financial statements for the year ended December 31, 2021 and as of and for the nine months ended September 30, 2022, as described above, and are presented under IFRS. The unaudited pro forma financial statements reflect certain reclassifications of Arq Ltd.'s historical financial statement captions to conform to ADES' presentation in its historical financial statements.

The reclassifications are summarized below (in thousands):

Arq Ltd. Financial Statement Line	Arq Ltd. as of September 30, 2022	Reclassifications	Arq Ltd. Historical Reclassified Amount	ADES Financial Statement Line
Assets				**Assets**
Property, plant and equipment	$ 42,929	$ —	$ 42,929	Property, plant and equipment, net
Receivables and prepayments	1,867	—	1,867	Other long-term assets, net
Inventory	340	—	340	Current: Inventories, net
Receivables and prepayments	1,463	—	1,463	Current: Prepaid expenses and other current assets
Cash and cash equivalents	5,860	—	5,860	Current: Cash
	$ 52,459	$ —	$ 52,459	
Equity				**Stockholders' equity**
Called up share capital	$ 16,116	$ —	$ 16,116	Common stock
Share premium	278,250	(278,250)	—	
Other capital reserve	99,204	278,250	377,454	Additional paid-in capital
Retained deficit	(467,441)	—	(467,441)	Retained earnings (deficit)
	(73,871)	—	(73,871)	
Liabilities				**Liabilities**
Trade and other payables	5,831	—	5,831	Current: Accounts payable and accrued expenses
Derivative liabilities	2,882	—	2,882	Current: Other current liabilities
Current portion of long-term borrowing	94,780	—	94,780	Current: Current portion of long-term borrowings
Long-term borrowing, net of current portion	19,539	—	19,539	Long-term borrowings, net of current portion
Provisions	3,298	—	3,298	Other long-term liabilities
	$ 52,459	$ —	$ 52,459	

Arq Ltd. Financial Statement Line	Arq Ltd. for the year ended December 31, 2021	Reclassifications	Arq Ltd. Historical Reclassified Amount	ADES Financial Statement Line
Plant operating expenses	$ 96,172	$ (96,172) (1)	$ —	
	—	90,070	90,070	Impairment of long-lived assets
	—	710	710	Depreciation, amortization, depletion and accretion
Research and development expense	4,003	(4,003) (2)	—	
Administration expenses	15,794	9,395	25,189	Selling, general and administrative
Operating loss	(115,969)	—	(115,969)	
Finance expense	(699)	—	(699)	Interest expense
Finance and other income	51	(51)	—	
Other expense	(22)	51	29	Other
Loss before tax	(116,639)	—	(116,639)	
Income tax income	915	—	915	Income tax expense (benefit)
Net loss for the financial year	(115,724)	—	(115,724)	Net income (loss)
Other comprehensive income	—	—	—	
Total comprehensive loss for the financial year	(115,724)	—	(115,724)	
Attributable to Equity shareholders of the company	$ (115,724)	$ —	$ (115,724)	

(1) Represents amounts which were reclassified to conform with ADES' presentation as follows: approximately $90.1 million to Impairment of long-lived assets, $5.4 million to Selling, general and administrative and $0.7 million to Depreciation, amortization, depletion and accretion.

(2) $4.0 million was reclassified to Selling, general and administrative to conform with ADES' presentation.

Arq Ltd. Financial Statement Line	Arq Ltd. for the nine months ended September 30, 2022	Reclassifications	Arq Ltd. Historical Reclassified Amount	ADES Financial Statement Line
Plant operating expenses	$ 51,301	$ (51,301) (1)	$ —	
	—	45,224	45,224	Impairment of long-lived assets
	—	3,678	3,678	Depreciation, amortization, depreciation, and accretion
Research and development expenses	1,401	(1,401) (2)	—	
Administration expenses	11,317	(11,317) (3)	—	
	—	15,117	15,117	Selling, general and administrative
Operating loss	(64,019)	—	(64,019)	
Finance expense	(14,295)	—	(14,295)	Interest expense
Gain on changes to liabilities and debt	10,568	(10,568)	—	
Other income	269	10,548	10,817	Other
Other expenses	(20)	20	—	
Loss before tax	(67,497)	—	(67,497)	
Income tax income	352	—	352	Income tax expense (benefit)
Net loss and total comprehensive loss attributable to the shareholders of the company	(67,145)	—	(67,145)	Net loss
Attributable to Equity shareholders of the company	$ (67,145)	$ —	$ (67,145)	

(1) Represents amounts which were reclassified to conform with ADES' presentation as follows: approximately $45.2 million to Impairment of long-lived assets, $2.6 million to Selling, general and administrative and $3.5 million to Depreciation, amortization, depreciation, and accretion.

(2) $1.4 million was reclassified to Selling, general and administrative to conform with ADES' presentation.

(3) Represents amounts which were reclassified to conform with ADES' presentation as follows: approximately $11.1 million to Selling, general and administrative and $0.2 million to Depreciation, amortization, depreciation, and accretion.

3. IFRS to U.S. GAAP adjustments

IFRS differs in certain material respects from U.S. GAAP. The following material adjustments have been made to reflect Arq Ltd.'s historical financial statements on a U.S. GAAP basis for purposes of presenting unaudited pro forma financial information. In addition, the adjustments have been made to align Arq Ltd.'s historical significant accounting policies under IFRS to ADES' significant accounting policies under U.S. GAAP.

(a) Preferred Units

Under IFRS, Arq Ltd. classified and accounted for certain preferred shares (the "Preferred Units") as liabilities and classified and recorded dividends earned on the Preferred Units as finance costs. In addition, and through December 31, 2021, Arq Ltd. capitalized substantially all of is finance costs to Property, plant and equipment, which included all of the cumulative dividends earned on the Preferred Units of $61.8 million.

Under U.S. GAAP, the Preferred Units are not classified as liabilities, as they are not mandatorily redeemable as defined in U.S. GAAP. Further, under U.S. GAAP, dividends earned on the Preferred Units represent a "preferred return" and are recorded within equity. In addition, SEC accounting guidance "requires equity instruments with redemption features that are not solely within the control of the issuer to be classified outside of permanent equity (often referred to as classification in "temporary equity"). Accordingly, under U.S. GAAP and SEC accounting guidance, the Preferred Units, including cumulative dividends, are classified as temporary equity. Since the cumulative dividends earned on the Preferred Units do not represent finance costs under U.S. GAAP, they are not capitalized nor are they expensed in the statement of operations under U.S. GAAP.

For the year ended December 31, 2021, the impairment of long-lived assets recognized by Arq Ltd. under IFRS is reduced by the cumulative dividends earned on the Preferred Units of $61.8 million.

For the nine months ended September 30, 2022, Arq Ltd. reported finance costs of $12.9 million which are eliminated and recorded to temporary equity under U.S. GAAP. In addition, for the nine months ended September 30, 2022, Arq Ltd. recognized a gain of $5.8 million and corresponding reduction to the carrying amount of the Preferred Units related to a modification of conversion terms related to the Preferred Units (the "Preferred Gain"). Under U.S. GAAP, the impact of this modification is not recorded to the statement of operations but recorded within equity.

The following table reflects the U.S. GAAP adjustments for the reversal of Preferred Gain recognized in the Statement of Operations under IFRS related to the Preferred Units and the reclassification of the Preferred Units from Current portion of long-term debt to Temporary equity:

(in thousands)		As of September 30, 2022
Condensed Balance Sheet		
Decrease to Current portion of long-term debt	$	(90,053)
Increase to Temporary equity	$	126,628
Decrease to Additional paid in capital	$	(13,740)
Decrease to Retained earnings	$	(22,835)

The following table reflects the decrease of Impairment of long-term assets for the year ended December 31, 2021 and the decrease in interest expense and the reversal of the Preferred Gain for the nine months ended September 30, 2022 due to the recording of cumulative dividends on the Preferred Units within equity under U.S. GAAP:

(in thousands)		For the year ended December 31, 2021		For the nine months ended September 30, 2022
Condensed Statement of Operations				
Decrease to Impairment of long-lived assets	$	(61,819)	$	—
Decrease to Interest expense	$	—	$	(12,948)
Decrease to Other income	$	—	$	(5,775)

(b) Leases

Under IFRS, all leases are classified as and accounted for as finance leases. Under U.S. GAAP, leases are classified as either finance or operating leases based on satisfying certain criteria, and under U.S. GAAP, certain Arq Ltd. leases meet the definition of operating leases. Arq Ltd. reports right of use ("ROU") assets for all of its leases in Property, plant and equipment. Under U.S. GAAP, ROU assets under operating leases are reported as Other long-term assets. The net carrying amount of ROU assets under operating leases under U.S. GAAP is different from their net carrying amounts as Property, plant and equipment under IFRS, primarily due to differences between depreciation of Property, plant and equipment recognized under IFRS and amortization recognized on ROU assets under operating leases under U.S. GAAP. As of September 30, 2022, the aggregate amount of these differences resulted in a decrease of $0.2 million to Retained earnings.

In addition, under U.S. GAAP, interest on an operating lease liability and amortization of an operating lease ROU asset are reported a single expense in operating expenses, in contrast to lease cost for finance leases, which are reported separately as interest expense and amortization of ROU assets. In converting the leases that meet the definition of operating leases, amounts for both interest expense and amortization of ROU assets reported under IFRS are reversed, and the aggregate amount of operating lease expense is reported under U.S. GAAP.

The following table reflects the adjustments to present certain of Arq Ltd.'s ROU assets and lease liabilities as operating lease ROU assets and operating lease liabilities under U.S. GAAP:

(in thousands)		As of September 30, 2022
Condensed Balance Sheet		
Decrease to Property, plant and equipment (1)	$	(10,287)
Increase to Other long-term assets (1)	$	10,058
Decrease to Current portion of long-term debt (2)	$	(315)
Increase to Other current liabilities (2)	$	1,782
Decrease to Long-term debt, net of current portion (2)	$	(10,959)
Increase to Other long-term liabilities (2)	$	9,492
Decrease to Retained earnings	$	(229)

(1) Represents reclassification of ROU assets for finance leases under IFRS to ROU assets for operating leases under U.S. GAAP.

(2) Represents reclassification of lease liabilities for finance leases under IFRS to lease liabilities for operating leases under U.S. GAAP.

In converting the leases that meet the definition of operating leases, amounts for both interest expense and amortization of ROU assets reported under IFRS are reversed, and the aggregate amount is reported as operating lease expense under U.S. GAAP.

The following table reflects the adjustments to report lease costs of certain of Arq Ltd.'s leases as operating leases under U.S. GAAP:

(in thousands)		For the year ended December 31, 2021		For the nine months ended September 30, 2022
Condensed Statement of Operations				
Increase to Selling, general and administrative	$	670	$	291
Decrease to Interest expense	$	(502)	$	(452)
Increase to Other income	$	—	$	4

(c) Asset retirement obligations

Under IFRS, the calculation of an asset retirement obligation ("ARO") is based on a risk-free rate, and under U.S. GAAP, it is determined using a credit adjusted rate. Arq Ltd. calculated its ARO using a discount rate that was significantly lower than a credit adjusted rate required under U.S. GAAP. The higher discount rate under U.S. GAAP resulted in significantly lower ARO and ARO asset amounts at inception reported under U.S. GAAP compared to IFRS. In addition, under IFRS, the accretion of an ARO is reported as interest expense and under U.S. GAAP is reported as accretion expense. The reduction of ARO and ARO asset amounts also impacted the reported amounts of accretion expense and depreciation, respectively, for the periods presented below.

The following tables reflect the adjustments to Arq Ltd.'s AROs, ARO assets and related expenses under U.S. GAAP:

(in thousands)		As of September 30, 2022
Condensed Balance Sheet		
Decrease to Property, plant and equipment	$	(1,771)
Decrease in Other long-term liabilities	$	(2,063)
Increase to Retained Earnings	$	292

(in thousands)	For the year ended December 31, 2021		For the nine months ended September 30, 2022	
Condensed Statement of Operations				
Increase to Depreciation, amortization, depletion and accretion	$	153	$	155
Decrease to Interest expense	$	(154)	$	(64)

(d) Impairment

The following tables reflect the adjustments to recognize changes in impairment under U.S. GAAP related to the IFRS to U.S. GAAP differences in reported asset and liability amounts for ROU assets under operating leases and AROs and ARO assets, as discussed in Notes 3(b) Leases and 3(c) Asset retirement obligations above:

(in thousands)	As of September 30, 2022	
Condensed Balance Sheet		
Increase to Property, plant and equipment	$	814
Increase to Retained earnings	$	814

(in thousands)	For the year ended December 31, 2021		For the nine months ended September 30, 2022	
Condensed Statement of Operations				
Increase (decrease) to impairment of long-lived assets	$	512	$	(1,286)

(e) Stock-based compensation

Under IFRS, stock-based compensation for graded vesting stock awards containing only service conditions is recognized and measured only as, in substance, multiple awards. Under U.S. GAAP, an accounting election is made to treat graded vesting awards as either a single award (straight-line cost recognition), or, in substance, multiple awards for both recognition and measurement. ADES' policy is to account for all service-based stock awards as a single award and to recognize stock-based compensation expense on a straight-line method over the vesting period. Arq Ltd.'s historical stock awards are graded vesting awards that vest based on service conditions. ADES is adjusting Arq Ltd's historical stock-based compensation expense, which is based on an accelerated graded vesting method, to ADES' straight-line method. The calculation of the fair value of Arq Ltd.'s historical stock awards is the same under both IFRS and U.S. GAAP.

The following tables reflect the adjustment of stock-based compensation expense from Arq Ltd.'s accelerated graded vesting method to ADES' straight-line method:

(in thousands)	As of September 30, 2022	
Condensed Balance Sheet		
Decrease to Additional paid in capital	$	(1,247)
Increase to Retained earnings	$	1,247

(in thousands)	For the year ended December 31, 2021		For the nine months ended September 30, 2022	
Condensed Statement of Operations				
Increase to Selling, general and administrative	$	1,583	$	2,605

4. Transaction Accounting Adjustments to the Unaudited Pro Forma Combined Financial Statements

The following transaction accounting adjustments have been made to reflect the Transactions. Further review may identify additional adjustments that could have a material impact on the unaudited pro forma financial statements of the combined company. At this time, ADES is not aware of any additional transaction accounting adjustments that would have a material impact on the unaudited pro forma financial statements that are not reflected or disclosed in the pro forma adjustments.

Transaction Accounting Adjustments to Unaudited Pro Forma Condensed Combined Balance Sheet

The transaction accounting adjustments included in the unaudited pro forma condensed combined balance sheet as of September 30, 2022 assume that the Transactions had occurred on September 30, 2022 and are as follows:

(f) The following table reflects the adjustments made to Cash:

(in thousands)	
Cash retained by Arq Ltd.	$ (500)
Net cash proceeds from PIPE Investment	15,082
Net cash proceeds from Term Loan	8,522
Transaction accounting adjustment to Cash	$ 23,104

(g) ADES has performed a preliminary valuation analysis of the fair value of Arq's assets and liabilities based on the purchase consideration of $31.2 million. The table below summarizes the preliminary allocation of the purchase price to the assets acquired and liabilities assumed for purposes of the unaudited pro forma financial information as if the Transactions occurred on September 30, 2022:

(in thousands)	**Preliminary Purchase Price Allocation**
Cash	$ 5,360
Inventories, net	340
Prepaid expenses and other current assets	1,463
Property, plant and equipment, net	32,135
Other long-term assets, net	19,625
Total Assets	$ 58,923
Accounts payable and accrued expenses	$ 5,831
Other current liabilities	1,782
Long-term debt, net of current portion	9,693
Other long-term liabilities	10,412
Total Liabilities	$ 27,718
Total Preliminary Purchase Price	$ 31,205

The preliminary purchase price allocation has been used to prepare transaction accounting adjustments in the pro forma balance sheet and statements of operations. The final purchase price allocation could differ materially from the preliminary purchase price allocation used in the pro forma financial statements. The final purchase price allocation may include (1) changes in fair values or asset lives of property, plant and equipment, (2) changes in allocations or asset lives to intangible assets and (3) other changes to assets and liabilities.

As part of its preliminary valuation of Arq, the Company identified an intangible asset, developed technology, which is included in Other long-term assets, net in the unaudited pro forma condensed combined balance sheet. The estimated fair value of the identifiable intangible asset was determined using significant estimates and assumptions. As such, actual amounts may differ from these estimates. The estimated fair value and useful live of the intangible asset identified are as follows:

(in thousands)	**Estimated Fair Value**	**Estimated Useful Life in Years**
Developed technology	$ 7,700	20

(h) Reflects transaction costs associated with the Transactions of $8.3 million that have been incurred through the Acquisition Date but not recognized in the historical financial statements.

(i) Represents compensation ("Arq Separation Pay") payable of $1.9 million to certain Arq Ltd. and Arq employees triggered by change in control provisions in employment agreements as well as in employee severance agreements that are not recognized in the historical financial statements, assuming such amounts will be paid in cash.

(j) Reflects the conversion of $7.3 million of convertible notes issued by Arq Ltd. in August 2022 (the "Convertible Notes"), of which $4.4 million was recorded in the Current portion of long-term debt. The Convertible Notes were bifurcated at inception and an embedded derivative was recognized in the amount of $2.9 million and recorded in Other current liabilities. The Convertible Notes converted into Arq Ltd. ordinary shares immediately prior to the Acquisition.

(k) Reflects the following transactions:

(1) Issuance of the Term Loan of $10.0 million, less original issue discount and debt issuance costs of $0.2 million and $1.3 million, respectively, and debt discount associated with the allocation of cash proceeds to the Warrant of $0.9 million. ADES estimated the standalone fair values of the Term Loan and the Warrant and allocated the proceeds to each instrument based on its relative fair value. The amount allocated to the Warrant is recorded as a debt discount and is amortized to interest expense over the term of the Term Loan. The standalone fair value of the Term Loan is based on a comparison of borrowings, credit ratings, etc. As the Warrant is exercisable for $0.01 per share, the fair value is deemed to be equal to the fair value of the underlying shares, and accordingly, the fair value of the Warrant is determined as the number of shares issuable from the exercise of the Warrant (based on 1.0% of post-transaction fully diluted share capital) multiplied by the closing price of ADES' common stock on the Acquisition Date;

(2) Adjustment to fair value of an assumed term loan of Arq (the "Arq Term Loan").

The table below summarizes the recording of the Term Loan and a fair value adjustment to the Arq Term Loan:

(in thousands)		
Long-term portion of Term Loan	$	10,000
Original issue discount		(200)
Debt issuance costs (1)		(2,228)
		7,572
Fair value adjustment to the Arq Term Loan		1,113
Transaction accounting adjustment to long-term debt, net of current portion	$	8,685

(1) Includes debt issuance costs of $1.3 million and the debt discount of $0.9 million associated with the allocation of a portion of the Term Loan proceeds to the Warrant.

(l) The following table reflects the adjustments to Temporary equity:

(in thousands)		
Conversion of Arq Ltd temporary equity into Arq Ordinary Shares (1)	$	(126,628)
Issuance of Preferred Shares pursuant to the Acquisition (2)		18,319
Contingency for Escrow Shares (3)		450
Transaction accounting adjustments to Temporary equity	$	(107,859)

(1) Prior to the Acquisition, Arq Ltd., a party who is the holder of the Preferred Units (the "Holder") and one of the subsidiaries of Arq ("Arq LLC") executed an agreement, whereby the Holder transferred all of its ownership in the Preferred Units to the Arq LLC and, in exchange, Arq Ltd. issued an agreed upon number of its Ordinary Shares to the Holder. As such, all Preferred Units were effectively canceled and converted into Arq Ltd. Ordinary Shares.

(2) Reflects the issuance of 5,294,462 Preferred Shares pursuant to the Acquisition. The Preferred Shares carry a redemption feature and under SEC accounting rules, are classified as "mezzanine" or "Temporary equity" for financial statement purposes.

(3) Under the terms of the Purchase Agreement, 833,914 Preferred Shares issued to Arq Ltd. are being held in escrow (the "Escrow Shares") pending a determination by the Internal Revenue Service (the "IRS") that no tax withholding is required on the Purchase Consideration issued to Arq Ltd. (the "Arq Ltd. Tax Liability"). In the event that the IRS determines that no withholding is required by Arq Ltd. in connection with the Arq Acquisition, all of the Escrow Shares will be released and delivered to Arq Ltd. In the event that the IRS determines that any amount of withholding is

required by Arq Ltd., ADES has agreed to remit a payment for such amount to the IRS on Arq Ltd.'s behalf, and a number of Escrow Shares equal to the required withholding amount divided by $4.00 will be returned to ADES, not to exceed a maximum of 833,914 Escrow Shares.

We estimated the fair value of the assumed Arq Ltd. Tax Liability at $3.3 million and the fair value of the Escrow Shares at $2.9 million, and the difference representing the value of the Contingent Consideration was recorded to Temporary equity in the Condensed Combined Balance Sheet.

(m) The following table reflects the transaction accounting adjustments made to Common stock:

(in thousands)		
Elimination of Arq Ltd. Called up shared capital	$	(16,116)
Issuance of shares of Common stock pursuant to Acquisition (1)		4
Issuance of shares of common stock pursuant to PIPE Investment (2)		4
Transaction accounting adjustment to Common stock	$	(16,108)

(1) Represents the issuance of 3,814,864 shares of Common stock to Arq Ltd.

(2) Represents the issuance of 3,842,315 shares of Common stock pursuant to the PIPE Investment at the PIPE Price Per Share.

(n) The following table reflects the adjustments made to Additional paid in capital:

(in thousands)		
Elimination of Arq Ltd. Share premium	$	(496,389)
Elimination of Arq Ltd. Temporary equity		126,628
Elimination of Arq Ltd. liabilities		7,294
Issuance of shares of Common stock pursuant to Acquisition (1)		12,432
Issuance of shares of common stock pursuant to PIPE Investment (2)		15,216
Warrant (3)		826
Transaction accounting adjustment to Additional paid in capital	$	(333,993)

(1) Represents the issuance of 3,814,864 shares of common stock to Arq Ltd.

(2) Represents the issuance of 3,842,315 shares of common stock pursuant to the PIPE Investment at the PIPE Price Per Share.

(3) Represents the allocation of a portion of the Term Loan proceeds to the Warrant as described in Note 4(l) above based on 325,457 shares of common stock issuable under the Warrant. The number of shares of Common stock which may be purchased under the Warrant was calculated as 1% of the post-transaction fully diluted share capital.

(o) Reflects the adjustments related to Retained earnings (deficit):

(in thousands)		
Elimination of Arq Ltd. Called up shared capital and Arq Ltd. Share premium	$	488,152
Severance compensation payable to Arq employees		(971)
Arq Separation Pay		(894)
Transaction costs		(8,338)
Transaction accounting adjustment to Retained earnings (deficit)	$	477,949

Transaction Accounting Adjustments to Unaudited Pro Forma Condensed Combined Statement of Operations

The following transaction accounting adjustments have been made to reflect the Transactions in the unaudited pro forma combined statements of operations for the nine months ended September 30, 2022 and for the year ended December 31, 2021 assuming the Transactions had occurred as of January 1, 2021:

(p) Includes transaction costs associated with the Acquisition of $8.3 million that have been incurred but not recognized in the historical financial statements presented. Transaction costs of $5.4 million are included in the historical statements of operations for ADES and Arq Ltd. for the nine months ended September 30, 2022. Transaction costs are not expected to recur in ADES' statement of operations beyond 12 months after the effective date of the Acquisition.

(q) Represents Arq Separation Pay of $1.9 million as discussed in Note 4(i) above. This expense will not impact ADES' statement of operations beyond 12 months after the effective date of the Acquisition.

(r) Represents elimination of certain expenses solely attributable to Arq Ltd. (in thousands):

	Year ended December 31, 2021		Nine months ended September 30, 2022	
Decrease in Stock-based compensation	$	(5,077)	$	(3,592)
Elimination of Interest expense on Convertible Notes	$	—	$	(402)

(s) Represents an adjustment to historical depreciation recorded due to a decrease of $0.5 million to the basis in the acquired property, plant and equipment of Arq to estimated fair value of $32.1 million. The estimated average useful life was 20 years. The following table summarizes the changes in the estimated depreciation (in thousands):

	Year ended December 31, 2021		Nine months ended September 30, 2022	
Estimated depreciation	$	1,607	$	1,205
Historical depreciation (1)		(710)		(3,833)
Transaction accounting adjustment to depreciation	$	897	$	(2,628)

(1) Property, plant and equipment included a production facility at Corbin, Kentucky, which was put into service at the end of the fourth quarter of 2021.

(t) Represents the amortization of Arq's intangible assets with definite lives acquired by the Company based on their estimated fair values (see Note 4(g) above). The following table summarizes the changes in the estimated amortization (in thousands):

	Year ended December 31, 2021		Nine months ended September 30, 2022	
Estimated amortization	$	385	$	289
Historical amortization		—		—
Transaction accounting adjustment to amortization	$	385	$	289

(u) Represents the net increase to interest expense resulting from the stated interest on the Term Loan and the amortization of related debt discount and debt issuance costs, as well as amortization of debt discount from remeasurement of the Arq Term Loan as follows (in thousands):

	Year ended December 31, 2021		Nine months ended September 30, 2022	
Interest expense on Term Loan (1)	$	1,646	$	1,287
Amortization of Term Loan discount and debt issuance costs (2)		576		432
Amortization of debt discount from remeasurement of Arq Term Loan		22		11
Transaction accounting adjustment to interest expense	$	2,244	$	1,730

(1) The Term Loan bears interest at a per annum rate equal to: (i) Term SOFR plus a margin of 9.0% paid in cash quarterly and (ii) 5.0% paid-in-kind ("PIK"), with PIK interest added to the principal balance of the Term Loan on a quarterly basis. Term SOFR is capped at a rate of 2.0% per annum and floored at a rate of 1.0% per annum. The stated interest

rate assumed for purposes of preparing this unaudited pro forma consolidated financial information is 16.0% per annum (Term SOFR of 2.0% plus margin of 9.0% plus PIK interest of 5.0%). A 100 basis point decrease in the Term SOFR would result in a decrease in interest expense of approximately $0.1 million for the year ended December 31, 2021 and approximately $0.1 million for the nine months ended September 30, 2022.

(2) See discussion in Note 4(k) above.

(v) For the year ended December 31, 2021, transaction accounting adjustments have been tax-effected based on the federal statutory tax rate. ADES pro forma combined income tax expense for the year ended December 31, 2021 has been offset by losses incurred by Arq for this year. In addition, refundable research and development tax credits earned by Arq for this year are presented as a component of other income rather than as a component of income tax expense.

For the nine months ended September 30, 2022, ADES pro forma combined income tax expense is zero due to pretax losses incurred by both ADES and Arq offset by a valuation allowance. As of September 30, 2022, both ADES and Arq do not forecast the ability to utilize the losses, and accordingly, the transaction accounting adjustments for this period have been tax-effected at a zero percent tax rate. In addition, refundable research and development tax credits earned by Arq for this period are presented as a component of other income rather than as a component of income tax expense.

Pro forma earnings (loss) per share

Pro forma net income (loss) per share amounts for the Unaudited Pro Forma Combined Statements of Operations have been recalculated after giving effect to the Transactions, on a basic and diluted outstanding share basis, assuming that the Preferred Shares and shares of Common Stock issued in connection with the Transactions were outstanding at the beginning of the periods presented. The effect of anti-dilutive potential ordinary shares is ignored in calculating pro forma diluted net income (loss) per share.

	For the year ended December 31, 2021	
(in thousands, except for per share data)	**Historical ADES**	**ADES Pro Forma Combined**
Net income (loss)	$ 60,401	$ 8,891
Preferred Shares dividends (1)	—	(1,510)
Undistributed net income allocated to participating securities - basic	—	(1,239)
Net income (loss) attributable to common shareholders - basic	$ 60,401	$ 6,142
Weighted average number of common shares outstanding - basic (2)	18,258	26,241
Net income (loss) per share - basic	**$ 3.31**	**$ 0.23**
Net income (loss)	$ 60,401	$ 8,891
Preferred Shares dividends (1)	—	(1,510)
Undistributed net income allocated to participating securities - diluted	—	(1,231)
Net income (loss) attributable to common shareholders - diluted	$ 60,401	$ 6,150
Weighted average number of common shares outstanding - diluted	18,461	26,444
Net income (loss) per share - diluted	**$ 3.27**	**$ 0.23**

(in thousands, except for per share data)	For the nine months ended September 30, 2022 Historical ADES	ADES Pro Forma Combined
Net loss	$ (5,750)	$ (62,364)
Preferred Shares dividends (1)	—	(1,214)
Loss attributable to common shareholders	$ (5,750)	$ (63,578)
Weighted average number of common shares outstanding - basic (2)	18,435	26,418
Net loss per share - basic	**$ (0.31)**	**$ (2.41)**
Loss attributable to common shareholders	$ (5,750)	$ (63,578)
Weighted average number of common shares outstanding - diluted	18,435	26,418
Net loss per share - diluted	**$ (0.31)**	**$ (2.41)**

(1) Preferred Shares dividends are calculated based on an 8% annual rate, compounded quarterly, of the Original Issue Amount and assume payment in kind (payable in Preferred shares).

(2) The weighted-average shares for the year ended December 31, 2021 and nine months ended September 30, 2022 includes 325,457 shares issuable upon the exercise of the Warrant at $0.01 per share.