

ASX Announcement



05 December 2024

ABN: 45 116 153 514

ASX: TMX

Larin's Lane Gallium Project Metallurgical Studies Underway MRIWA Research Project M10528

Terrain Minerals Limited (ASX: TMX) ('Terrain' or the 'Company') is pleased to announce that its 100% owned Larin's Lane Gallium project in Western Australia (WA) is advancing forward with preparation of the first round of Metallurgical studies now underway.

Terrain is excited to be taking part in a phase two Metallurgical study being led by geological consulting group RSC who have been appointed to lead the **Minerals Research Institute of Western Australia (MRIWA) Project M10528**.

MRIWA Project M10528 study overview:

- Samples will be tested with 8 separate solvents (acids as their pH <7).
- Terrain has switched the focus of the study goals to target Gallium extraction which is a critical metal.
- Terrain samples will be delivering late December 2024, and testing will commence once received.
- Final results will be available mid-year 2025 with interim results along the way.

As a participant in the MRIWA research project M10528, selected samples will also be the subject of a series of extraction processes via Curtin University. The objective of this government-sponsored research project is to optimise the recovery of regolith-hosted critical minerals (including Gallium) with a **focus on organic, near pH neutral, solvents**. Results from this research project will be provided to Terrain and will play a significant role in **underpinning any future Mineral Resource calculation** (and Scoping Study) for the Larins Lane Gallium Project.

Terrain's geological team are currently in the field preparing for a follow-up RC program after the successful air-core Gold drilling program (refer ASX announcement released on 26 November 2024). At the same time, Terrain will twin a Gallium hole for metallurgical sample material (refer to Diagram 4). The twinned hole sits within Terrain's recently announced JORC compliant exploration target (refer ASX announcement released on 6 November 2024). This study was compiled by SRK Consulting (Australasia) Pty Ltd (**SRK Consulting**) and defined an initial *Phase One* Exploration Target for the Larins Lane Project located in the Mid-West region of Western Australia (see Diagram 1).

The initial *Phase One* Exploration Target is based solely on the limited air core program completed by the Company in 2023, which appears to **cover less than 5% of the prospective geology at Larins Lane**. (See Diagram 2). It should be noted that both the rare earth element (REE) mineralisation and Gallium covered by this *Phase One* Exploration Target are hosted within the regolith (or oxide) horizon, sitting above the fresh bedrock (see Diagram 3).

To quote SRK Consulting: "SRK has not seen any data to indicate that the drill target areas chosen by Terrain have better prospectivity than the undrilled areas between these drill clusters, and **it is reasonable to expect that mineralisation could be discovered along the undrilled areas** elsewhere along the granite contact". But there are no guarantees that future exploration will be successful," quoted from ASX release 6 November 2024.

In addition, as part of their report, SRK Consulting also designed a follow-up air core drilling program aimed at **testing an expanded mineralisation footprint** at Larins Lane. This proposed drill program, which comprises 53 holes for an estimated total of 3,500 metres of air-core drilling, is designed to **triple the amount of prospective geology drill tested** by the Company (see Diagram 2).

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Commenting on the determination of an initial, Phase One Exploration Target for Larins Lane by SRK Consulting, and now the MRIWA advancement studies Terrain's Executive Director, Justin Virgin, said:

Justin's Key Highlights:

- We are extremely excited to have a gallium only project here in WA, after yesterday media around China's Gallium export bans to the USA.
 - One of the many links about the China/USA gallium export ban;
<https://au.finance.yahoo.com/news/china-targets-critical-metals-tit-102821740.html>
- The MRIWA metallurgical studies gives Terrain the opportunity to economically advance its Larin's Lane Gallium project forward. All other companies in the study are focused on REE.
- **Initial Exploration Target Defined:** SRK Consulting has defined a Phase One Exploration Target at Terrain Minerals' 100%-owned Larins Lane Project, covering only 5% of prospective geology.
- **Rare Earths and Gallium Potential:** Targeted REE and gallium mineralisation are located within the regolith (oxide horizon) above fresh bedrock.
- **Planned Expansion of Drilling:** SRK Consulting designed a follow-up air core drilling program (53 holes, 3,500 meters). Drilling is expected to commence in Q1 2025, with results six weeks post-completion (See Diagram 2).
- **Future Exploration Phases:** A Phase Three drilling program is under design to cover the remaining 80% of Larins Lane's geology. Details will be released with the Phase Two Exploration Target expected mid-2025. With a focused on delineating the higher-grade zones.

Selected higher grade holes include: (Refer to ASX announcement 27 May 2024)

Applying: Gallium Oxide (Ga2O3) cut-off 40.32 g/t (ppm)

- 16m @ 53.74 g/t Ga2O3 from 64m - (23SBAC035)
 - 20m @ 48.33 g/t Ga2O3 from 4m - (23SBAC045)
 - 30m @ 40.32 g/t Ga2O3 from 24m - (23SBAC071)
 - 24m @ 46.34 g/t Ga2O3 from 32m - (23SBAC077)
 - 8m @ 52.62 g/t Ga2O3 from 20m - (23SBAC080)
- **Shift in Focus to Gallium:** Future targets are expected to prioritise gallium, responding to industry demand and encouraging initial metallurgical results on its economic extraction potential.

"We're excited to announce this initial Exploration Target for the Larins Lane Project, marking a pivotal step in unlocking the project's vast potential. The Phase One findings have shown us just a glimpse of what Larins Lane holds, and our planned drilling campaigns aim to substantially increase our understanding of the mineralisation. With less than 5% of the prospective geology covered by this Phase One Exploration Target, the Company expects that this preliminary Exploration Target will grow substantially during the next two phases of drilling."

*SRK has not seen any data to indicate that the drill target areas chosen by Terrain have better prospectivity than the undrilled areas between these drill clusters, and **it is reasonable to expect that mineralisation could be discovered along the undrilled areas** elsewhere along the granite contact". But there are no guarantees that future exploration will be successful.*

"With 95% of the prospective area still to be properly drill tested, this represents an enormous opportunity for the Company and its shareholders alike".

"The Company is pleased with the progress of its on-going discussions with potential international partners in relation of the gallium mineralisation at Larins Lane and the release of this, and subsequent Exploration Targets, play a vital role in advancing these discussions. Terrain looks forward to updating shareholders on these gallium partnership discussions once they develop sufficiently to meet disclosure requirements".

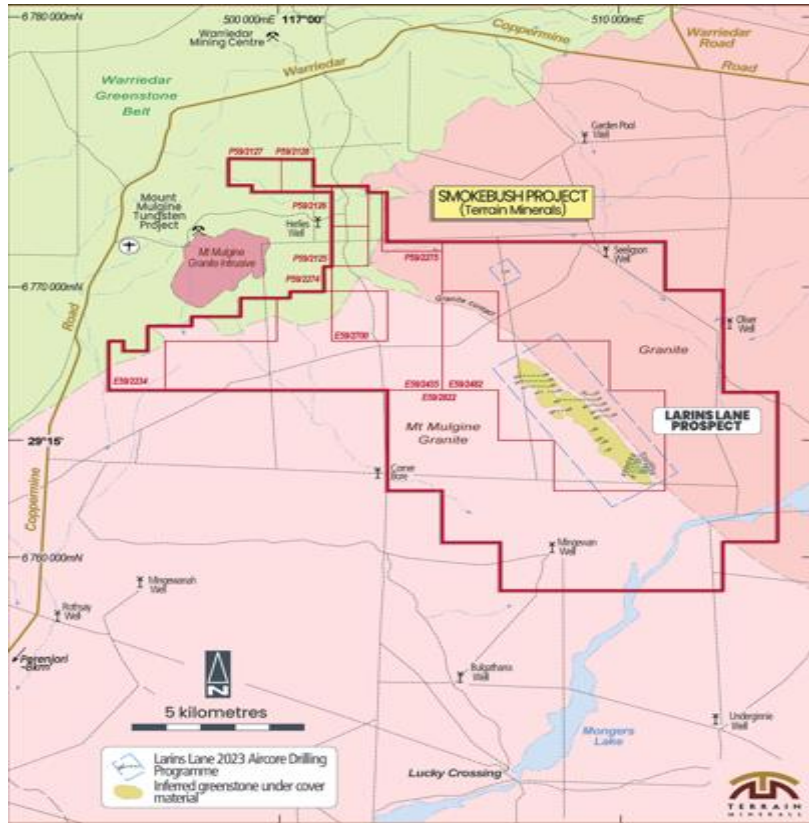


Diagram 1: Smokebush tenement package, refer to the following Diagram 2 (zoom in) which outlines the potential of Larin’s Lane Project and the proposed 3 stages of exploration, outlined in this report.

Larin’s Lane Gallium Project Location and Background

The Larins Lane Project is part of Terrain’s Smokebush project area, which is located in the Mid-West region of Western Australia, approximately 40 kilometres west of Paynes Find, and 350 kilometres northeast of Perth.

In 2023, Terrain conducted a 101-hole air core drilling program at the Larins Lane Project. Elevated concentrations of clay-hosted rare earth element (REE) and gallium (Ga) mineralisation were discovered in the regolith that has developed on an elongated amphibolite body located between adjacent monzogranite bodies.

Terrain engaged SRK Consulting to conduct an interim review of the available geological data with the aim of assessing the likely prospectivity of the area.

Following an initial review of the data, SRK Consulting concluded that there is sufficient data in selected parts of the deposit to define an REE and Gallium Exploration Target, which is also described in ASX release 06/11/2024.

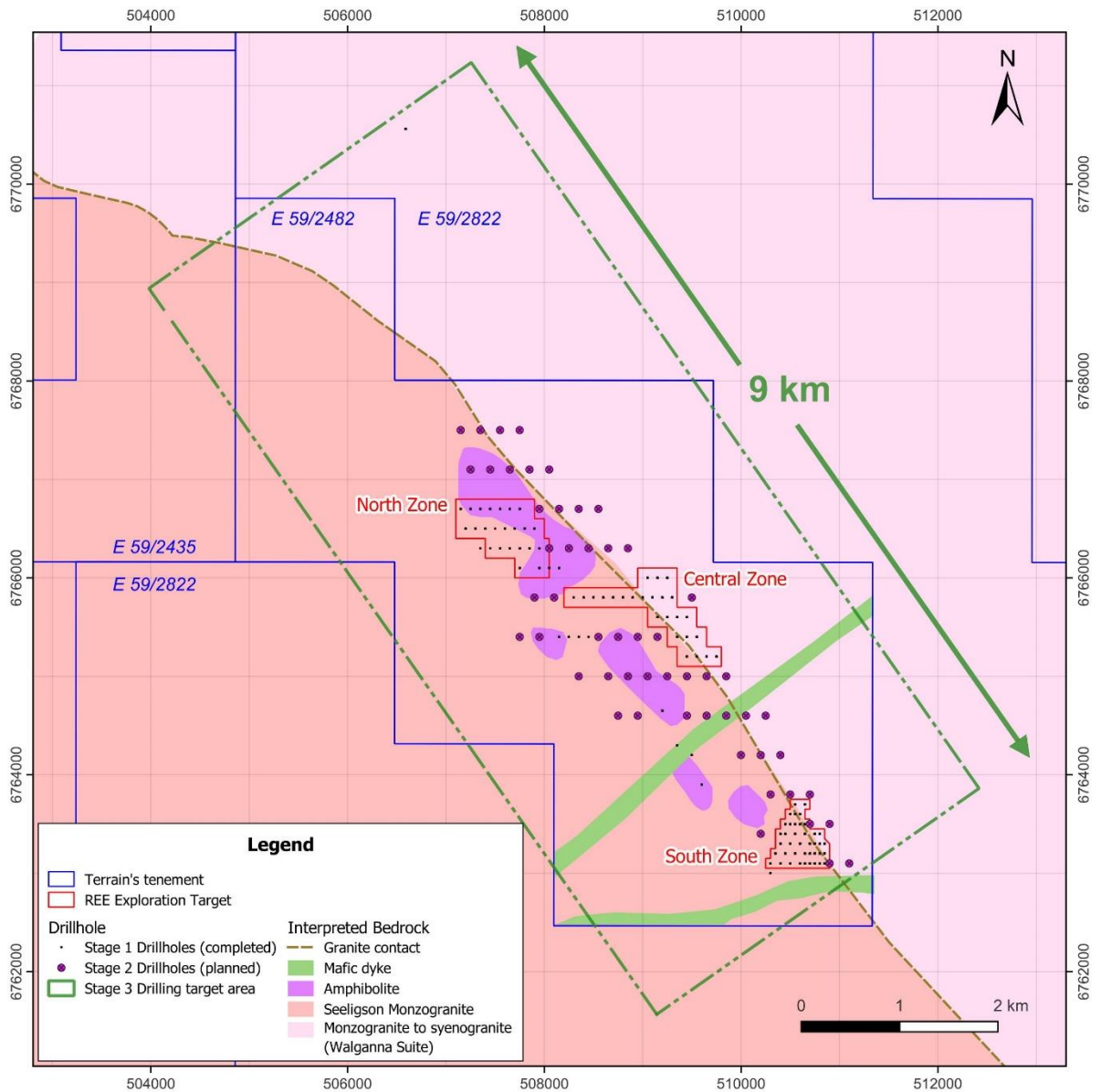


Diagram 2: Indicative area covered by the completed Stage 1 (2023) air core drill program, plus the proposed Stage 2 and Stage 3 drilling programs, highlighted in the legend box.

Notes: JORC tables relating to this diagram in ASX release 06/11/2024 see Appendix 1.

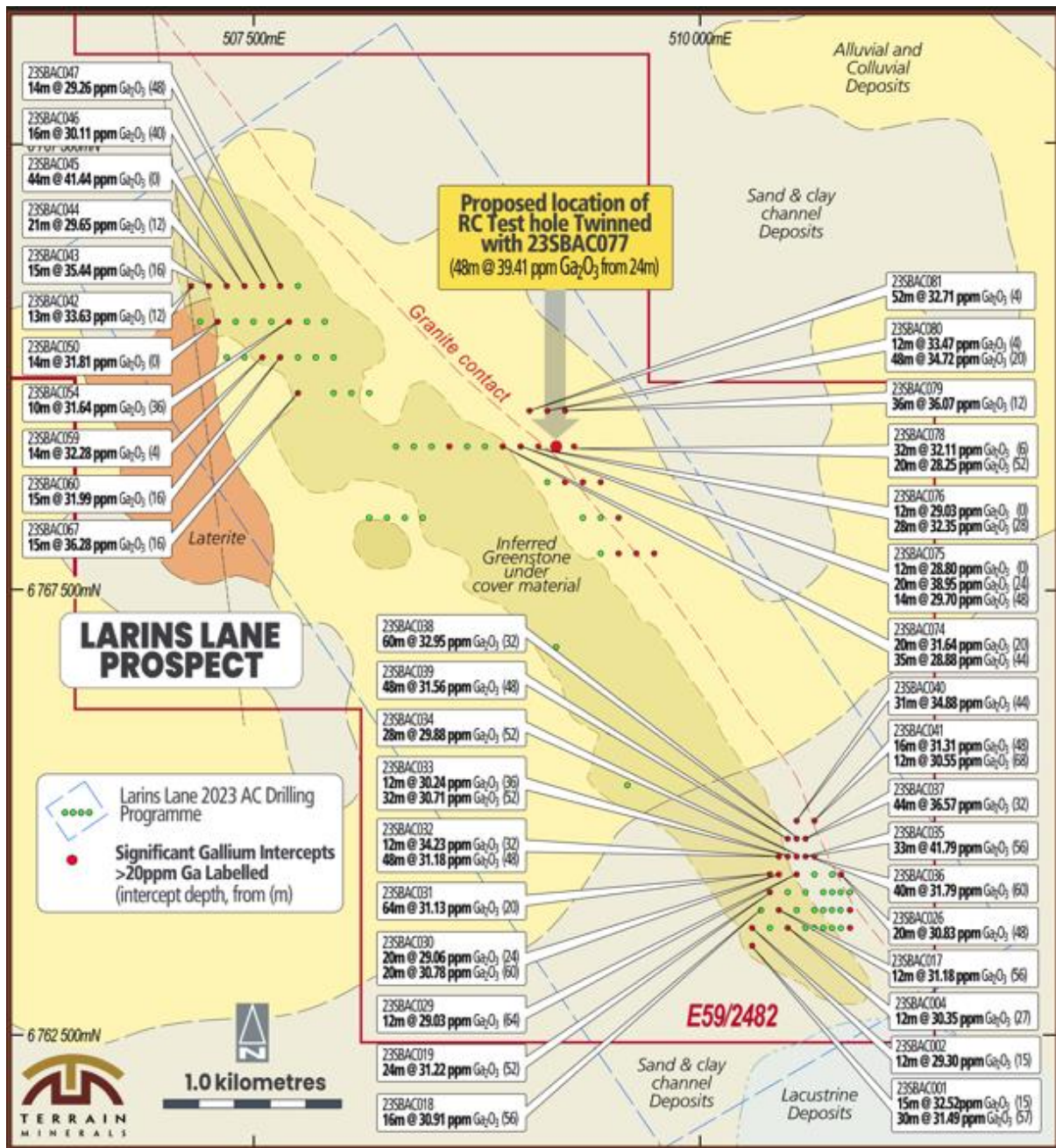


Diagram 4: Larin’s Lane gallium project and planned twin hole of 23SBAC077 for metallurgical testing as part of the MRIWA research pertaining to the M10528 - Extraction of Clay-Hosted Rare-Earth Element Deposits in Australia. Samples will be tested with 8 separate solvents (acids as their pH <7). Terrain has switched the focus of its study goals to target Gallium extraction which is a critical metal. The above drill hole location (not possible to show all) of Terrain’s 2023 air core drill program with selected gallium oxide grades highlighted.

Larin’s Lane JORC Tables and additional project information:

27 May 2024 - Exciting Gallium & REE drilling results at Larin’s Lane.

06 November 2024 - Larin’s Lane Phase One JORC Exploration Target Outlines Potential.

What is Gallium (Ga)

Gallium (GA) atomic number 31, is a soft, silvery metal, at standard temperature and pressure. The elemental gallium is a liquid at temperatures greater than 29.76C (85.57F) (slightly above room temperature), where it becomes silvery white. Source: <https://strategicmetalsinvest.com/gallium-prices/>

Solid gallium alloys are used in optics, electronics, and nuclear engineering because of their non-toxicity and resistance to neutron radiation and beta decay. Used in alloys with other metals such as aluminium, copper, and tin to create gallium arsenide (GaAs) as well as being used in semiconductor fabrication, one of gallium's most important uses. It provides a critical component in multiple steps of the manufacturing process for computer chips and other electronic devices including photovoltaics (solar panels cells due to a recent patent expiring).

Gallium is a critical metal used in the defence industry and computer chips, (Gallium chips will potentially replacing silicon), semi-conductors, transistors, including electronic circuitry.

Gallium nitride (GaN) is another important compound of gallium that has applications in light-emitting diodes (LEDs), laser diodes, power amplifiers, and solar cells. Source: <https://strategicmetalsinvest.com/gallium-prices/>

Gallium increases component speed and miniaturization critical in generative AI (and the associated demand for semiconductor).

Until 1 August 2023 export ban, China was ostensibly the sole supplier to Gallium to the semiconductor industry, producing a staggering ~98% of the world's supply of raw Gallium. It is anticipated that USA, European and Asian, Sovereign states and semiconductor chip makers will actively seek to ensure reliable and secure supply outside of China, with the aim of safeguarding critical manufacturing and in country industrial production into the future.

Note: Gallium - For addition information and references, refer to ASX releases:

16 August 2023 - Gallium (Ga) Discovered at Smokebush RC drilling campaign.

31 October 2023 – Quarterly Activities Report: September 2023.

23 October 2023 – Gallium Clays in drilling at Lort River.

11 March 2024 - Highly encouraging REE & Gallium results at Larins Lane Project, only ~25% of samples assayed to date.

27 May 2024 - Exciting Gallium & REE drilling results at Larin's Lane.

06 November 2024 - Revised Larin's Lane Phase One JORC Exploration Target Outlines Potential.

For further information, please contact:

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ABOUT TERRAIN MINERALS LIMITED:

Terrain Minerals Limited (ASX: TMX) is a mineral exploration company with an asset portfolio that includes:

Trade Opportunities:

Terrain is open to commercial discussions in relation to the full or partial sale, and/or joint venture of the Company's non-core assets.

Smokebush Exploration Project

100% owned exploration project located within the prospective Yalgoo Mineral Field of Western Australia which neighbours Warriedar Resources Limited's (ASX: WA8) Golden Dragon Project. The Company's previous exploration campaign have targeting gold, and other commodities across the tenement package:

Larin's Lane - Gallium (& REE) Project:

The maiden drilling program in late 2023 intersected broad zones of Gallium mineralisation over a ~9km by ~3km of interpreted strike. This mineralisation remains open in all directions and has the potential to grow into a significant clay/oxide hosted Gallium project. The project area benefits from year-round access and within close proximity to established mining infrastructure. A JORC compliant exploration target refer to ASX release on 06 11 2024, also refer to the above release.

Wildflower Gold Project

- **Wildflower/Cota/T16 and Lightning/Monza Gold Prospects:**
RC follow up drilling December 2024 - Refer to ASX realise 26//11/2024.

Lort River Exploration Project

100% owned exploration project that covers more than ~550km² square kilometres of highly prospective exploration acreage located approximately 50 kilometres northwest of Esperance, Western Australia.

- **Lort River - Nickel Project:**

Is situated within the highly prospective Albany-Fraser Belt, being home to Nova-Bollinger nickel-copper ore bodies. The host geology of the Nova-Bollinger nickel-copper orebody appears as a very distinctive “eye” in the aeromagnetic data. Terrain has identified a possible repetition of the Nova-style eye feature in its recently granted tenement E63/2447 within its Lort River Project. An Airborne EM (Vtem) survey to test for sulphide bodies, flying over 1,281km line survey. **Leading geophysical consulting firm Southern Geoscience Consultants (SGC)** has confirmed that the “eye” feature at Lort River is likely a mafic or ultra mafic “intrusion” potentially emplaced during the Albany Fraser Orogen, for additional information refer to ASX release 13 August 2024. Terrain currently preparing to drill test these targets with ground EM survey scheduled to commence in December 2024.

Project Review

Terrain continues to investigate potential projects across various commodities including gold, copper, nickel, and industrial minerals. Whilst Western Australian based projects are the Company’s current focus, other parts of Australia are being seriously examined and considered as are other jurisdictions including, but not limited to, Africa, Europe, and the Americas across all commodities.

Pending Applications

Terrain has several pending tenement (packages) applications across Australia. These applications include:

Biloela: Copper & Gold Project is located along strike of the Cracow Gold Mine in Queensland (See ASX release dated 21 June 2023 for more information on the rationale, geological setting and walk-up drill targets already identified within this key project area).

Carlindie: Lithium Project is strategically located between Wildcat Resources (ASX: WC8) and Kali Metals (ASX: KM1) tenements in the East Pilbara of Western Australia. The Company has prioritised the granting of its Carlindie tenement package and is continuing to work successfully towards achieving its goal.

Note: Terrain incurs no addition costs until pending applications are granted. Terrain’s board also believes that having a strong project pipeline into the future ensures investors are able to see future value opportunities by being a shareholder of the Terrain Minerals Limited (ASX:TMX).

Authority

This announcement has been authorised for release by the Justin Virgin, Executive Director of Terrain Minerals Limited.

Competent Person’s Statement -

From ASX release 06/11/2024 on REE/Gallium exploration target ASX release;

SRK Gallium

The information in this exploration target report is based on information compiled by Mr. Rodney Brown who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and Member of the Australian Institute of Geoscientists (AIG). Mr Brown is Principal Consultant (Resource Evaluation) at SRK Consulting (Australia) Pty Ltd and has 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. Brown consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

ASX Listing Rule 14.3

In accordance with ASX Listing Rule 14.3 and its Constitution, the Company advises that valid nominations for the position of Director remain open throughout the year.

Compliance Statement

The Company notes that within the announcement, all the information is referenced directly to the relevant original ASX market releases of that technical data.

Terrain Minerals would like to confirm to readers that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of the estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

Disclaimer

Information included in this release constitutes forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "intend", "plan", "estimate", "anticipate", "continue" and "guidance" or other similar words, and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company's actual results, performance, and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate environmental conditions including extreme weather conditions, staffing and litigation.

Forward looking statements are based on the company and its management's assumptions made in good faith relating to the financial, market, regulatory and other relevant environments that exist and effect the company's business operations in the future. Readers are cautioned not to place undue reliance on forward looking statements.

Forward looking statements are only current and relevant for the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward looking statements or advise of any change in events, conditions or circumstances on which such statement is based.