UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Arcadium Lithium plc

(Exact name of registrant as specified in its charter)

Bailiwick of Jersey (State or other jurisdiction of incorporation or organization)

98-1737136 (I.R.S. Employer Identification No.)

Suite 12, Gateway Hub Shannon Airport House Shannon, Co. Clare V14 E370 Ireland Tel. +353 1 6875238 Principal Executive Offices

Livent Nonqualified Savings Plan (Full title of the plan)

Sara Ponessa
Vice President, General Counsel and Secretary
Suite 12, Gateway Hub
Shannon Airport House
Shannon, Co. Clare V14 E370
Ireland
Tel. +353 1 6875238
Name and address of agent for service

With a copy to:

Michael Kaplan William H. Aaronson Cheryl Chan Davis Polk & Wardwell LLP 450 Lexington Avenue New York, New York 10017 Tel.: (212) 450-4000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer		Accelerated filer			
Non-accelerated filer	☐ (Do not check if a smaller reporting company)	Smaller reporting company			
		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 new or revised financial accounting standards provided pursuant to Section $7(a)(2)(B)$ of the Securities Act. \Box					

EXPLANATORY NOTE

On January 4, 2024, Arcadium Lithium plc completed the previously announced transactions contemplated by the Transaction Agreement, dated as of May 10, 2023, as amended by the Amendment to Transaction Agreement, dated as of August 2, 2023, the Second Amendment to Transaction Agreement, dated as of December 20, 2023 (as amended, the "Transaction Agreement"), by and among Livent Corporation, a Delaware corporation ("Livent"), Allkem Limited, an Australian public company limited by shares, Arcadium Lithium plc, a public limited company incorporated under the laws of the Bailiwick of Jersey (originally incorporated as Lightning-A Limited, a private limited company incorporated under the laws of the Bailiwick of Jersey and f/k/a Allkem Livent plc) ("Arcadium" or the "Registrant"), Lightning-A Merger Sub, Inc., a Delaware corporation, and Arcadium Lithium Intermediate IRL Limited, a private company limited by shares and incorporated and registered in Ireland.

At the effective time of the Merger (as defined in the Transaction Agreement), the Registrant assumed the obligations of Livent under the Livent Nonqualified Savings Plan, dated January 1, 2019, (the "Livent NQ Savings Plan"), pursuant to which eligible participants may elect to defer their compensation in accordance with the provisions of the Livent NQ Savings Plan.

This Registration Statement on Form S-8 (this "Registration Statement") is being filed for the purpose of registering (i) up to 2,400,000 ordinary shares, par value \$1.00 per share (the "Ordinary Shares"), reserved for issuance or issuable under the Livent NQ Savings Plan; and (ii) up to \$15,000,000 of obligations of the Registrant to pay deferred compensation in the future in accordance with the terms of the Livent NQ Savings Plan.

PART I

The information specified in Item 1 and Item 2 of Part I of Form S-8 is omitted from this filing with the Commission in accordance with the provisions of Rule 428 under the Securities Act and the introductory note to Part I of the Form S-8 instructions. The documents containing the information specified in Part I will be delivered to the participants in the Plan as required by Rule 428(b)(1).

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents are incorporated herein by reference:

- a. the annual report on Form 10-K of Livent Corporation (the predecessor of the Registrant) for the year ended December 31, 2022, filed with the Commission on February 24, 2023;
- b. quarterly reports of Livent Corporation on Form 10-Q for the quarter ended March 31, 2023, filed with the Commission on May 4, 2023, for the quarter ended June 30, 2023, filed with the Commission on August 4, 2023, and for the quarter ended September 30, 2023, filed with the Commission on November 9, 2023;
- c. the Registrant's Current Report on Form 8-K12B, filed with the Commission on January 4, 2024;
- d. current Reports of Livent Corporation on Form 8-K filed with the Commission on September 26, 2023 and November 15, 2023;
- e. all other reports filed by the Registrant (and its predecessor, Livent Corporation) pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") since the end of the fiscal year covered by the document referred to in (a) above; and
- f. the description of the Ordinary Shares of the Registrant included under the caption "Description of NewCo Shares" in the Registrant's registration statement on Form S-4 (File No. 333-273360), initially filed with the Commission on July 20, 2023, as amended thereafter (including on November 15, 2023) and declared effective by the Commission on November 20, 2023, and including any amendment or report filed for the purpose of updating such description.

In addition, all documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment to this Registration Statement which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of the filing of such documents.

Nothing in this Registration Statement shall be deemed to incorporate information furnished but not filed with the Commission pursuant to Item 2.02 or Item 7.01 of Form 8-K.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein (or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference herein), modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

The following description of the deferred compensation obligations of the Registrant under the Livent NQ Savings Plan is qualified in its entirety by reference to the Livent NQ Savings Plan, which is included as Exhibit 99 to this Registration Statement.

Under the Livent NQ Savings Plan, the Registrant provides a select group of management or highly compensated employees, who (i) earned at least \$250,000 in one of the prior two years and are expected to earn at least \$250,000 in the current year, (ii) are prohibited from receiving the total employer contribution under the Livent Savings and Investment Plan (the "Tax-Qualified Plan") due to limitations imposed on the Tax-Qualified Plan by the Internal Revenue Code, as amended, or (iii) are otherwise selected by the plan sponsor ("Participants"), the opportunity to elect to defer up to 50% of their base compensation and up to 100% of their annual cash management incentive compensation. The portions of compensation deferred under such elections are referred to herein as the "Obligations". If Participants elect to defer their compensation under the Livent NQ Savings Plan, Participants are eligible for company matching and other contributions ("Company Contributions").

The Obligations are unsecured general obligations of the Registrant to pay the deferred compensation in the future in accordance with the terms of the Livent NQ Savings Plan and rank equally with other unsecured and unsubordinated indebtedness of the Registrant. The Registrant is not required to fund or otherwise segregate assets to be used for the payment of the Obligations. Notwithstanding the foregoing, the Registrant has established a grantor trust (the "Trust") to hold assets to be used for payment of the Obligations. However, the assets of the Trust shall remain the assets of the Registrant subject to the claims of its general creditors. The Obligations shall be paid in cash (either in a lump sum or installments) on the first day of the calendar month following the earliest to occur of (i) the Participant's death, (ii) a specified date elected by the Participant at the time of the deferral or (iii) the sixth calendar month after the date such Participant's employment with the Registrant terminates. There is no trading market for the Obligations.

Compensation deferred by a Participant and Company Contributions are credited to an individual bookkeeping account for each Participant established by the Livent Employee Benefit Plan Committee (the "Committee"). Participant accounts shall be deemed to be invested in accordance with the investment alternatives the Participants select and the terms of the Livent NQ Savings Plan. The investment alternatives are determined by the Committee and include a diversified group of mutual funds. In addition, there is a Registrant stock fund which is closed to new contributions. Each Participant account shall be adjusted for all earnings, expenses, gains or losses that would have been applicable with respect to the particular investment, as the case may be, deemed to be held in such account if the Registrant actually owned such investment.

A Participant's rights to any amounts credited to his or her account shall not be grantable, transferable, pledgeable or otherwise assignable by the Participant and may only pass upon the Participant's death pursuant to the terms of the Livent NQ Savings Plan, pursuant to a beneficiary designation made by a Participant in accordance with the terms of the Livent NQ Savings Plan or pursuant to the laws of inheritance. The Obligations are not subject to early redemptions, in whole or in part. The Obligations are not convertible into any other security of the Registrant. The plan sponsor reserves the right to amend or terminate the Livent NQ Savings Plan; provided, however, that any such action shall not adversely affect the right of any Participant to receive any vested benefits already accrued in a Participant's account.

Item 5. Interests of Named Experts and Counsel.

The validity of the securities registered hereunder has been passed upon for the Registrant by Sara Ponessa. As of January 4, 2024, Sara Ponessa, Vice President, General Counsel and Secretary of the Registrant, participated in the Livent NQ Savings Plan and held \$421,274 in securities under the Livent NQ Savings Plan. In addition, as of January 4, 2024, Ms. Ponessa beneficially owned 49,789 outstanding Ordinary Shares, held 66,562 restricted share units in respect of Ordinary Shares and held options to purchase 128,321 shares of Ordinary Shares.

Item 6. Indemnification of Directors and Officers.

Except as hereinafter set forth, there is no charter provision, bylaw, contract, arrangement or statute under which any director or officer of the Registrant is insured or indemnified in any manner against any liability which he or she may incur in his or her capacity as such.

Pursuant to clause 11.2 of the articles of association of the Registrant (the "Articles"), the Registrant must indemnify each director and officer and to the full extent permitted by law.

The Registrant's articles of association provide in relevant part: "The Company must indemnify each Officer on a full indemnity basis and to the full extent permitted by law against all losses, liabilities, costs, charges and expenses incurred by the Officer as a present or former director or officer of the Company or of a related body corporate." As used in the foregoing sentence, the term "Officer" means (a) a person who is or has been a director or officer of the Registrant and (b) such other officers or former officers of the Registrant or of its related bodies corporate as its board of directors in each case determines.

The relevant provision of the Companies (Jersey) Law 1991 (the "Jersey Companies Law") is is Article 77, which provides:

"(1)

Subject to paragraphs (2) and (3), any provision, whether contained in the articles of, or in a contract with, a company or otherwise, whereby the company or any of its subsidiaries or any other person, for some benefit conferred or detriment suffered directly or indirectly by the company, agrees to exempt any person from, or indemnify any person against, any liability which by law would otherwise attach to the person by reason of the fact that the person is or was an officer of the company shall be void.

(2)

Paragraph (1) does not apply to a provision for exempting a person from or indemnifying the person against—

- a. any liabilities incurred in defending any proceedings (whether civil or criminal)—
- (i) in which judgment is given in the person's favour or the person is acquitted,
- (ii) which are discontinued otherwise than for some benefit conferred by the person or on the person's behalf or some detriment suffered by the person, or
- (iii) which are settled on terms which include such benefit or detriment and, in the opinion of a majority of the directors of the company (excluding any director who conferred such benefit or on whose behalf such benefit was conferred or who suffered such detriment), the person was substantially successful on the merits in the person's resistance to the proceedings;
- b. any liability incurred otherwise than to the company if the person acted in good faith with a view to the best interests of the company;
- c. any liability incurred in connection with an application made under Article 212 in which relief is granted to the person by the court; or
- d. any liability against which the company normally maintains insurance for persons other than directors.

(3)

Nothing in this Article shall deprive a person of any exemption or indemnity to which the person was lawfully entitled in respect of anything done or omitted by the person before the coming into force of this Article.

(4)

This Article does not prevent a company from purchasing and maintaining for any such officer insurance against any such liability."

The Registrant maintains an insurance policy for its directors and officers in respect of liabilities arising out of any act, error or omission whilst acting in their capacities as directors or officers of the Registrant or its affiliated companies.

The Registrant's directors and its executive officers have entered into an indemnification agreement with the Registrant that provides indemnification for judgments, fines, excise taxes, penalties and amounts paid in settlement and related expenses to the fullest extent permitted under the applicable provisions of Article 77 of the Jersey Companies Law (as amended from time to time). This indemnification will be reduced to the extent that a director or applicable executive officer has received payment under the Registrant's directors' and officers' liability insurance.

The foregoing is subject to the detailed provisions of the Articles, the full text of the indemnification agreements and the Jersey Companies Law.

Item 7. **Exemption from Registration Claimed.**

Not applicable.

Item 8. Exhibits.

Exhibit Number	Description
3.1*	Memorandum of Association of the Registrant, as amended, effective as of November 9, 2023 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, dated as of January 4, 2024)
3.2*	Articles of Association of the Registrant, as amended, effective as of December 20, 2023 (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, dated as of December 27, 2023)
5.1**	Opinion of Ogier (Jersey) LLP
5.2**	Opinion of Sara Ponessa
23.1**	Consent of Ogier (Jersey) LLP (included in the opinion filed as Exhibit 5.1 to this Registration Statement)
23.2**	Consent of Sara Ponessa (included in the opinion filed as Exhibit 5.2 to this Registration Statement)
23.3**	Consent of KPMG LLP, independent registered public accounting firm of Livent Corporation
23.4**	Consent of Ernst & Young, independent auditors of Allkem Limited
23.5**	Consent of Integral Consulting Inc.
23.6**	Consent of Sean Kosinski
23.7**	Consent of BBA Inc.
23.8**	Consent of DRA Americas Inc.
23.9**	Consent of SGS Geological Services
23.10**	Consent of Marc Rougier (WSP Canada Inc.)
23.11**	Consent of Carl Pednault (WSP Canada Inc.)
99*	<u>Livent Nonqualified Savings Plan (incorporated herein by reference to Exhibit 10.22 to Livent Corporation's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed on February 28, 2019 (Registration No. 001-38694))</u>
107**	Filing Fee Table

^{*} Previously filed or incorporated by reference herein. ** Submitted herewith.

Item 9. Undertakings.

- (a) The Registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of this Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement;
 - (iii) To include any material information with respect to the Plan not previously disclosed in this Registration Statement or any material change to such information in this Registration Statement;

provided, however, that: the undertakings set forth in paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 15(d) of the Exchange Act, that are incorporated by reference in this Registration Statement;

- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof;
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;
- (b) The undersigned Registrant hereby undertakes that, for the purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in this Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof;
- (c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Philadelphia, Pennsylvania, on the 4th day of January, 2024.

ARCADIUM LITHIUM PLC

By: /s/ Paul W. Graves

Paul W. Graves

President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, the trustees (or other persons who administer the Livent NQ Savings Plan) have duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Philadelphia, Pennsylvania on the 4th day of January, 2024.

LIVENT NONQUALIFIED SAVINGS PLAN

By: /s/ Gilberto Antoniazzi

Gilberto Antoniazzi Chair, Livent Benefits Plan Committee

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POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Paul W. Graves, Gilberto Antoniazzi and Sara Ponessa, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all (i) amendments (including post-effective amendments) and additions to this Registration Statement, (ii) additional registration statements pursuant to Rule 462 of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body and (iii) documents and to take any action that may be required under applicable law in connection with this Registration Statement and the transactions contemplated herein, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act, hereby ratifying and confirming all that said attorneys-in-fact and agents may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the date indicated.

Name and Signature	Title	Date January 4, 2024	
/s/ Paul W. Graves Paul W. Graves	President and Chief Executive Officer (Principal Executive Officer) and Director		
/s/ Gilberto Antoniazzi Gilberto Antoniazzi	Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)	January 4, 2024	
/s/ Ronald B. Stark Ronald B. Stark	Chief Accounting Officer (Principal Accounting Officer)	January 4, 2024	
/s/ Michael F. Barry Michael F. Barry	Director	January 4, 2024	
/s/ Peter Coleman Peter Coleman	_ Director	January 4, 2024	
/s/ Alan Fitzpatrick Alan Fitzpatrick	Director	January 4, 2024	
/s/ Florencia Heredia Florencia Heredia	Director	January 4, 2024	
/s/ Leanne Heywood Leanne Heywood	Director	January 4, 2024	
/s/ Christina Lampe-Önnerud Christina Lampe-Önnerud	Director	January 4, 2024	
/s/ Pablo Marcet Pablo Marcet	Director	January 4, 2024	
/s/ Steven T. Merkt Steven T. Merkt	Director	January 4, 2024	
/s/ Fernando Oris de Roa Fernando Oris de Roa	Director	January 4, 2024	
/s/ Robert C. Pallash Robert C. Pallash	_ Director	January 4, 2024	
/s/ John Turner John Turner		January 4, 2024	
	9		



Arcadium Lithium plc 3rd Floor 44 Esplanade St Helier JERSEY JE4 9WG D +44 1534 514032 E alexander.curry@ogier.com

Reference: AAC/AFS/AAF/503372.00001

January 4, 2024

Dear Sirs

Arcadium Lithium plc (the Company)

1 Request for opinion

We have been requested to provide the Company with a legal opinion on matters of Jersey law in relation to the Company.

2 Documents examined

- 2.1 For the purposes of giving this opinion, we have examined copies of the corporate and other documents and conducted the searches listed in Schedule 1 hereto.
- 2.2 We have not made any searches or enquiries concerning and have not examined any documents entered into by or affecting the Company or any other person, save for the searches, enquiries and examinations expressly referred to in Schedule 1 hereto.

3 Assumptions

In giving this opinion, we have relied upon the assumptions set out in Schedule 2 hereto without having carried out any independent investigation or verification in respect of such assumptions.

4 Opinions

In accordance with the requirements of Item 8 of the Commission's (as defined in Schedule 1 hereto) Form S-8 and Item 601(b)(5) of Regulation S-K under the Securities Act of 1933, as amended (the **Securities Act**), and on the basis of the examinations and assumptions referred to above and subject to the qualifications set forth in Schedule 3 hereto and the limitations set forth below, we are of the opinion that:

Ogier (Jersey) LLP 44 Esplanade St Helier Jersey JE4 9WG

T +44 1534 514000 F +44 1534 514444 ogier.com Partners Raulin Amy

Raulin Amy
James Angus
James Campbell
Alexander Curry
Richard Daggett
Simon Dinning
Katrina Edge
Damian Evans

James Fox Josephine Howe Jonathan Hughes Niamh Lalor Kate McCaffrey Edward Mackereth Bruce MacNeil Katharine Marshall Rebecca McNulty Steven Meiklejohn Oliver Passmore Nathan Powell Sophie Reguengo Daniel Richards Oliver Richardson Nicholas Williams

Registered as a limited liability partnership in Jersey. Registered number 99.

Corporate existence and capacity

- (a) the Company has been duly incorporated and is validly existing under the laws of Jersey;
- (b) upon the effectiveness of the transactions contemplated by the Savings Plan (as defined in Schedule 1 hereto) (the **Transaction**), and the effectiveness of the Registration Statement (as defined in Schedule 1 hereto), and when issued as contemplated by the Registration Statement in the form filed with the Commission and pursuant to the Savings Plan, the Shares (as defined in Schedule 1 hereto) will be duly authorised, validly issued, fully paid and non-assessable; and

Registrations

(c) the SIR Search (as defined in Schedule 1 hereto) did not reveal any financing statements or financing change statements registered against the name or any previous name of the Company.

5 Limitations

- 5.1 We offer no opinion:
 - (a) in relation to the laws of any jurisdiction other than Jersey (and we have not made any investigation into such laws);
 - (b) as to the enforceability of any documents entered into or to be entered into by the Company; or
 - (c) as to the title or interest of the Company to or in, or the existence of, any property or assets the subject of any documents entered into or to be entered into by the Company.

6 Governing law

- 6.1 This opinion is:
 - (a) governed by, and shall be construed in accordance with, the laws of Jersey;
 - (b) limited to the matters expressly stated herein; and
 - (c) confined to and given on the basis of the laws and practice in Jersey at the date hereof.
- 6.2 Unless otherwise indicated, all references in this opinion to specific Jersey legislation shall be to such legislation as amended to, and as in force at, the date hereof.

7 Who can rely on this opinion

- 7.1 This opinion is given for the Company's benefit and it may not be disclosed to or relied upon by any person or used for any other purpose or referred to or made public in any way without our prior written consent, save that it may be disclosed on a non-reliance basis to the Company's professional advisers (acting only in that capacity).
- 7.2 Notwithstanding the foregoing, we hereby consent to the filing of this opinion as an Exhibit to the Registration Statement, and to all references to this law firm under the caption "Legal Matters" in the Registration Statement. In giving this consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act.

Yours faithfully

/s/ Ogier (Jersey) LLP

SCHEDULE 1

Documents examined

- The registration statement on Form S-8 filed with the US Securities and Exchange Commission (the **Commission**) relating to the registration under the Securities Act of ordinary shares, par value \$1.00 per share, of the Company (the **Shares**) (the **Registration Statement**).
- The Livent Nonqualified Savings Plan, dated as of January 1, 2019 (as may be amended from time to time, the **Savings Plan**).
- A copy of the certificate of incorporation of the Company, together with any certificates of incorporation upon change of name of the Company appearing on the Public Records (as defined below) on the date of this opinion.
- The current memorandum and articles of association of the Company (including any special resolutions amending the memorandum and articles of association of the Company) appearing on the Public Records on the date of this opinion (the **M&As**).

Searches

- The public records of the Company on file and available for inspection at the Companies Registry of the Jersey Financial Services Commission on the date hereof (the **Public Records**).
- The results received on the date hereof of our written enquiry in respect of the Company made to the Viscount's Department (the **Désastre Search**).
- The results received on the date hereof of our written enquiry in respect of applications for a creditors' winding up made in respect of the Company made to the Judicial Greffe (the **Creditors' Winding Up Search**).
- A printed search result of the Jersey register of security interests (the **SIR**) established pursuant to Part 8 of the Security Interests (Jersey) Law 2012 (the **SIJL**) in respect of a search against the name of the Company made on the date hereof (the **SIR Search**).

SCHEDULE 2

Assumptions

- 1 Signatures, seals, dates, stamps and markings (whether on original or copy documents) are genuine.
- 2 All copy documents and counterparts of documents provided to us (whether in facsimile, electronic or other form) conform to the originals of such documents and those originals are authentic and complete.
- None of the opinions expressed in this opinion will be adversely affected by the laws or public policies of any jurisdiction other than Jersey.
- A meeting of the Company's board of directors (or a duly authorised committee thereof) has been, or will be, duly convened and held at which it was, or will be, resolved to allot and issue the Shares.
- 5 All Shares will be duly allotted in accordance with the M&As.
- The written confirmation provided by the Viscount's Department in response to the Désastre Search is accurate and complete as at the date hereof.
- 7 The written confirmation provided by the Judicial Greffe in response to the Creditors' Winding Up Search is accurate and complete as at the date hereof.
- The information and documents disclosed by our searches of the Public Records is accurate as at the date hereof and there is no information or document which has been delivered for registration, or which is required by the law of Jersey to be delivered for registration, which was not included in the Public Records.
- The information disclosed by the SIR Search is true, accurate and complete as of the date hereof and there is no information which has been delivered to the SIR for registration which was not disclosed by the SIR Search.

SCHEDULE 3

Qualifications

- Information available in public registries in Jersey is limited and, in particular, the only publicly available records of security over the shares or assets of Jersey companies include the Jersey registers for:
 - (a) certain security over intangible movable property governed by the SIJL (but not security governed by the Security Interests (Jersey) Law 1983);
 - (b) security over immovable property situated in Jersey; and
 - (c) security over ships in respect of which title has been entered on the Registry of British Ships maintained in Jersey.
- The search of the Public Records and the Creditors' Winding Up Search referred to in this opinion is not conclusively capable of revealing whether or not an order has been made or a resolution passed for the winding up or dissolution of the Company or for the appointment of a liquidator in respect of the Company, as notice of these matters might not be filed with the Jersey Financial Services Commission or the Judicial Greffe immediately and, when filed, might not be entered on the public record of the Company immediately.
- The written confirmation provided by the Viscount's Department in response to the Désastre Search relates only to the property of the Company being declared to be "en désastre". There is no formal procedure for determining whether the Company has otherwise become "bankrupt", as defined in the Interpretation (Jersey) Law 1954.
- The Creditors' Winding Up Search is only capable of revealing whether or not an application for a creditors' winding up of the Company made by a creditor pursuant to Article 157A of the Companies (Jersey) Law 1991 has been recorded in the records of the Royal Court of Jersey (the **Royal Court**). It will not reveal whether (i) any statutory demand preceding a creditors' winding up application has been served on the Company, (ii) there are any other actions, suits or proceedings pending against the Company in the Royal Court, nor (iii) whether the Royal Court has granted the application or made any orders in relation to it.
- 5 The SIR Search will not reveal all security interests created under the laws of Jersey or by the Company and, in particular, will not reveal those created:
 - (a) under the Security Interests (Jersey) Law 1983;
 - (b) by possession or control in accordance with the SIJL (unless they are also registered in the SIR);
 - (c) under the laws of a jurisdiction other than Jersey;
 - (d) by trustees of a trust (other than a prescribed unit trust (as defined in the Security Interests (Registration and Miscellaneous Provisions) (Jersey) Order 2013)) in respect of trust property of that trust; or
 - (e) under the SIJL where the relevant financing statements have been removed from the SIR for whatsoever reason, or have not yet been registered.

January 4, 2024

Arcadium Lithium plc

Suite 12, Gateway Hub Shannon Airport House Shannon, Co. Clare V14 E370 Ireland

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

I have acted as Vice President, General Counsel and Secretary for Arcadium Lithium plc, a public limited company incorporated under the laws of the Bailiwick of Jersey (the "Company"), in connection with the Form S-8 Registration Statement (the "Registration Statement") relating to: (i) the registration of \$15,000,000 of deferred compensation obligations (the "Obligations"), which will represent unsecured obligations of the Company to pay deferred compensation in the future in accordance with the terms of the Livent Corporation Nonqualified Savings Plan (the "Plan"); and (ii) the registration of 2,400,000 ordinary shares of the Company, par value \$1.00 per share (the "Shares"), which may be offered and sold pursuant to the terms and in the manner set forth in the Plan.

This opinion is delivered in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act of 1933, as amended (the "Act").

In connection with this opinion, I have examined and am familiar with originals or copies, certified or otherwise identified to my satisfaction, of: (i) the Registration Statement, to be filed with the Securities and Exchange Commission (the "Commission") under the Act; (ii) the Memorandum of Association of the Company, as currently in effect; (iii) the Articles of Association of the Company, as currently in effect; (iv) the Plan; and (v) resolutions of the Board of Directors of the Company relating to the Plan and the filing of the Registration Statement. I have also examined such other documents as I have deemed necessary or appropriate as a basis for the opinion set forth below.

In my examination, I have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to me as certified or photostatic copies and the authenticity of the originals of such latter documents. As to any facts material to this opinion that I did not independently establish or verify, I have relied upon oral or written statements and representations of officers and other representatives of the Company and others.

Based upon and subject to the foregoing, I am of the opinion that the Obligations, when issued pursuant to the terms and in the manner set forth in the Plan, will be valid and binding obligations of the Company, enforceable against the Company in accordance with their terms, except as enforcement thereof may be limited by bankruptcy, insolvency or other laws of general applicability relating to or affecting enforcement of creditors' rights or by general principles of equity.

I hereby consent to the filing of this opinion with the Commission as an exhibit to the Registration Statement. In giving such consent, I do not concede that I am an expert within the meaning of the Act or the rules and regulations thereunder.

Sincerely,
/s/ Sara Ponessa
Sara Ponessa
Vice President, General Counsel and Secretary



KPMG LLP 1601 Market Street Philadelphia, PA 19103-2499

Consent of Independent Registered Public Accounting Firm

We consent to the use of our reports dated February 24, 2023, with respect to the consolidated financial statements of Livent Corporation, and the effectiveness of internal control over financial reporting, incorporated herein by reference.

/s/ KPMG LLP

Philadelphia, Pennsylvania January 4, 2024

Consent of Independent Auditors

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Livent Nonqualified Savings Plan of Arcadium Lithium plc of our report dated September 5, 2023, with respect to the consolidated financial statements of Allkem Limited as of June 30, 2023 and 2022 and for the years ended June 30, 2023, 2022 and 2021 included in Arcadium Lithium plc's Current Report on Form 8-K dated January 4, 2024, filed with the Securities and Exchange Commission.

/s/ Ernst & Young

Brisbane, Australia January 4, 2024

CONSENT OF QUALIFIED PERSON

Integral Consulting Inc. ("Integral"), in connection with Arcadium Lithium plc's registration statement on Form S-8, including any amendments thereto (the "Registration Statement"), consents to:

- the incorporation by reference in the Registration Statement and use of the technical report titled "Resource and Reserve Report, Pre-Feasibility Study, Salar del Hombre Muerto, Argentina" (as amended, the "Technical Report Summary"), originally dated February 21, 2023 and amended on November 14, 2023, that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission (the "SEC") and which is included as an exhibit to the Current Report of Livent Corporation on Form 8-K filed with the SEC on November 15, 2023 (the "Form 8-K"), which Form 8-K is incorporated by reference in the Registration Statement;
- the use of and references to our name, including our status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the Form 8-K and the Registration Statement; and
- any extracts from or a summary of the Technical Report Summary included in or incorporated by reference in the
 Registration Statement and the use of any information derived, summarized, quoted or referenced from the Technical Report
 Summary, or portions thereof, that was or were prepared by us, that we supervised the preparation of and/or that was or were
 reviewed and approved or certified by us, that is or are included in or incorporated by reference in the Registration
 Statement.

Integral is responsible for authoring jointly with Sean Kosinski (an employee of Livent Corporation), and this consent pertains to, the entire Technical Report Summary. We certify that we have read the descriptions and references to the Technical Report Summary in the documents incorporated by reference into the Registration Statement and that such descriptions and references fairly and accurately represent information in the Technical Report Summary for which we are responsible.

Date: January 4, 2024

INTEGRAL CONSULTING INC.

By: /s/ William Cutler
Name: William Cutler, Ph.D., P.G.
Title: Principal

CONSENT OF QUALIFIED PERSON

I, Sean Kosinski, in connection with Arcadium Lithium plc's registration statement on Form S-8, including any amendments thereto (the "Registration Statement"), consent to:

- the incorporation by reference in the Registration Statement and use of the technical report titled "Resource and Reserve Report, Pre-Feasibility Study, Salar del Hombre Muerto, Argentina" (as amended, the "Technical Report Summary"), originally dated February 21, 2023 and amended on November 14, 2023, that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission (the "SEC") and which is included as an exhibit to the Current Report of Livent Corporation on Form 8-K filed with the SEC on November 15, 2023 (the "Form 8-K"), which Form 8-K is incorporated by reference in the Registration Statement;
- the use of and references to my name, including my status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the Form 8-K and the Registration Statement; and
- any extracts from or a summary of the Technical Report Summary included in or incorporated by reference in the
 Registration Statement and the use of any information derived, summarized, quoted or referenced from the Technical Report
 Summary, or portions thereof, that was or were prepared by me, that I supervised the preparation of and/or that was or were
 reviewed and approved or certified by me, that is or are included in or incorporated by reference in the Registration
 Statement.

I am responsible for authoring jointly with Integral Consulting Inc., and this consent pertains to, the entire Technical Report Summary. I certify that I have read the descriptions and references to the Technical Report Summary in the documents incorporated by reference into the Registration Statement and that such descriptions and references fairly and accurately represent information in the Technical Report Summary for which I am responsible.

Date: January 4, 2024

By: /s/ Sean Kosinski
Name: Sean Kosinski
Title: CPG, P.Hg.

CONSENT OF QUALIFIED PERSON

BBA Inc. ("BBA"), in connection with Arcadium Lithium plc's registration statement on Form S-8, including any amendments thereto (the "Registration Statement"), consents to:

- the incorporation by reference in the Registration Statement and use of the technical report titled "SEC Technical Report Summary, Pre-Feasibility Study on the Whabouchi Mine, Nemaska, Quebec" (as amended, the "Technical Report Summary"), originally dated September 8, 2023 and amended on November 14, 2023, that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission (the "SEC") and which is included as an exhibit to the Current Report of Livent Corporation on Form 8-K filed with the SEC on November 15, 2023 (the "TRS Form 8-K"), which TRS Form 8-K is incorporated by reference in the Registration Statement;
- the use of and references to our name, including our status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the TRS Form 8-K, the Current Report of Livent Corporation on Form 8-K filed with the SEC on September 26, 2023 (the "Whabouchi Form 8-K") and the Registration Statement; and
- any extracts from or a summary of the Technical Report Summary included in or incorporated by reference in the
 Registration Statement and the use of any information derived, summarized, quoted or referenced from the Technical Report
 Summary, or portions thereof, that was or were prepared by us, that we supervised the preparation of and/or that was or were
 reviewed and approved or certified by us, that is or are included in or incorporated by reference in the Registration
 Statement.

We are responsible for authoring, and this consent pertains to, Sections 1.12, 1.13, 1.23.2, 12 (except 12.4.2), 13, 23.3 and 24.5 of the Technical Report Summary. We certify that we have read the descriptions and references to the Technical Report Summary in the documents incorporated by reference into the Registration Statement and that such descriptions and references fairly and accurately represent information in the Technical Report Summary for which we are responsible.

Date: January 4, 2024

BBA INC.

By: /s/ Jeffrey Cassoff

Name: Jeffrey Cassoff

Title: Principal Mining Engineer

CONSENT OF QUALIFIED PERSON

DRA Americas Inc. ("DRA"), in connection with Arcadium Lithium plc's registration statement on Form S-8, including any amendments thereto (the "Registration Statement"), consents to:

- the incorporation by reference in the Registration Statement and use of the technical report titled "SEC Technical Report Summary, Pre-Feasibility Study on the Whabouchi Mine, Nemaska, Quebec" (as amended, the "Technical Report Summary"), originally dated September 8, 2023 and amended on November 14, 2023, that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission (the "SEC") and which is included as an exhibit to the Current Report of Livent Corporation on Form 8-K filed with the SEC on November 15, 2023 (the "TRS Form 8-K"), which TRS Form 8-K is incorporated by reference in the Registration Statement;
- the use of and references to our name, including our status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the TRS Form 8-K, the Current Report of Livent Corporation on Form 8-K filed with the SEC on September 26, 2023 (the "Whabouchi Form 8-K") and the Registration Statement; and
- any extracts from or a summary of the Technical Report Summary included in or incorporated by reference in the
 Registration Statement and the use of any information derived, summarized, quoted or referenced from the Technical Report
 Summary, or portions thereof, that was or were prepared by us, that we supervised the preparation of and/or that was or were
 reviewed and approved or certified by us, that is or are included in or incorporated by reference in the Registration
 Statement.

We are responsible for authoring, and this consent pertains to, Sections 1.1, 1.10, 1.14 through 1.23 (except subsections 1.15.2, 1.23.1, 1.23.2, 1.23.3, 1.23.6 and 1.23.7), 2, 10, 14, 15 (except subsections 15.1.9 and 15.1.10), 16, 17 (except subsections 17.5 and 17.6), 18, 19 and 21 through 25 (except subsections 23.2, 23.3, 23.4, 23.7, 24.2, 24.4 and 24.5) of the Technical Report Summary, provided that, in accordance with the provisions set forth in §229.1302(f), we have relied on information provided by or on behalf of Livent Corporation as set forth in Section 25 of the Technical Report Summary. We certify that we have read the descriptions and references to the Technical Report Summary in the documents incorporated by reference into the Registration Statement and that such descriptions and references fairly and accurately represent information in the Technical Report Summary for which we are responsible.

Date: January 4, 2024

DRA AMERICAS INC.

By: /s/ Daniel M. Gagnon

Name: Daniel M. Gagnon Title: VP Mining, Geology and GM Montréal

office

CONSENT OF QUALIFIED PERSON

SGS Geological Services ("SGS"), in connection with Arcadium Lithium plc's registration statement on Form S-8, including any amendments thereto (the "Registration Statement"), consents to:

- the incorporation by reference in the Registration Statement and use of the technical report titled "SEC Technical Report Summary, Pre-Feasibility Study on the Whabouchi Mine, Nemaska, Quebec" (as amended, the "Technical Report Summary"), originally dated September 8, 2023 and amended on November 14, 2023, that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission (the "SEC") and which is included as an exhibit to the Current Report of Livent Corporation on Form 8-K filed with the SEC on November 15, 2023 (the "TRS Form 8-K"), which TRS Form 8-K is incorporated by reference in the Registration Statement;
- the use of and references to our name, including our status as an expert or "qualified person" (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the TRS Form 8-K, the Current Report of Livent Corporation on Form 8-K filed with the SEC on September 26, 2023 (the "Whabouchi Form 8-K") and the Registration Statement; and
- any extracts from or a summary of the Technical Report Summary included in or incorporated by reference in the
 Registration Statement and the use of any information derived, summarized, quoted or referenced from the Technical Report
 Summary, or portions thereof, that was or were prepared by us, that we supervised the preparation of and/or that was or were
 reviewed and approved or certified by us, that is or are included in or incorporated by reference in the Registration
 Statement.

We are responsible for authoring, and this consent pertains to, Sections 1.2 through 1.9, 1.11, 1.23.1, 3 through 9, 11, 20, 23.2, 24.2 and 24.4 of the Technical Report Summary. We certify that we have read the descriptions and references to the Technical Report Summary in the documents incorporated by reference into the Registration Statement and that such descriptions and references fairly and accurately represent information in the Technical Report Summary for which we are responsible.

Date: January 4, 2024

SGS GEOLOGICAL SERVICES

By: /s/ Marc-Antoine Laporte

Name: Marc-Antoine Laporte Title: Global Business Manager Marc Rougier, ing.
Principal Geotechnical Engineer
WSP Canada Inc.

CONSENT OF QUALIFIED PERSON

I, Marc Rougier, state that I am responsible for preparing or supervising the preparation of parts of the amended technical report summary titled "SEC Technical Report Summary, Pre-Feasibility Study on the Whabouchi Mine, Nemaska, Quebec" with an original report date of 8 September, 2023 and amended on 14 November, 2023, as signed and certified by me (as amended, the "Technical Report Summary").

Furthermore, I state that:

- (a) I consent, in connection with Arcadium Lithium plc's registration statement on Form S-8, including any amendments thereto (the "Registration Statement"), to the incorporation by reference in the Registration Statement and use of the Technical Report Summary, that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission (the "SEC") and which is included as an exhibit to the Current Report of Livent Corporation on Form 8-K filed with the SEC on November 15th, 2023 (the "TRS Form 8-K"), which TRS Form 8-K is incorporated by reference in the Registration Statement;
- (b) I consent to the use of my name in connection with the TRS Form 8-K, the Current Report of Livent Corporation on Form 8-K filed with the SEC on September 26, 2023 (the "Whabouchi Form 8-K") and the Registration Statement, and to any quotation from or summarization in the Registration Statement, of the parts of the Technical Report Summary for which I am responsible;
- (c) I am responsible for authoring, and this consent pertains to, Sections 1.23.3, 12.4.2 and 23.4 of the Technical Report Summary. I further confirm that I have read the Registration Statement, and that the descriptions and references to the Technical Report Summary in the documents incorporated by reference into the Registration Statement fairly and accurately reflect, in the form and context in which they appear, the information in the parts of the Technical Report Summary for which I am responsible.

Dated at Oakville, Ontario, Canada this 4th of January, 2024.

/s/ Marc Rougier
Signature of Qualified Person

Marc Rougier, ing. OIQ 5055818

V1. 2021 Docwith Rougier Seal V0 Carl Pednault, ing.
Principal Mine Waste Engineer
WSP Canada Inc.

CONSENT OF QUALIFIED PERSON

I, Carl Pednault, state that I am responsible for preparing or supervising the preparation of parts of the amended technical report summary titled "SEC Technical Report Summary, Pre-Feasibility Study on the Whabouchi Mine, Nemaska, Quebec" with an original report date of 8 September, 2023 and amended on 14 November, 2023, as signed and certified by me (as amended, the "Technical Report Summary").

Furthermore, I state that:

- (a) I consent, in connection with Arcadium Lithium plc's registration statement on Form S-8, including any amendments thereto (the "Registration Statement"), to the incorporation by reference in the Registration Statement and use of the Technical Report Summary, that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the U.S. Securities and Exchange Commission (the "SEC") and which is included as an exhibit to the Current Report of Livent Corporation on Form 8-K filed with the SEC on November 15th, 2023 (the "TRS Form 8-K"), which TRS Form 8-K is incorporated by reference in the Registration Statement;
- (b) I consent to the use of my name in connection with the TRS Form 8-K, the Current Report of Livent Corporation on Form 8-K filed with the SEC on September 26, 2023 (the "Whabouchi Form 8-K") and the Registration Statement, and to any quotation from or summarization in the Registration Statement, of the parts of the Technical Report Summary for which I am responsible;
- (c) I am responsible for authoring, and this consent pertains to, Sections 1.15.2, 1.23.6, 1.23.7, 15.1.9, 15.1.10, 17.5, 17.6 and 23.7 of the Technical Report Summary. I further confirm that I have read the Registration Statement, and that the descriptions and references to the Technical Report Summary in the documents incorporated by reference into the Registration Statement fairly and accurately reflect, in the form and context in which they appear, the information in the parts of the Technical Report Summary for which I am responsible.

Dated at Sherbrooke, Québec, Canada this 4th of January, 2024.

/s/ Carl Pednault
Signature of Qualified Person
Carl Pednault, ing. OIQ 135738

V1. 2021 Docwith PEDNAULT Seal V0 Draft

Calculation of Filing Fee Tables

FORM S-8 Registration Statement Under the Securities Act of 1933

(Form Type)

Arcadium Lithium plc

(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities							
Security Type	Security Class Title	Fee Calculation Rule	Amount Registered (1)	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee (5)
Equity	Ordinary Shares, par value \$1.00 per share ("Ordinary Shares")	457(c) and 457(h)	2,400,000 (2)	\$6.89 (4)	\$16,536,000	0.0001476	\$2,440.71
Debt	Deferred Compensation Obligations	457(c) and 457(h)	\$15,000,000(3)	100%	\$15,000,000	0.0001476	\$2,214.00
	Total Offering Amounts			\$31,536,000		\$4,654.71	
Total Fee Offsets							
Net Fee Due						\$4,654.71	

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), the number of ordinary shares ("Ordinary Shares") of Arcadium Lithium plc (the "Registrant") registered hereunder includes an indeterminable number of shares of Ordinary Shares that become issuable by reason of any share dividend, share split or other similar transaction.
- (2) Represents Ordinary Shares reserved for issuance under the Livent Nonqualified Savings Plan (the "Livent NQ Savings Plan").
- (3) Represents unsecured obligations of the Registrant to pay deferred compensation from time to time in the future in accordance with the terms of the Livent NQ Savings Plan.
- (4) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and Rule 457(h) under the Securities Act based on \$6.89, which is the average of the high and low prices per Ordinary Share on the New York Stock Exchange on January 4, 2024.
- (5) Rounded up to the nearest penny.