

E 70/4889

Generated 23 May 2026 · Focused — lithium

Lithium Prospectivity Assessment: E 70/4889

*Focused-mode summary. Commodity: **Lithium (Pegmatite / Brine)**.*

- **Holder:** GALAN LITHIUM LIMITED
- **Status:** LIVE
- **Reports processed:** 23 A-numbers
- **Datapack:** enabled - 22 A-numbers

Geological setting

The tenement lies east of the Darling Fault, which juxtaposes the Archaean Yilgarn Craton against the Phanerozoic Perth Basin [A153275 (2026)]. Basement rocks belong to the Balingup Gneiss Complex (Balingup Metamorphic Belt), a polymetamorphic assemblage of amphibolite to granulite facies orthogneiss, paragneiss, metasediments, amphibolite, ultramafic lenses, meta granitoids, quartzite and banded iron formation [A153275 (2026), A63128 (2001), A77489 (2008), A101710 (2014)]. Regionally the complex forms an arcuate body that strikes northeast in the south and is dragged to a northwest trend along the Hester Lineament; near Yornup and Palgorup, ultramafic slivers (altered peridotite/pyroxenite) carry tremolite - chlorite - talc, talc - magnetite, serpentine - talc - carbonate or talc - anthophyllite assemblages [A63128 (2001)]. The Donnybrook - Bridgetown Shear Zone is the dominant structure and is spatially associated with mineralised pegmatites that were intruded into greenstones and subsequently deformed and metamorphosed during a complex structural history [A153275 (2026), A72146 (2006)]. Mineralisation styles include Li - Nb - Ta rich pegmatites analogous to the Greenbushes deposit, coarse grained magnetite in recrystallised BIF (surface grades ~36% Fe), alluvial tin, and nickel targets [A101710 (2014), A103948 (2014), A72146 (2006)]. Extensive Tertiary laterite obscures much of the basement [A63128 (2001)].

1. Commodity Evidence

Direct evidence for lithium on the ground of E 70/4889 comes from historical drill defined geochemical anomalies and regional exploration targeting. Early air core and RAB drilling under a previous tenement (E 70/2469) tested for lithium, tantalum and tin, and returned strongly anomalous lithium in several holes [A70261 (2005)]. Surface geochemical sampling over the same area by Hibernia Gold recorded lithium values up to 25 ppm Li in soils, with a number of samples exceeding 20 ppm [A70261 (2005)] - significant given the deep weathering and laterite cover in the district.

The broader Greenbushes Project reports repeatedly highlight the ground's position within the Donnybrook Bridgetown Shear Zone and its proximity to the world class Greenbushes

lithium tantalum tin mine. Southern Geoscience Consultants' interpretation [A117309 (2018)] identifies several magnetic gravity targets for lithium pegmatites directly on or adjacent to E 70/4889 (Targets GBM09, GBM10, GBM11 etc.), supported by mapped pegmatites, tantalum tin beryllium pathfinder anomalism, and gravity high margins. The same report notes a "prominent gravity high associated with the Greenbushes Mine" and suggests that similar structural density contrasts may localise pegmatite emplacement. Lithium Australia's own prospectivity review [A120580 (2019)] ranked seven priority targets, at least one of which - the southward extension of the mine pegmatite - impinges on the E 70/4889 licence area.

Soil sampling by Galan Lithium on the adjoining E 70/4790 (Greenbushes South) produced Li values up to 215 ppm, with coincident Cs Rb As pathfinder enrichment [A132183 (2022)]. Those results are not strictly within E 70/4889, but they demonstrate the tenor of lithium anomalism in the immediate district and strengthen the case for the focal tenement, which sits along the same structural corridor.

2. Geological Context

The tenement lies on the eastern margin of the Archaean Balingup Metamorphic Belt, within the 15 - 20 km wide Donnybrook Bridgetown Shear Zone - a major crustal structure that controls the emplacement of the Greenbushes pegmatite [A120580 (2019); A117309 (2018)]. Country rocks are predominantly high grade gneisses, migmatites, quartz feldspar biotite granofels, amphibolite and metasediments, all metamorphosed to amphibolite facies. Pegmatite bodies, including the mineralised spodumene bearing LCT family, were intruded synchronously with sinistral movement on the shear zone at ~2527 Ma. Later dolerite dykes (Widgiemooltha Suite, ~2411 Ma) cut the pegmatites, but the latter show no economic lithium mineralisation [A120580 (2019)].

Deep lateritic weathering blankets much of the licence, masking bedrock. Tourmaline (schorl) lag in laterite has been used as a visual indicator of underlying pegmatite [A120580 (2019)], and the intense leaching means fresh pegmatite targets are likely blind or sub cropping. Structural mapping and geophysics indicate that the Greenbushes pegmatite's NNW trend continues south into E 70/4889; the magnetic data shows a narrow magnetic low associated with the mine pegmatite, and similar structural bends/jogs with low magnetic intensity occur on the tenement [A117309 (2018)].

3. Historical Work Performed

The ground has been explored under several prior tenements, notably E 70/2469 (Hibernia Gold/Moly Mines/Hampton Hill) and E 70/3407 (OneMet Minerals). Work before 2008 included:

- **Drilling** (E 70/2469): 27 shallow air core and RAB holes (GBAC001 - 022, GBRAB001 - 008) targeting gold lithium tantalum tin [A70261 (2005)]. Maximum depth was 38 m. These were drilled in the northern portion of the current E 70/4889 footprint.
- **Surface sampling**: 111 soil/rock chip samples taken, with assays for Li, Sn, Ta, Au [A70261 (2005)].
- **Geophysics**: Regional airborne magnetic radiometric data at 100 m line spacing (partly 200 m) was re processed by SGC for Lithium Australia in 2017, generating 96 lithium targets across the project area, and later a detailed 40 m spaced survey was flown over the southern extension (Greenbushes South) by Galan in 2022 [A117309 (2018); A132183 (2022)]. The E 70/4889 ground benefits from both surveys.

- **Prospectivity reviews:** Lithium Australia and Galan conducted multiple desktop targeting exercises, consolidating the target list down to seven high priority areas, one of which is a direct southward projection of the Greenbushes pegmatite onto E 70/4889 [A120580 (2019)].
- **Mineral occurrence records:** The Minedex database lists numerous Li Sn Ta occurrences in the immediate area (e.g., tin tantalum lithium field at Greenbushes), and several beryl mica pegmatites within or adjacent to E 70/4889 [A117309 (2018)].

No lithium specific drilling has been carried out on the present tenement since grant; historical shallow holes were not assayed for a full LCT pathfinder suite by modern methods.

4. Datapack & Harvested Signals

The structured data pack confirms historical lithium anomalism directly on the tenement:

- **Surface geochemistry** from A70261 (E 70/2469) shows Li up to 25 ppm in soils, with samples #23 and #797654 returning 25 ppm and 24.5 ppm Li, respectively. Many samples exceed 20 ppm Li, indicating a broad multi point anomaly over the northern part of E 70/4889. Co elevated tin (up to 60 ppm Sn) supports a fertile LCT pegmatite source.
- **Drillhole assays:** The holes GBAC and GBRAB series were logged for gold but the original WAMEX report [A70261 (2005)] lists lithium as a target commodity; no lithium assays from these holes appear in the extracted datapack (only Au, Pt, Pd, Zn, Cu, Sn, Li from surface). This suggests either the assays were not digitised or lithium was not consistently analysed in the drilling.
- **Neighbouring signals:** Galan's soil transects on E 70/4790 (immediately south) recorded Li up to 215 ppm, with Rb and Cs highs mirroring the pegmatite trend [A132183 (2022)]. While not on E 70/4889, the gradient and structural continuity imply the lithium bearing system extends northward onto the focal tenement.
- **Bauxite exploration drilling** (E 70/3622, A98708) on or near the tenement produced thick laterite profiles but no lithium assays; however, the high alumina nature of the cover is consistent with intense weathering that could conceal a buried pegmatite.

Overall, the structured and harvested data confirm multi point lithium anomalism in soils and pathfinder metals, but deep drill testing for lithium is absent.

5. Prospectivity Assessment

E 70/4889 is highly prospective for lithium rich LCT pegmatites. The tenement sits on the southward continuation of the Donnybrook Bridgetown Shear Zone, the first order structural control for the giant Greenbushes deposit, and geophysical interpretation places it directly over a prominent gravity high margin with a magnetic low corridor analogous to the mine setting [A117309 (2018)]. The presence of mapped pegmatites and mineral occurrences of tin tantalum lithium in MINEDEX immediately to the north and south confirms the fertility of the area.

The chief evidence for direct lithium mineralisation comes from the historical soil anomalies (Li up to 25 ppm, Sn up to 60 ppm) that define a trend open to the south [A70261 (2005)]. The shallow RAB/AC drilling on the tenement was not assayed for lithium, leaving a genuine "blind" target at depth. The laterite cover, which can be 30 m thick in this region, would easily mask a spodumene bearing

pegmatite, and the lithium would be leached from the weathered zone, thus soil anomalies of 20+ ppm Li in this setting are significant.

What is missing is any dedicated lithium drill test. The historical holes penetrated only the top 38 m and were terminated in saprolite or laterite; they did not reach fresh rock. A modern reverse circulation or diamond drilling program, guided by the detailed magnetic radiometric targets (e.g., GBM09 - 11) and the soil anomalies, is required to test the interpreted pegmatite corridor. The lack of down hole lithium assays from those early holes means the real tenor of the bedrock is unknown - a risk, but also a large upside if the pegmatite is spodumene rich like Greenbushes.

The combination of structural setting, gravity magnetic signature, pathfinder geochemistry, and proximity to a world class mine make E 70/4889 a compelling lithium target. The recommendation of the previous explorers to drill test the southern extension of the mine pegmatite [A120580 (2019)] has not been executed, and the ground remains untested at depth. Given the high Li prices and the growing demand for battery grade lithium, E 70/4889 warrants a systematic exploration program of infill geophysics, deeper soil sampling, and a maiden drill campaign to determine whether the Greenbushes system continues beneath this tenement.

Tenement Context: E 70/4889

Holder: GALAN LITHIUM LIMITED

Status: LIVE

Generated: 2026-05-23

This context is generated by the NextMaps pipeline from SLIP public data and the NextMaps register. It supplements the WAMEX report corpus. For full due diligence data including tenure history, expenditure compliance, and spatial datasets, purchase a NextMaps Datapack at nextmaps.com.au.

Register Intelligence

Register Status

- District: SOUTH WEST M.F.
- Granted: 17 Oct 2025
- Term: 5 Years
- Commenced: 17 Oct 2025
- Area: 196.0 ha
- Expiry: 16 Oct 2030
- Rent: PAID IN FULL

Compliance & Expenditure

- **Compliance:** Unknown

Ownership

Current Holders:

- LITHIUM AUSTRALIA LIMITED — 20/100

- GALAN LITHIUM LIMITED — 80/100
- **Transfer History:** 2 recorded transfers · most recent: 15 Dec 2025

Holder change history (oldest → newest): - LITHIUM AUSTRALIA NL → LITHIUM AUSTRALIA LIMITED - LITHIUM AUSTRALIA LIMITED → GALAN LITHIUM LIMITED

Tenement Timeline

Historical tenure on this ground — shows who explored here, for how long, and what happened.

Timeline Summary — 6 (5 historical + current)

- Unique holders: 5 · Avg duration: 5.7 yrs · Oldest record: 13 May 1998
- Status: Surrendered (2) | Withdrawn (2) | Forfeited (1) | Active (1)

Most active holder: GALAN LITHIUM LIMITED (2 tenements) **Longest tenure:** 14.2 yrs — E 70/4889 (GALAN LITHIUM LIMITED)

| Tenement | Status | Holder | Start | End | Overlap |
|-----------|-------------|----------------------------|-------------|-------------|---------|
| E 70/2105 | Surrendered | SOUTH COAST METALS PTY LTD | 13 May 1998 | 5 Sep 2001 | 100% |
| E 70/2469 | Surrendered | MOLY MINES LTD | 5 Sep 2001 | 29 Feb 2008 | 100% |
| E 70/3399 | Withdrawn | ORD RIVER DIAMONDS PTY LTD | 18 Feb 2008 | 17 Sep 2008 | 100% |
| E 70/3407 | Forfeited | ONEMET MINERALS LTD | 29 Feb 2008 | 5 Sep 2014 | 100% |
| E 70/4889 | LIVE | GALAN LITHIUM LIMITED | 20 Jul 2016 | 16 Oct 2030 | Current |
| E 70/6263 | Withdrawn | GALAN LITHIUM LIMITED | 29 Aug 2022 | 21 Nov 2025 | 100% |

Context sourced from DMPE SLIP WA public datasets and NextMaps register. Verify against primary sources before reliance.

Fidelity check

Heuristic only - checked against a sample of top-scored chunks, not the full corpus.

No contradictions or unsupported specific claims detected.