

ASX Announcement



23 October 2023

ABN: 45 116 153 514

ASX: TMX

Gallium Clays Mineralisation Intersected in all Drill holes at the Lort River (REE) Project

Terrain Minerals Limited (ASX: TMX) ('Terrain' or the 'Company') provides this further update following the highly successful maiden air core drill program that intersected multiple rare earth element (REE) mineralisation at its 100% owned Lort River Project near Esperance in Western Australia (refer ASX announcement released 19 October 2023).

The review process is currently still ongoing. In addition to REE mineralisation, the reconnaissance drilling also returned encouraging assays from every hole for **Gallium (Ga₂O₃)**.

"Clay Hosted Gallium mineralisation" Across the Lort River (REE) Project.

Highlights (All holes ended in mineralisation):

- **38m @ 34.1 g/t - Ga₂O₃** from surface (hole 23LRAC001)
- **27m @ 35.6 g/t - Ga₂O₃** from surface (hole 23LRAC002)
- **6m @ 32 g/t - Ga₂O₃** from surface (hole 23LRAC003)
- **21m @ 31.3 g/t - Ga₂O₃** from 10 meters (hole 23LRAC004)
- **32m @ 36.8 g/t - Ga₂O₃** from surface (hole 23LRAC005)
- **9m @ 43.1 g/t - Ga₂O₃** from 7 meters (hole 23LRAC006)
- **14m @ 29.3 g/t - Ga₂O₃** from surface (hole 23LRAC007)
- **10m @ 27.5 g/t - Ga₂O₃** from 4 meters (hole 23LRAC008)
- **22m @ 31.6 g/t - Ga₂O₃** from surface (hole 23LRAC009)
- **7m @ 34.6 g/t - Ga₂O₃** from surface (hole 23LRAC0010)
- **14m @ 33.5 g/t - Ga₂O₃** from 7 meters (hole 23LRAC0011)
- **6m @ 25.2 g/t - Ga₂O₃** from surface (hole 23LRAC0012)
- **11m @ 25.6 g/t - Ga₂O₃** from surface (hole 23LRAC0013)
- **9m @ 29.7 g/t - Ga₂O₃** from 9 meters (hole 23LRAC0014)
- **11m @ 31.8 g/t - Ga₂O₃** from surface (hole 23LRAC0015)
- **15m @ 25.6 g/t - Ga₂O₃** from surface (hole 23LRAC0016)

Gallium is considered a critical mineral by the European Union^(F/note1) (refer to Diagram 1) whose economic importance to the EU is higher than that of any of the rare earth elements. Yet, despite its importance to the EU economy, unlike REE, gallium to date has not attracted the attention from the mainstream investment community.

Gallium is also a critical metal used in the defence industry (refer to diagram 4) and in the production of computer chip, semi-conductors, transistors, including light emitting diodes (LED) and electronic circuitry.

Until 1 August 2023, China was ostensibly the sole supplier to Gallium to the semiconductor industry, producing a staggering 98% of the world's supply of raw Gallium (refer to diagram 5). China's strict export bans of Gallium came into effect on 1 August 2023.

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Foot Note from page one:

https://www.researchgate.net/publication/309583931_The_distribution_of_gallium_germanium_and_indium_in_conventional_and_non-conventional_resources_-_Implications_for_global_availability

For additional information on Terrain & Gallium refer ASX release: 16 August 2023 Gallium (Ga) Discovered at Smokebush RC drilling campaign.

For additional information to REE results from the same drill program as above refer to ASX release: 19 October 2023 Rare Earth Element (REE) Mineralisation Intersected across the Lort River project area.

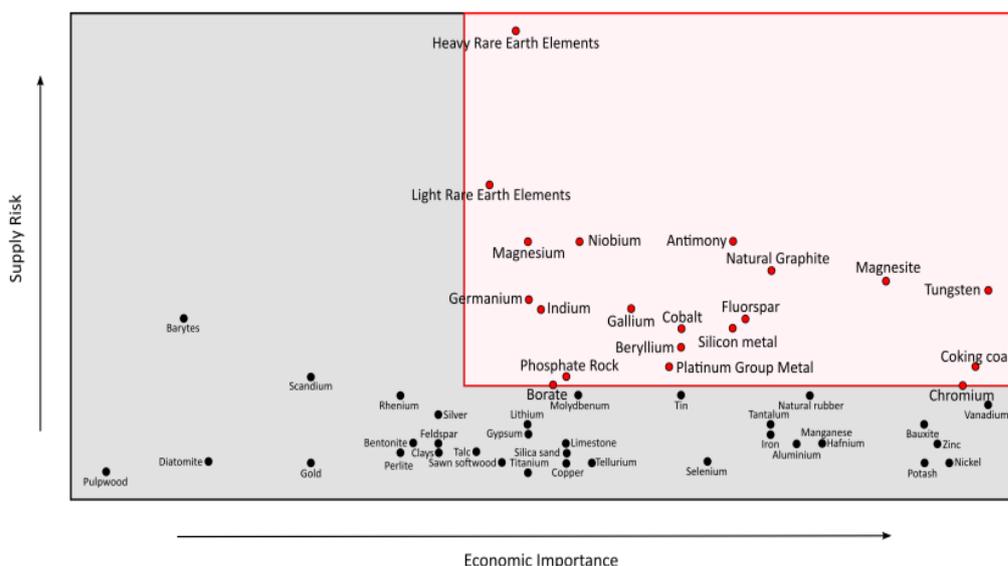


Diagram 1: Criticality plot of supply risk vs. economic importance of different raw materials for the EU. Raw materials falling into the red box in the upper right-hand corner of the plot are classified as 'critical'. Modified from: EU Commission (2014).

Terrain is of the opinion that over the coming 12 months, economies like the USA and EU will start to actively engage directly with resource companies active within the gallium (and germanium) sector and, as such, the Company has commenced routinely assaying for these evolving critical metals as part of its standard exploration activities.

Current projections suggest that the demand for gallium going forward will require more than a tenfold increase in primary production by 2050¹. Concerns over the future availability of gallium are due particularly to its importance in the production of thin-film photovoltaics as well as semiconductors.

The Company is presently undertaking a detailed analysis of gallium mineralisation and its market. This is inspired by the (unsolicited) interest the Company has received over the past few months from a number of parties since Terrain made its first gallium announcement on 16 August 2023².

Terrain sees similarities between what occurred in the lithium market over the past decade and the future growth of the gallium market over the next 10 years. For instance, prior to the mainstream uptake of electric vehicles, global demand for lithium was rather muted. As a result, lithium focused exploration was minimal, and the market capitalisation of lithium explorers were modest. Fast forward to the present day, and lithium exploration companies, even in early stage, are demanding significant market valuations that now push into the billions of dollars. Likewise, as the world moves ever quicker towards green energy (such as photovoltaics) and the exponential growth of the Internet of Things (IoT) and generative artificial intelligence (AI), it would seem reasons to expect that the demand for specialised critical metals such as gallium would follow a similar exponential demand curve as that observed for lithium. Should such a growth occur, Terrain is determined to be at the forefront of this market and, in turn, endeavour to ensure its shareholders reap the maximum return from the Company's foresight.

Terrain will continue to keep shareholders informed as to the progress it makes in terms of gallium, both from an exploration perspective as well as market intelligence for this often overlooking but vitally critical metal.

¹ [ResearchGate](https://www.researchgate.net/publication/309583931_The_distribution_of_gallium_germanium_and_indium_in_conventional_and_non-conventional_resources_-_Implications_for_global_availability)

² [20230816GalliumdiscoveredatSmokebushRCdrillingcampaignJVfinal\(002\).pdf \(terrainminerals.com.au\)](https://www.terrainminerals.com.au/20230816GalliumdiscoveredatSmokebushRCdrillingcampaignJVfinal(002).pdf)

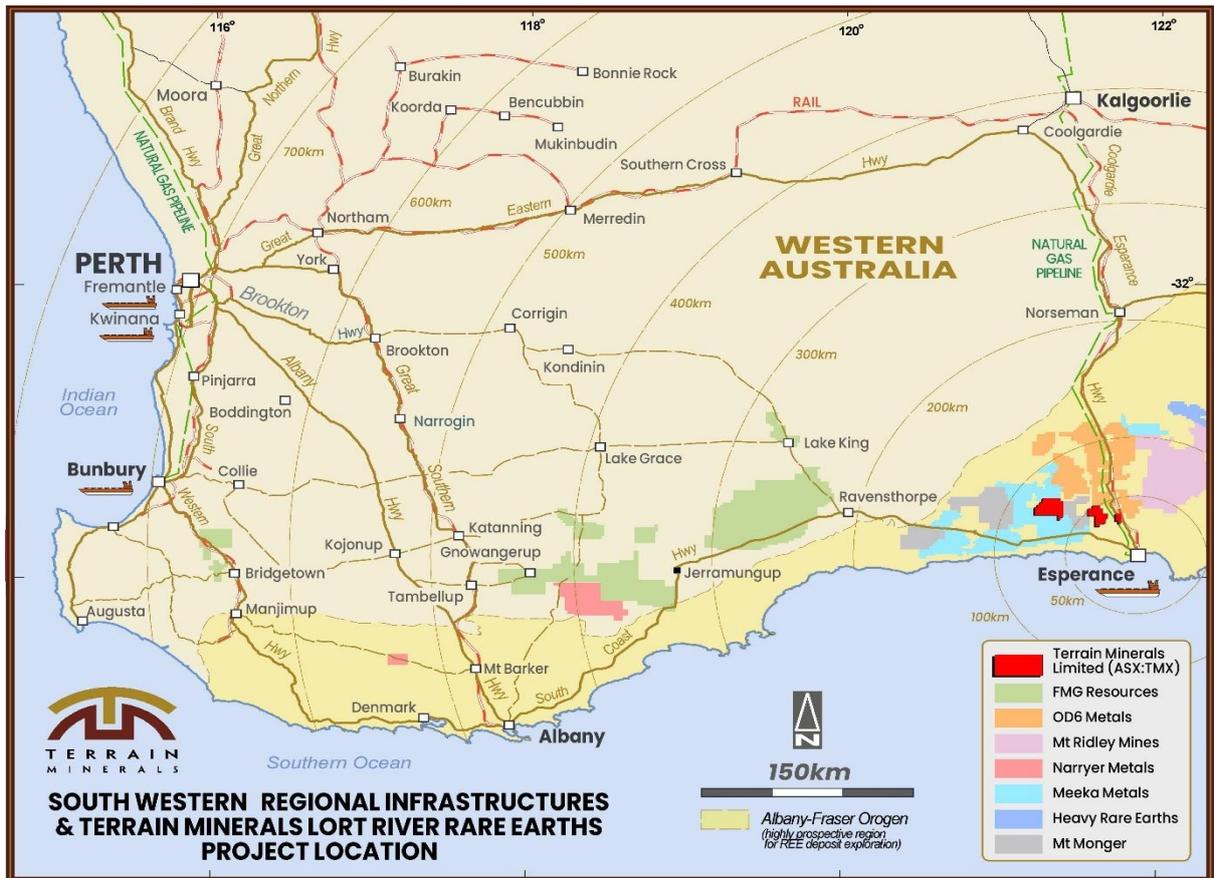


Diagram 2: Location of Terrain Mineral’s 100% owned Lort River Project within the highly prospective Esperance region of Western Australia. The majority of the Company’s 320 square kilometre Lort River tenement package encompasses privately owned (third party) freehold land, used for cropping and other agricultural activities.

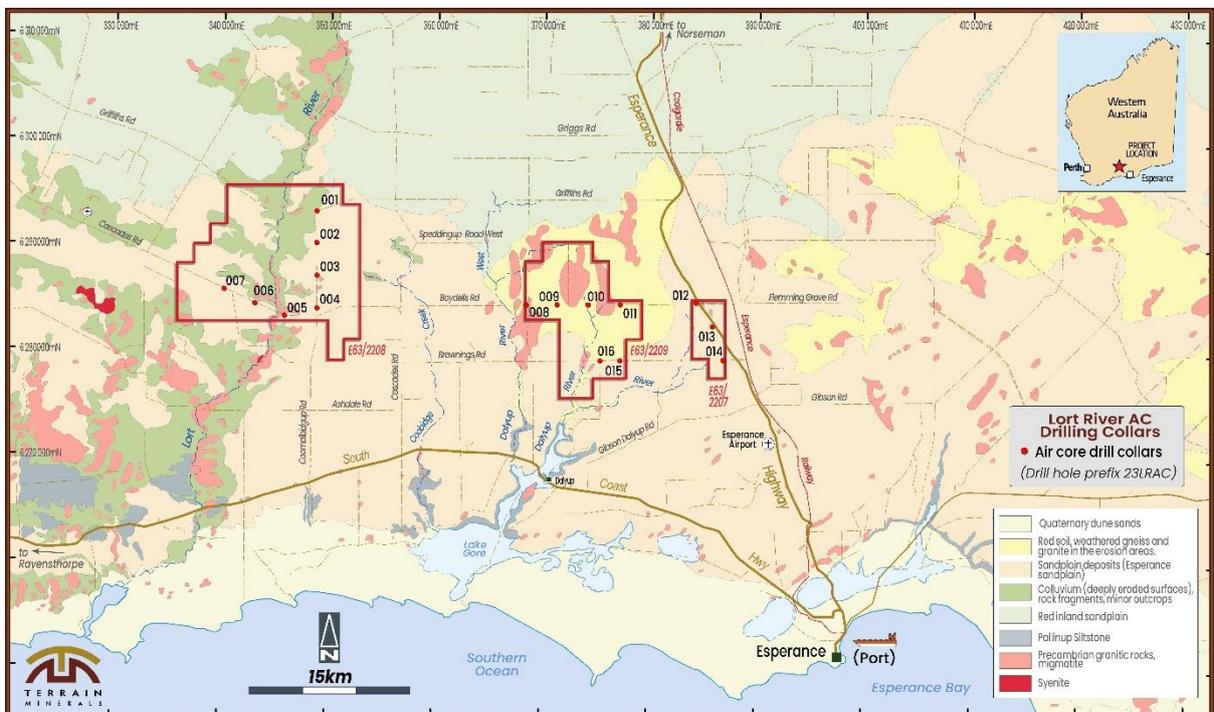


Diagram 3: Collar location map for Terrain Minerals’ August 2023 first pass, reconnaissance scale air core drill program, whose results the subject of this release (refer to picture 1).

Hole	Easting	Northing	Total Depth	Azimuth	Inclination
23LRAC001	348965	6293189	38	180	-90
23LRAC002	348983	6290212	27	180	-90
23LRAC003	349004	6287139	6	180	-90
23LRAC004	349035	6284079	31	180	-90
23LRAC005	345986	6283266	32	180	-90
23LRAC006	343228	6284487	16	180	-90
23LRAC007	340348	6285810	14	180	-90
23LRAC008	368577	6284488	14	180	-90
23LRAC009	371474	6284502	22	180	-90
23LRAC010	374399	6284541	7	180	-90
23LRAC011	377415	6284574	21	180	-90
23LRAC012	384438	6284780	6	180	-90
23LRAC013	386044	6282557	11	180	-90
23LRAC014	388085	6279355	17	180	-90
23LRAC015	377471	6279245	11	180	-90
23LRAC016	375608	6279209	15	180	-90

Table 1: Drill hole collar information for Terrain Minerals’ August 2023, reconnaissance scale air core drill program, whose results the subject of this release. (GDA94 Zone 51).

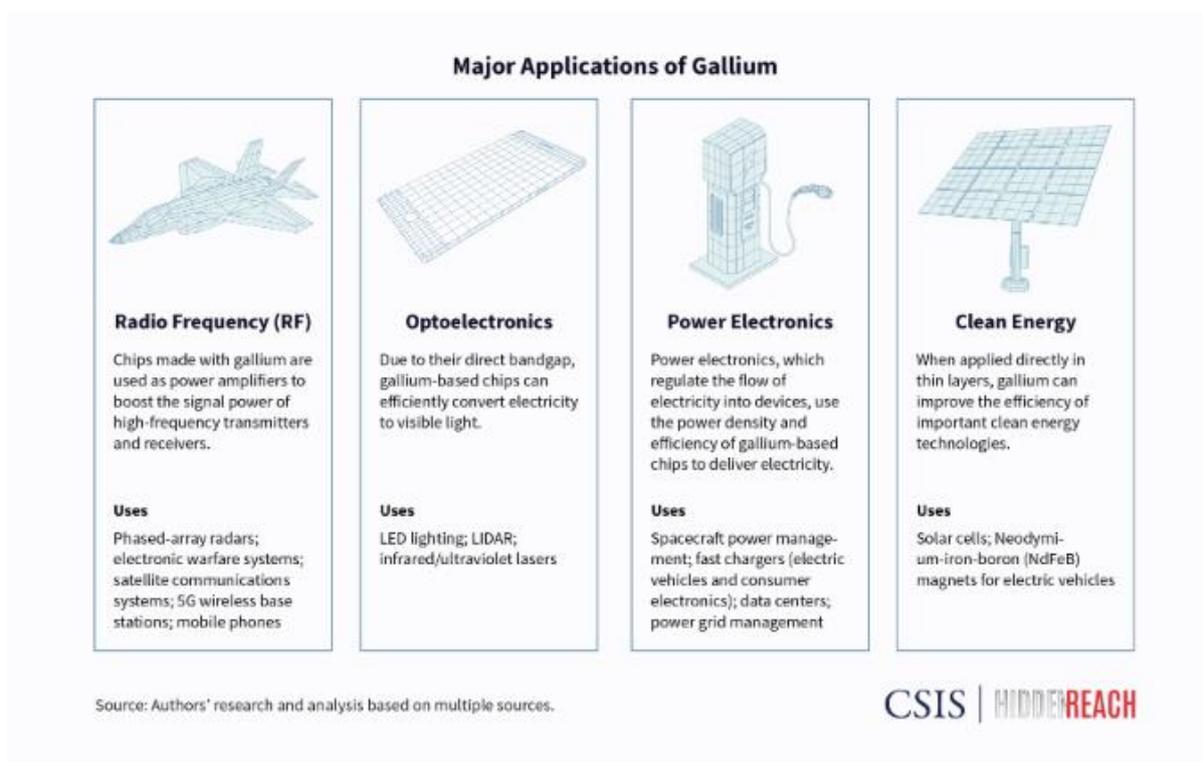
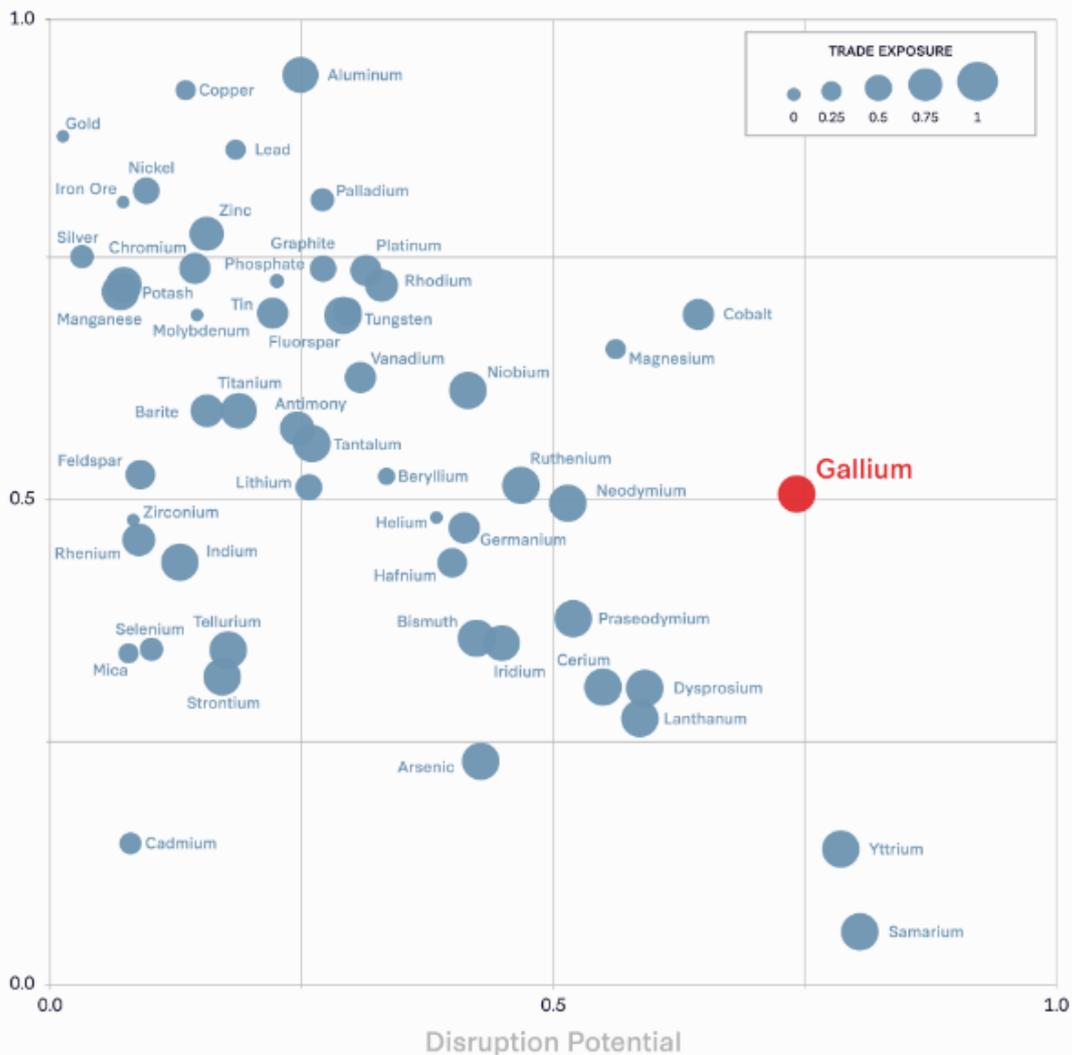


Diagram 4: Major Applications for Gallium (reference as listed in diagram 5).

Critical Minerals Commodity Supply Risk Assessment

Economic Vulnerability



Note: The disruption potential (horizontal axis), economic vulnerability (vertical axis), and trade exposure (point size) are the inputs used by the USGS to calculate the overall supply risk.

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Source: Adapted from Nedal T. Nassar and Steven M. Fortier, *Methodology and Technical Input for the 2021 Review and Revision of the U.S. Critical Minerals List*, Open-File Report 2021-1045 (Reston, VA: 2021, USGS), <https://doi.org/10.3133/ofr20211045>.

Diagram 5: Critical minerals Commodity Supply Risk Assessment.

Above information was source from an article:

De-risking Gallium Supply Chains The National Security Case for Eroding China's Critical Mineral Dominance. By: Matthew P. Funaiolo, Brian Hart, and Aidan Powers-Riggs | August 2023. <https://www.csis.org/analysis/de-risking-gallium-supply-chains-national-security-case-eroding-chinas-critical-mineral#:~:text=As%20of%202022%2C%20China%20produced,which%20most%20gallium%20is%20extracted.>



Picture 1 – Raglan air core drilling at Terrain’s 100% Lort River REE project.

Relevant references for previously released ASX information listed above:

Note: For additional information refer to ASX announcement on **Lort River:**

- **5 May 2022** - Lort River (320km²) Rare Earth Project Highly Prospective Tenements Granted.
- **30 May 2022** - High-Grade Clay Type Rare Earths (REE) Soil Anomaly Identified at Lort River Project.
- **21 November 2022** - Rare Earths (REE) Exploration Planning for 2023 has Commenced at Lort River.
- **14 August 2023** - Heritage approval received for maiden REE drilling at Lort River & Smokebush Exploration Update.
- **22 August 2023** - Lort River 'REE' Maiden Drilling has Commenced.
- **28 August 2023** - Lort River 'REE' - Drilling Intersected Large Clay Zones.

Justin Virgin
Executive Director

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ABOUT TERRAIN MINERALS LIMITED:

Terrain Minerals Limited (ASX: TMX) is a mineral exploration company with a Western Australian based asset portfolio consisting of:

Trade Opportunities: Terrain is always open to commercial discussions of full/partial sales and or JV of assets.

Lort River – WA Rare Earth Elements Exploration Project 100% owned. Covering 320km² of highly prospective exploration acreage for REE within the now tightly held and emerging southern Esperance clay hosted REE province of Western Australia. Terrain has recently executed a roadside air core drilling program that has successfully intersected highly encouraging REE mineralisation, that appears to be comparable to the other regional exploration companies. Also refer to the above release for Gallium results from the same drilling campaign. The Company's Lort River Project immediately adjoins Meeka Metals Limited's (ASX: MEK) Cascade REE Project and OD6 Metals Limited's (ASX: OD6) Grass Patch REE Project.

Smokebush (SB): 100% owned gold, copper, gallium and lithium exploration project located within the prospective Yalgoo Mineral Field of Western Australia. The Company's Smokebush Project neighbours Warriedar Resources Limited's (ASX: WA8) (formally Minjar, Golden Dragon Project), The Company's exploration campaigns are targeting both gold, lithium, and new Copper/Ni targets across the tenement package:

- **SB - Gold IP Survey** – IP survey program identified multiple drill targets, now drill tested with results pending – expected late October 2023.
- **SB - Lithium** - 20+ pegmatites identified, ranging up to 20m wide and up to 200m long before appearing to go under cover. The pegmatite swarms run along a 4 km long zone with the most prospective targets around the Monza and Hurly areas. Results expected late October 2023.
- **SB - Larin's Lane** – MMI soil sampling results have identified potential polymetallic drill targets. Refer to above ASX release on the 18 October 2023. Targeting maiden drill program in November 2023.

Wild Viper Project: 100% owned gold exploration project, located 70 kilometres north of Leonora, Western Australia, and incorporates the strategic land holding known as Wilsons Patch. The Company's Wild Viper Project is strategically located and surrounds Red5 Limited's (ASX: RED) Great Western Mine as well as being adjacent to Northern Star Resources Limited's (ASX: NST) Bundarra gold deposits.

Project Review: Terrain Minerals Limited continues to investigate potential projects across various commodities including gold, copper, nickel, rare earth elements, and other industrial minerals. Western Australian based projects are the Company's current focus, but other parts of Australia are being seriously examined and considered as are other jurisdictions like Africa, Europe, and the Americas. Several Canadian Lithium opportunities are currently being reviewed.

Pending Applications: Terrain has several pending tenement (packages) applications across Western Australian and now Queensland. These applications include:

- **Biloela Copper & Gold Project** located along strike of the Cracow Gold Mine in Qld (ASX release 21 June 2023);
- **Carlindie Lithium Project** located near Lithium Power International's Tappa Tappa Lithium Project in the Pilbara WA;
- **Mukinbudin (WA) Rare Earths and Lithium Project** which neighbours Rio Tinto's landholding in the region.

Note: The Company does not incur any holding or ongoing costs in relation to pending applications. It should be noted that there is no guarantee that pending application will be granted.

Authority

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

Competent Person's Statement

The information in this report that relates to Exploration Results are based on information compiled by Mr. B. Bell, who is a Member of the Australian Institute of Geoscientists and is a consultant retained by Terrain Minerals. Mr Bell is an options holder of Terrain Minerals. Mr Bell 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. Bell 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.

Table 1. Lort River significant intersections.

Hole ID	From	To	Ga ₂ O ₃ ppm
23LRAC001	0	1	28.4
23LRAC001	1	2	31.7
23LRAC001	0	1	27.3
23LRAC001	1	2	30.6
23LRAC001	2	3	35.4
23LRAC001	3	4	16.8
23LRAC001	4	5	11.4
23LRAC001	5	6	21.1
23LRAC001	6	7	39.0
23LRAC001	7	8	17.7
23LRAC001	8	9	33.6
23LRAC001	9	10	41.4
23LRAC001	10	11	34.9
23LRAC001	11	12	41.7
23LRAC001	12	13	37.8
23LRAC001	13	14	39.1
23LRAC001	14	15	39.0
23LRAC001	15	16	39.8
23LRAC001	16	17	39.8
23LRAC001	17	18	38.4
23LRAC001	18	19	41.5
23LRAC001	19	20	34.1
23LRAC001	20	21	37.8
23LRAC001	21	22	39.0
23LRAC001	22	23	37.8
23LRAC001	23	24	35.2
23LRAC001	24	25	33.3
23LRAC001	25	26	39.3
23LRAC001	26	27	38.8
23LRAC001	27	28	37.2
23LRAC001	28	29	34.9
23LRAC001	29	30	34.8
23LRAC001	30	31	31.7
23LRAC001	31	32	28.4
23LRAC001	32	33	35.6
23LRAC001	33	34	37.0
23LRAC001	34	35	36.6
23LRAC001	35	36	42.2
23LRAC001	36	37	27.6
23LRAC001	37	38	30.0

23LRAC002	0	1	24.3
23LRAC002	1	2	28.5
23LRAC002	2	3	34.9
23LRAC002	3	4	31.9
23LRAC002	4	5	36.6
23LRAC002	5	6	39.1
23LRAC002	6	7	44.0
23LRAC002	7	8	47.3
23LRAC002	8	9	46.1
23LRAC002	9	10	39.1
23LRAC002	10	11	41.1
23LRAC002	11	12	34.1
23LRAC002	12	13	38.6
23LRAC002	13	14	34.5
23LRAC002	14	15	34.3
23LRAC002	15	16	36.2
23LRAC002	16	17	35.6
23LRAC002	17	18	31.3
23LRAC002	18	19	39.7
23LRAC002	19	20	27.7
23LRAC002	20	21	32.5
23LRAC002	21	22	43.8
23LRAC002	22	23	45.8
23LRAC002	23	24	36.3
23LRAC002	24	25	28.4
23LRAC002	25	26	26.6
23LRAC002	26	27	22.4
23LRAC003	0	1	34.3
23LRAC003	1	2	32.4
23LRAC003	2	3	32.1
23LRAC003	3	4	31.3
23LRAC003	4	5	34.4
23LRAC003	5	6	27.7
23LRAC004	0	1	16.5
23LRAC004	1	2	22.2
23LRAC004	2	3	25.5
23LRAC004	3	4	26.3
23LRAC004	4	5	31.7
23LRAC004	5	6	27.8
23LRAC004	6	7	15.3
23LRAC004	7	8	18.0
23LRAC004	8	9	15.3
23LRAC004	9	10	20.4
23LRAC004	10	11	37.6
23LRAC004	11	12	37.6

23LRAC004	12	13	36.6
23LRAC004	13	14	22.9
23LRAC004	14	15	33.3
23LRAC004	15	16	32.9
23LRAC004	16	17	34.1
23LRAC004	17	18	34.9
23LRAC004	18	19	29.6
23LRAC004	19	20	27.0
23LRAC004	20	21	23.0
23LRAC004	21	22	32.7
23LRAC004	22	23	33.3
23LRAC004	23	24	32.0
23LRAC004	24	25	32.7
23LRAC004	25	26	30.4
23LRAC004	26	27	26.3
23LRAC004	27	28	34.3
23LRAC004	28	29	26.9
23LRAC004	29	30	30.1
23LRAC004	30	31	28.9
23LRAC005	0	1	28.1
23LRAC005	1	2	27.3
23LRAC005	2	3	35.2
23LRAC005	3	4	46.0
23LRAC005	4	5	31.1
23LRAC005	5	6	22.4
23LRAC005	6	7	46.9
23LRAC005	7	8	54.4
23LRAC005	8	9	56.3
23LRAC005	9	10	43.7
23LRAC005	10	11	42.5
23LRAC005	11	12	32.9
23LRAC005	12	13	35.5
23LRAC005	13	14	34.7
23LRAC005	14	15	36.3
23LRAC005	15	16	31.2
23LRAC005	16	17	21.9
23LRAC005	17	18	21.8
23LRAC005	18	19	39.7
23LRAC005	19	20	38.3
23LRAC005	20	21	36.0
23LRAC005	21	22	55.9
23LRAC005	22	23	44.8
23LRAC005	23	24	38.4
23LRAC005	24	25	47.3
23LRAC005	25	26	34.7

23LRAC005	26	27	40.1
23LRAC005	27	28	37.9
23LRAC005	28	29	32.4
23LRAC005	29	30	33.9
23LRAC005	30	31	29.0
23LRAC005	31	32	21.6
23LRAC006	0	1	26.1
23LRAC006	1	2	25.3
23LRAC006	2	3	20.4
23LRAC006	3	4	25.3
23LRAC006	4	5	28.8
23LRAC006	5	6	12.9
23LRAC006	6	7	10.4
23LRAC006	7	8	31.2
23LRAC006	8	9	39.7
23LRAC006	9	10	47.0
23LRAC006	10	11	65.2
23LRAC006	11	12	53.8
23LRAC006	12	13	43.6
23LRAC006	13	14	46.4
23LRAC006	14	15	36.7
23LRAC006	15	16	24.7
23LRAC007	0	1	31.9
23LRAC007	1	2	29.2
23LRAC007	2	3	16.5
23LRAC007	3	4	41.4
23LRAC007	4	5	33.5
23LRAC007	5	6	34.1
23LRAC007	6	7	28.0
23LRAC007	7	8	28.4
23LRAC007	8	9	28.8
23LRAC007	9	10	27.6
23LRAC007	10	11	26.2
23LRAC007	11	12	27.2
23LRAC007	12	13	29.3
23LRAC007	13	14	28.9
23LRAC008	0	1	20.4
23LRAC008	1	2	20.4
23LRAC008	2	3	19.5
23LRAC008	3	4	23.0
23LRAC008	4	5	31.7
23LRAC008	5	6	28.6
23LRAC008	6	7	24.3
23LRAC008	7	8	27.2
23LRAC008	8	9	28.6

23LRAC008	9	10	26.3
23LRAC008	10	11	25.7
23LRAC008	11	12	27.6
23LRAC008	12	13	27.0
23LRAC008	13	14	28.0
23LRAC009	0	1	25.5
23LRAC009	1	2	26.3
23LRAC009	2	3	35.6
23LRAC009	3	4	35.8
23LRAC009	4	5	36.4
23LRAC009	5	6	44.5
23LRAC009	6	7	24.5
23LRAC009	7	8	24.5
23LRAC009	8	9	31.1
23LRAC009	9	10	28.2
23LRAC009	10	11	28.8
23LRAC009	11	12	29.3
23LRAC009	12	13	29.4
23LRAC009	13	14	42.1
23LRAC009	14	15	37.9
23LRAC009	15	16	36.6
23LRAC009	16	17	35.1
23LRAC009	17	18	28.0
23LRAC009	18	19	28.6
23LRAC009	19	20	28.6
23LRAC009	20	21	29.4
23LRAC009	21	22	29.4
23LRAC010	0	1	32.3
23LRAC010	1	2	48.0
23LRAC010	2	3	41.4
23LRAC010	3	4	30.2
23LRAC010	4	5	31.3
23LRAC010	5	6	29.7
23LRAC010	6	7	29.0
23LRAC011	0	1	32.7
23LRAC011	1	2	26.1
23LRAC011	2	3	34.3
23LRAC011	3	4	27.0
23LRAC011	4	5	17.5
23LRAC011	5	6	9.8
23LRAC011	6	7	10.9
23LRAC011	7	8	45.8
23LRAC011	8	9	30.2
23LRAC011	9	10	35.9
23LRAC011	10	11	41.1

23LRAC011	11	12	37.5
23LRAC011	12	13	30.9
23LRAC011	13	14	34.8
23LRAC011	14	15	32.8
23LRAC011	15	16	32.0
23LRAC011	16	17	29.6
23LRAC011	17	18	32.9
23LRAC011	18	19	32.4
23LRAC011	19	20	28.8
23LRAC011	20	21	23.7
23LRAC012	0	1	26.1
23LRAC012	1	2	20.8
23LRAC012	2	3	26.1
23LRAC012	3	4	22.6
23LRAC012	4	5	26.5
23LRAC012	5	6	28.9
23LRAC013	0	1	24.1
23LRAC013	1	2	39.3
23LRAC013	2	3	30.1
23LRAC013	3	4	25.5
23LRAC013	4	5	18.3
23LRAC013	5	6	17.7
23LRAC013	6	7	27.2
23LRAC013	7	8	26.3
23LRAC013	8	9	25.3
23LRAC013	9	10	25.5
23LRAC013	10	11	22.9
23LRAC014	0	1	22.6
23LRAC014	1	2	23.4
23LRAC014	2	3	28.6
23LRAC014	3	4	33.9
23LRAC014	4	5	29.2
23LRAC014	5	6	5.6
23LRAC014	6	7	3.1
23LRAC014	7	8	4.3
23LRAC014	8	9	3.8
23LRAC014	9	10	23.3
23LRAC014	10	11	22.9
23LRAC014	11	12	24.7
23LRAC014	12	13	28.6
23LRAC014	13	14	25.7
23LRAC014	14	15	23.7
23LRAC014	15	16	27.6
23LRAC014	16	17	30.0
23LRAC014	16	17	25.0

23LRAC015	0	1	31.2
23LRAC015	1	2	39.0
23LRAC015	2	3	34.7
23LRAC015	3	4	24.2
23LRAC015	4	5	36.6
23LRAC015	5	6	35.5
23LRAC015	6	7	27.2
23LRAC015	7	8	28.1
23LRAC015	8	9	30.8
23LRAC015	9	10	32.5
23LRAC015	10	11	29.7
23LRAC016	0	1	34.3
23LRAC016	1	2	22.6
23LRAC016	2	3	20.7
23LRAC016	3	4	7.0
23LRAC016	4	5	19.5
23LRAC016	5	6	25.5
23LRAC016	6	7	29.0
23LRAC016	7	8	28.5
23LRAC016	8	9	28.6
23LRAC016	9	10	28.4
23LRAC016	10	11	28.9
23LRAC016	11	12	25.3
23LRAC016	12	13	32.4
23LRAC016	13	14	25.8
23LRAC016	14	15	28.2

JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Air core drill samples were collected at one metre intervals for analysis. No compositing of samples was undertaken. Drill holes were located using handheld GPS. Sampling was carried out using Terrain Minerals' protocols and QA/QC procedures as per current industry practice. Air core drilling was used to obtain one metre samples, collected through a splitter into buckets and placed in rows for geological logging. Samples were submitted to Company's preferred (and independently certified) laboratory in Perth, Western Australia on Friday 25 August 2023 where they will be dried (ALS code DRY-21), crushed (ALS code CRU-32) and pulverised (ALS code PUL-21) before being analysed using ME-MS89 (for rare earths) and Au-ICP21 (for gold). Rare Earth Elements (REE) analysis: Lithium borate fusion with ICP-MS (ALS code ME-MS89) which, according to the laboratory, enables complete analysis when the targeted elements are the suite of rare earth elements including the light rare earth elements of Lanthanum, Cerium, Praseodymium, Neodymium and Samarium and the heavy rare earths elements Europium, Gadolinium, Terbium, Dysprosium, Holmium, Erbium, Thulium, Ytterbium, Lutetium and Yttrium. Analysis method ME-MS89 also analysis for, amongst other things, Niobium, Tantalum, Gallium and Germanium. See Fusion de-composition (alsglobal.com) for more details on fusion digestion with ICP-MS analysis being used by the Company to analyse the samples referred to in this release. The Company may also utilise four acid digestion method (ALS code ME-MS61) in addition to (or instead of ME-MS89) during its exploration drilling programs when a lower detection limit or a different suite of trace-elements is required. Gold analysis: Fire assay of 25-gram samples aliquots (ALS code Au-ICP21). See Gold by fire assay (alsglobal.com) a for more details the fire assay analysis being used by the Company on these samples.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> The type of drilling used for this program was air core. The drilling contractor was Raglan Drilling, using a standard air core rod string and blade drill bit.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 	<ul style="list-style-type: none"> The drill cyclone was cleaned at the end of each hole in the effort to minimise the risk of contamination. The volume of sample collected for analysis per sample is representative of each one metre interval.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> The weight of each sample was recorded by the Company's preferred (and independently certified) laboratory in Perth prior to analysis. There is no apparent relationship between sample recovery and grade.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> All holes were logged geologically by Company geologists using Terrain Minerals' logging codes. Logging is both qualitative and quantitative by nature, and may include lithology, mineralogy, mineralisation, weathering and colour. All drill holes were logged in full. In relation to any disclosure of, or reference to, interpreted visual mineralisation, the Company cautions that visual estimates of mineral abundance should never be considered a proxy or substitute for laboratory analysis. Laboratory assay results are required to determine the widths and grade of the visual mineralization (if reported) in preliminary geological logging. The Company will update the market when laboratory analytical results become available. In relation to any disclosure of, or reference to, clay zones (or similar) within this release, the Company cautions that the presence of clay zones above fresh bedrock is a very common occurrence across Australia and is in no way indicative of the presence of ionic (or clay hosted) rare earth elements or any other form of mineralisation. Rather, clay zones are simply a natural part of the weathering process of Australia's geology and its presence should be considered typical (or normal) for most parts of Australia. (see Welcome : CRC LEME for additional information)
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> Air core drill samples were collected at individual one metre intervals down the entire length of each hole. No compositing of samples was undertaken. Each sample from this air core drill program was split using a cone splitter, incorporated as part of the drill rig's cyclone. Each one metre drill sample was pulverized to 75um by Company's preferred (and independently certified) laboratory prior to analysis, which is the industry's standard protocol when assaying air core drill samples. Certified Reference Material (CRM, or 'standards') were routinely included in the one metre sampling sequence. The sample size is considered appropriate for the grain size of sampled material.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> Samples were submitted to Company's preferred (and independently certified) laboratory in Perth, Western Australia on Friday 25 August 2023 where they will be dried (ALS code DRY-21), crushed (ALS code CRU-32) and pulverised (ALS code PUL-21) before being analysed using ME-MS89 (for rare earths) and Au-ICP21 (for gold). Rare Earth Elements (REE) analysis: Lithium borate fusion with ICP-MS (ALS code ME-MS89) which, according to the laboratory, enables complete analysis when the targeted elements are the suite of rare earth elements including the light rare earth elements of Lanthanum, Cerium, Praseodymium, Neodymium and Samarium and the heavy rare earths elements Europium,

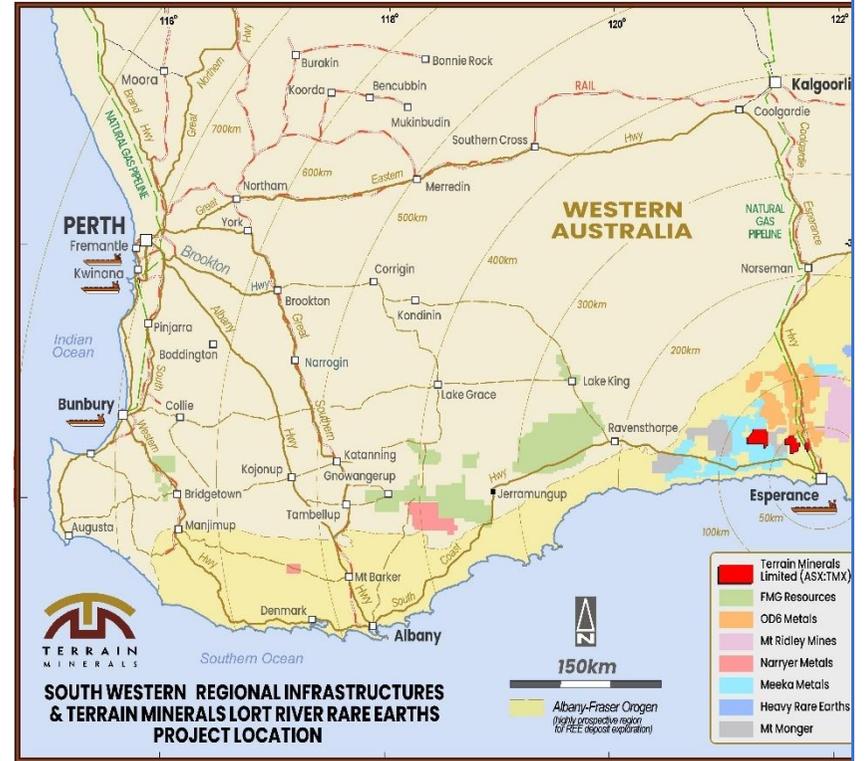
Criteria	JORC Code explanation	Commentary						
		<p>Gadolinium, Terbium, Dysprosium, Holmium, Erbium, Thulium, Ytterbium, Lutetium and Yttrium. Analysis method ME-MS89 also analysis for, amongst other things, Niobium, Tantalum, Gallium and Germanium. See Fusion de-composition (alsglobal.com) for more details on fusion digestion with ICP-MS analysis being used by the Company to analyse the samples referred to in this release.</p> <ul style="list-style-type: none"> The Company may also utilise four acid digestion method (ALS code ME-MS61) in addition to (or instead of ME-MS89) during its exploration drilling programs when a lower detection limit or a different suite of trace-elements is required. <p>Gold analysis: Fire assay of 25-gram samples aliquots (ALS code Au-ICP21). See Gold by fire assay (alsglobal.com) a for more details the fire assay analysis being used by the Company on these samples.</p> <ul style="list-style-type: none"> Both lithium borate fusion with ICP-MS (ALS code ME-MS89) and fire assay of 25-gram samples aliquots (ALS code Au-ICP21) are the industry standard protocols for assaying rare earth elements and gold respectively. Certified Reference Material (CRM, or "standards") were inserted into the sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis. This represents the accepted industry standard in quality control procedures. 						
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> Certified Reference Material (CRM, or "standards") were inserted into the sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis. No holes were twinned or duplicated. All logging and assay data is stored within an independently managed database, with auto-validation of all data. Multi-element results (REE) are converted to stoichiometric oxide (REO) using element-to-stoichiometric conversion factors. <table border="1" data-bbox="1249 973 2123 1069"> <thead> <tr> <th>Element</th> <th>Conversion Factor</th> <th>Oxide form</th> </tr> </thead> <tbody> <tr> <td>Ga</td> <td>1.3442</td> <td>Ga₂O₃</td> </tr> </tbody> </table> <p>These element-to-stoichiometric conversion factors used by Terrain Minerals (as shown in the above table) are in line with that report by James Cook University (amongst others.) See Advanced Analytical Centre - Element-to-stoichiometric oxide conversion factors - JCU Australia</p>	Element	Conversion Factor	Oxide form	Ga	1.3442	Ga ₂ O ₃
Element	Conversion Factor	Oxide form						
Ga	1.3442	Ga ₂ O ₃						
<p>Location of data points</p>	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Drill collar locations were surveyed using handheld GPS, which is considered to be accurate to within +/- 5 metres. Map coordinates are recorded in MGA Zone 51 GDA94 						

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> • <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i> • <i>Whether sample compositing has been applied.</i> 	<ul style="list-style-type: none"> • Drill spacing is suitable for reporting of exploration results. • Drill spacing is not suitable for Mineral Resource estimation.
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> • <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i> • <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i> 	<ul style="list-style-type: none"> • Drill planning was undertaken at an interpreted perpendicular angle to the targeted lithological unit. Given that the targeted clay horizon is interpreted to be horizontal, the air core holes of this program, therefore, were drilled vertically (being at a dip of -90 degrees). • Sampling is regarded to be unbiased with respect to the orientation of the lithologies.
<i>Sample security</i>	<ul style="list-style-type: none"> • <i>The measures taken to ensure sample security.</i> 	<ul style="list-style-type: none"> • Samples are given individual sample numbers for tracking. • The sample chain of custody is overseen by the geologist in charge of the program. • Samples were transported in sealed bags to the Company's preferred (and independently certified) laboratory in Perth, Western Australia by the geologist in charge of the program.
<i>Audits or reviews</i>	<ul style="list-style-type: none"> • <i>The results of any audits or reviews of sampling techniques and data.</i> 	<ul style="list-style-type: none"> • The sampling techniques and analytical data are monitored by the Company's geologists. • An external review of the assay data provided by the Company's preferred (and independently certified) laboratory has been completed by Expedio (see Expedio Services), who did not raise any issues or concerns in relation to the data.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<p>Mineral tenement and land tenure status</p>	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> The exploration results referenced in this release are from the Western Australian tenements of E63/2207, E63/2208 and E63/2209, located approximately 50 kilometers northwest of Esperance. See Terrain Minerals » Projects » Lort River Project - Rare Earths (REE) These tenements are 100% held and operated by Terrain Minerals Limited. There are no known material issues with third parties in relation to these tenements. The tenements are in good standing with no known impediments to exploration.



Criteria	JORC Code explanation	Commentary						
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The historic exploration across the Company's Lort River Project is summarised, acknowledged and appraised in the Company's ASX announcement dated 30 May 2022 (see http://terrainminerals.com.au/upload/documents/InvestorRelations/Releases/20220530DraftLortRiverREEReviewJVfinalSN.pdf) The Company is unaware of any additional exploration beyond that described in its 30 May 2022 ASX announcement. 						
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The Company's working thesis is that a zone of potential rare earth element (REE) enrichment has occurred within the regolith after weathering of REE mineralised felsic bedrock (felsic gneiss after granite). See Rare Earth Element Accumulation Processes Resulting in High-Value Metal Enrichments in Regolith U.S. Geological Survey (usgs.gov) for a more detailed explanation and discussion on the clay hosted rare earth elements deposits (also known as ion adsorption clay rare earth element deposits) 						
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> See Table 1 within this release. 						
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> No cutting of grades has been undertaken. Data has been aggregated according to downhole intercept lengths above the lower cut-off grade. A lower cut-off grade of 300ppm total rare earth oxide (TREO) has been applied. Terrain Minerals considers this to be an appropriate cut-off grade for exploration data in a clay hosted REE project. Multi-element results (REE) are converted to stoichiometric oxide (REO) using element-to-stoichiometric conversion factors. <table border="1"> <thead> <tr> <th>Element</th> <th>Conversion Factor</th> <th>Oxide form</th> </tr> </thead> <tbody> <tr> <td>Ga</td> <td>1.3442</td> <td>Ga₂O₃</td> </tr> </tbody> </table> <p>These element-to-stoichiometric conversion factors used by Terrain Minerals (as shown in the above table) are in line with that report by James Cook University (amongst others.) See Advanced Analytical Centre - Element-to-stoichiometric oxide conversion factors - JCU Australia</p>	Element	Conversion Factor	Oxide form	Ga	1.3442	Ga ₂ O ₃
Element	Conversion Factor	Oxide form						
Ga	1.3442	Ga ₂ O ₃						

Criteria	JORC Code explanation	Commentary
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i> 	<ul style="list-style-type: none"> • The precise orientation / geometry of the mineralization at Lort River is unknown but is interpreted to be horizontal to sub-horizontal. • The air core holes reported within the release were drilled vertically and, thus, are considered to be orthogonal to the generally flat to shallow dipping clay mineralisation. As such, the drill widths reported in this release is approximately true widths.
<i>Diagrams</i>	<ul style="list-style-type: none"> • <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i> 	<ul style="list-style-type: none"> • The appropriate exploration maps and sections have been included within the main body of this release.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> • <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i> 	<ul style="list-style-type: none"> • All drill hole results have been reported within this release, including where no significant intersections were recorded.
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> • <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i> 	<ul style="list-style-type: none"> • All relevant exploration data has been included within this release.
<i>Further work</i>	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Further work is discussed within the main body of this release.