

11 April 2024

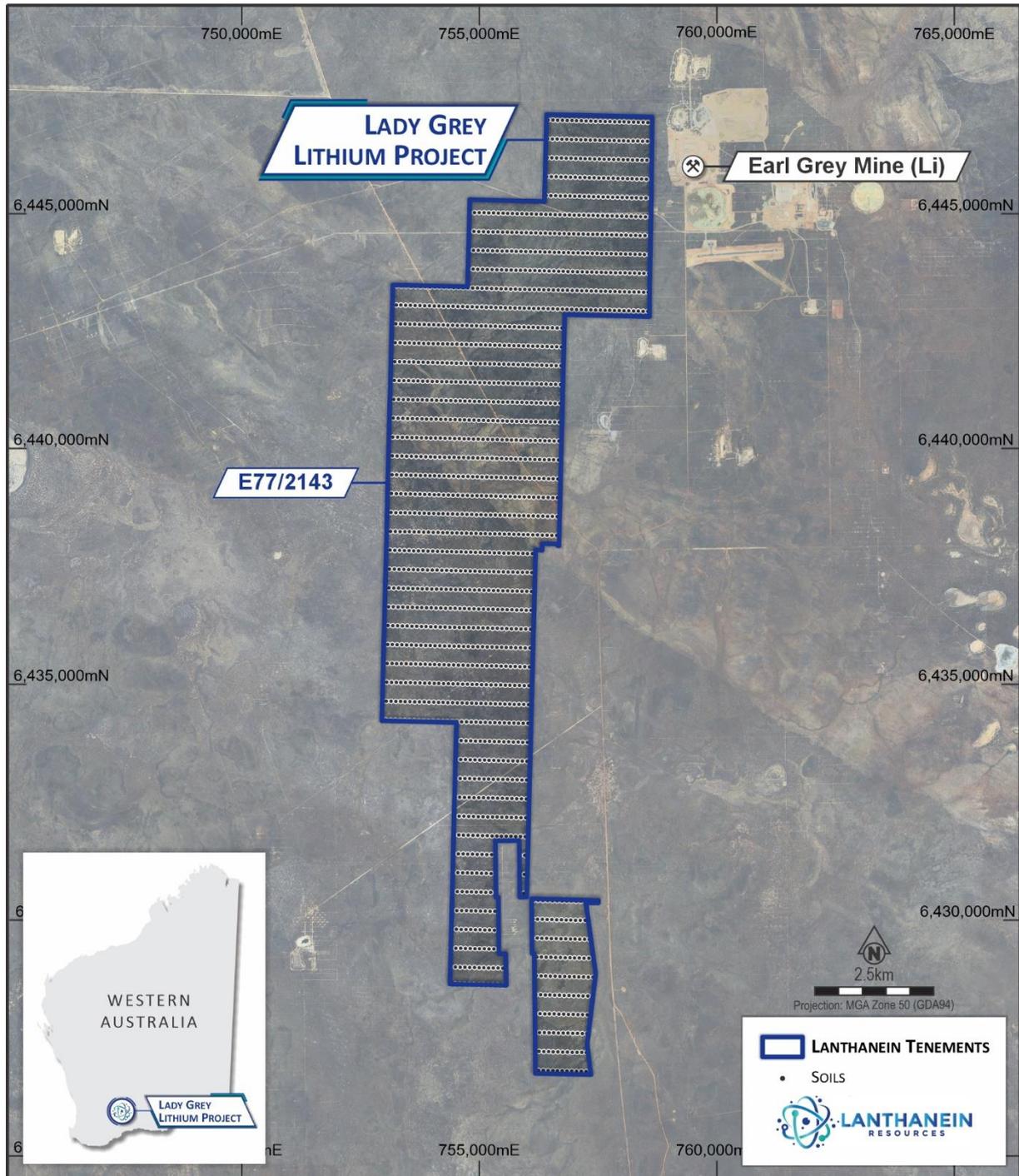
# Lady Grey Exploration Update

- Extensive soil sampling programme of approximately 1,900 samples across the entire 77km<sup>2</sup> granted tenement completed
- Samples analysed using LabWest's UltraFine+™ technique with low level detection technology, to better define geochemical anomalies, expected shortly
- Lanthanein has entered into a farm-in agreement to earn up to 70% of the Lady Grey Lithium-Tantalum Project, immediately adjacent to Covalent Lithium's (SQM, Wesfarmers 50/50 JV) Earl Grey Mine
- Delays on heritage clearance has forced deferral of the DEMIRS PoW approved 50 hole RC and 193 Air Core Drill Programme over historic geochemical and radiometric anomaly

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Lanthanein Resources Limited (ASX: LNR) ("Lanthanein" or the "Company") is pleased to announce that the extensive tenement wide soil sampling programme at the Lady Grey Lithium Project ("Lady Grey") directly adjacent to Covalent Lithium's (SQM & Wesfarmers) Earl Grey Mine, 189Mt @1.53% Li<sub>2</sub>O<sup>1</sup> at Mount Holland in the Forrestania Greenstone Belt has been completed. The programme collected approximately 1,900 samples (Figures 1 and 2) and included several rock chip samples of prospective sub crop with assays expected in the coming weeks.

**Mr Brian Thomas, Technical Director of Lanthanein commented:** "We are very excited to finally have the essential modern geochemical exploration work completed to give us complete geochemical coverage of the ~77km<sup>2</sup> of the tenement rather than the ad hoc historical coverage. This will allow better definition of the potential drill targets, including those PoW approved proposed holes originally based on the historical geochemical and radiometric anomalies in the north east corner of the tenement. We now have closer spaced repetition of that coverage but also infill between the lines to provide higher quality information. This increased sample density will also assist with the interpretation of the granite contact areas adjacent to the western and northwestern boundary."



**Figure 1: Completed Soil Sampling Grid for the Lady Grey Project adjacent to the Earl Grey Lithium Mine in the Forrestania Greenstone Belt of Western Australia.**

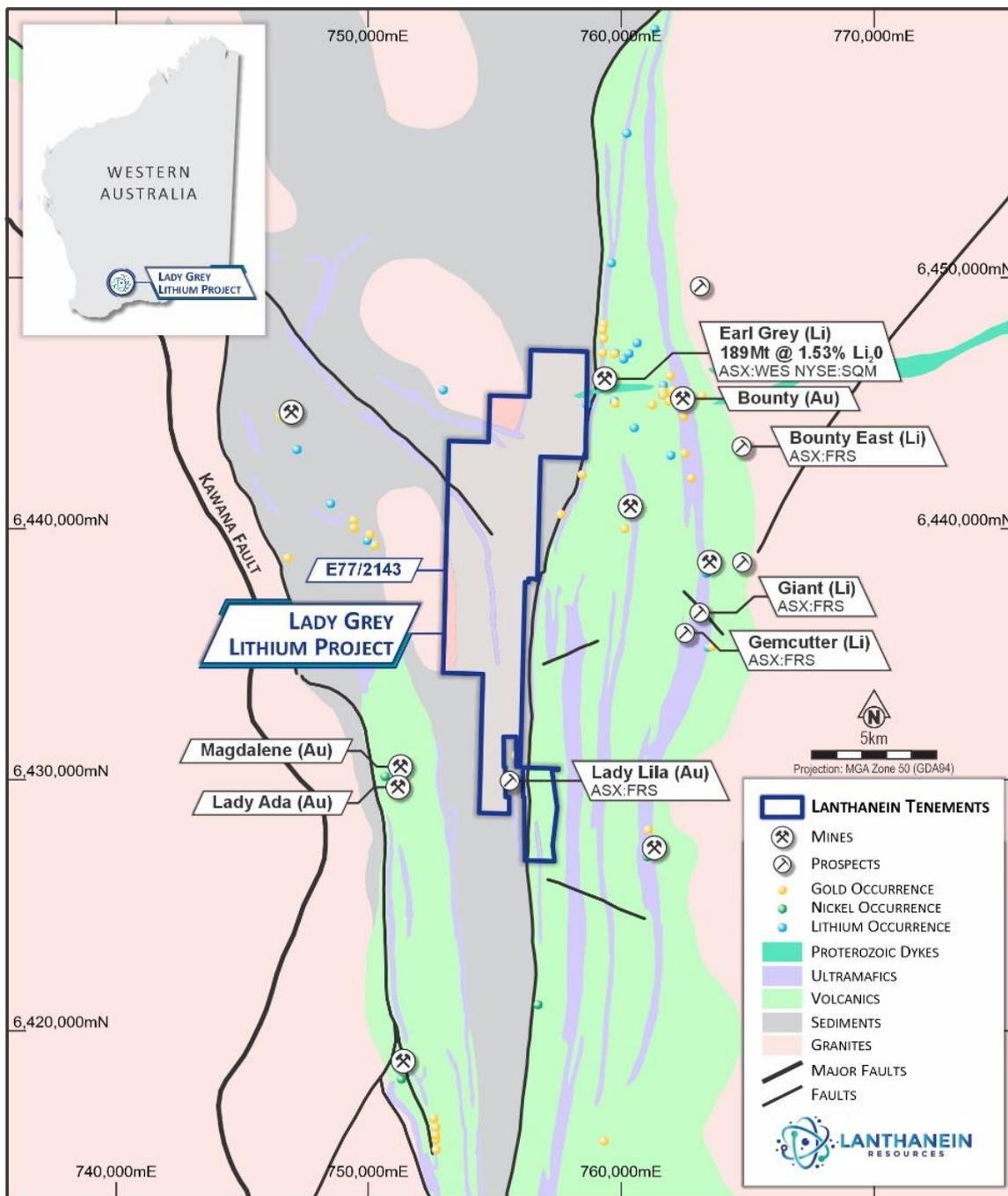


Figure 2: Location of the Lady Grey Project relative to infrastructure of Earl Grey Lithium Mine in the Forrestania Greenstone Belt of Western Australia.

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## **UltraFine+™ Soil Sample Analysis Technique**

The UltraFine+™ analysis process was developed in conjunction with CSIRO around 2017. Analysis of the reactive 2-micron clay fraction, with microwave digestion and using the latest low detection level ICPMS technology, has proven to be useful to help “see through” shallow to moderate cover. Ultra Fine analysis is now an established approach to surface exploration analysis using proven geochemical methods to identify sensitive signals at surface.

The technique delivers multielement analysis, mineralogy and several related parameters derived from the ultrafine (< 2 µm) fraction of soil samples. Concentration of metals in the ultrafine fraction gives stronger signals, generally well above instrumental detection limits, and increased signal-to-background ratios.

## **Murraydium REE Project**

Following the grant of the new Exploration Licence EL 6969 adjacent to the Bordertown Block, the Company applied to the South Australian DEM to surrender the Naracoorte and Jip Jip Blocks of the existing EL 6717 as finding any areas of potential Loxton Parilla Sands with exempt land was proving challenging in those two blocks and also to reduce the carrying costs and expenditure commitment on EL 6717.

## **Mt Clere Project**

Immediately prior to the anniversary of E52/4012, the Company decided to surrender the tenement due to the limited prospectivity following a number of reconnaissance programmes and review of historical exploration work completed.

This announcement has been authorised for release by the Directors of the Company.

For additional information please visit our website at [www.lanthanein.com](http://www.lanthanein.com)

### **LANTHANEIN RESOURCES LTD**

The information referred to in this announcement relates to the following sources:

<sup>1</sup> David Chapman, Geoscience Australia, Australia Resource Reviews, Lithium 2018. Comprising 66Mt @ 1.58% Li<sub>2</sub>O Measured, 106Mt @ 1.52% Li<sub>2</sub>O Indicated and 17Mt @ 1.11% Li<sub>2</sub>O Inferred.

### **Competent Person’s Statement**

The information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Thomas Langley who is a member of the Australian Institute of Geoscientists (MAIG) and a member of the Australasian Institute of Mining and Metallurgy (MAusIMM). Mr. Thomas Langley is a Non-Executive Director of Lanthanein Resources Limited, and is a shareholder, however Mr. Thomas Langley believes this shareholding does not create a conflict of interest, and Mr. Langley has

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sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Langley consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.