

# 28 Lithium Areas of Interest Identified Across Carlingup

## Key Highlights:

- NickelSearch has commenced a programme of work to test the lithium prospectivity of the broader Carlingup tenement package, which includes detailed mapping, rock chip sampling and infill soil sampling.
- Independent review of geochemistry identified numerous areas of interest for Lithium-Caesium-Tantalum (LCT) pegmatites.
- Interpretation of geophysical and geological information has led to further areas of interest being identified, with **28 areas of interest for LCT pegmatites now identified**.
- NickelSearch is collaborating with Allkem Limited (ASX:AKE) to advance lithium exploration on its Carlingup tenements. Allkem is the owner and operator of the Mt Cattlin lithium mine, 10km from NickelSearch's Carlingup Project.

NickelSearch Limited (ASX: NIS) (NickelSearch, NIS or the Company) is pleased to provide an update on progress in assessing lithium potential at its Carlingup Project (Carlingup) near Ravensthorpe in Western Australia.

## NickelSearch Managing Director, Nicole Duncan, commented:

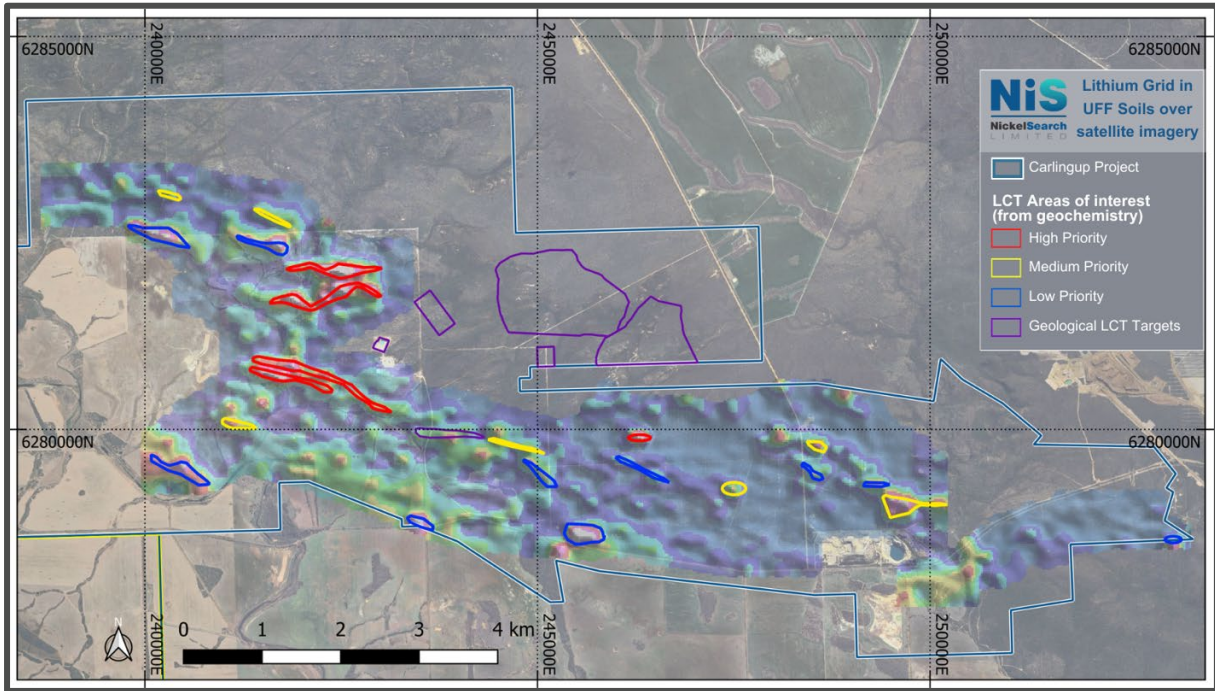
*"The Carlingup Project has already demonstrated that mineralised spodumene pegmatites exist on NIS tenements in a region hosting an economic spodumene operation.*

*We are stepping out from the initial target areas to assess the lithium potential across NickelSearch's lithium tenement package, using the combination of geology, geochemistry and geophysics to define our areas of exploration. We also will analyse areas where pegmatites have been logged historically but not sampled for lithium."*

## Lithium Exploration Across Tenement Package

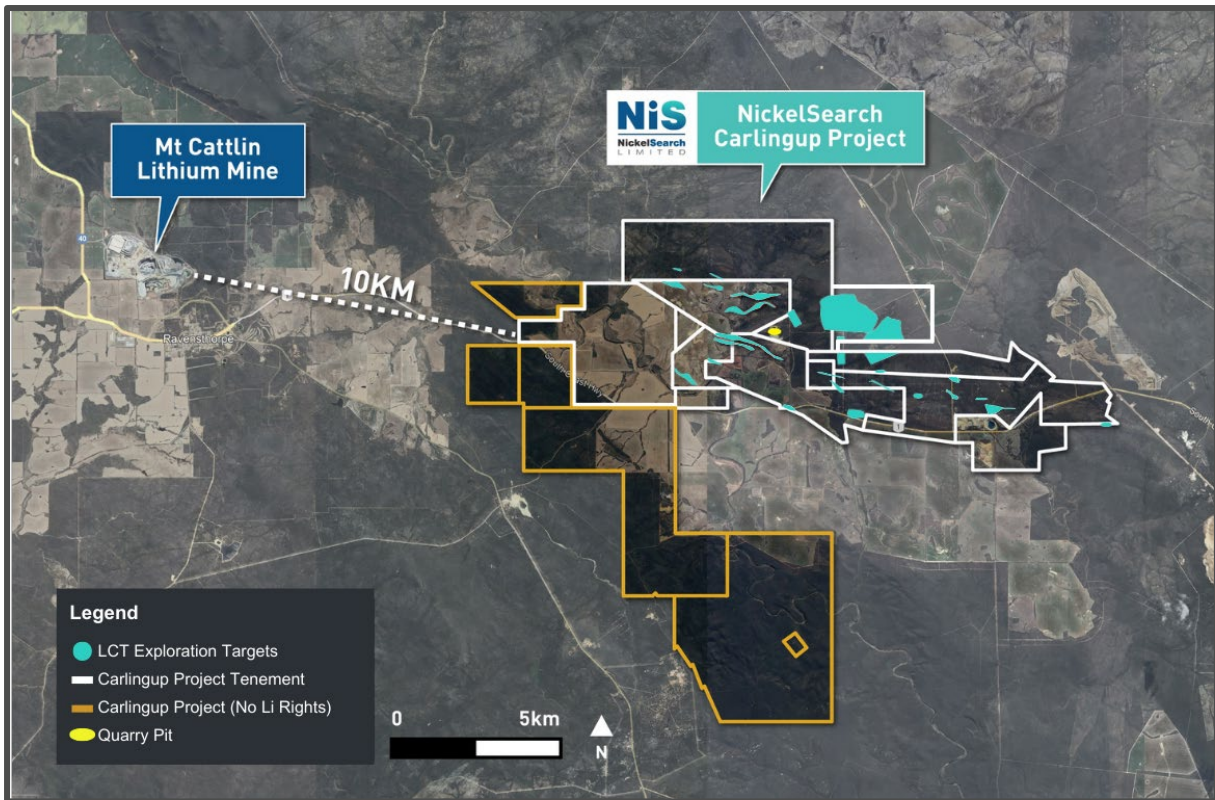
In April 2023, NickelSearch highlighted the lithium potential at Carlingup, identified through an independent geochemical review.<sup>1</sup> This review studied the results of ultra-fine soil sampling conducted over parts of the Carlingup Trend by the Company (and also soil sampling completed by previous owners) for LCT pegmatite potential (see Figure 1). In total, 22 areas of interest were identified from this geochemical review.

<sup>1</sup> NIS ASX Announcement 5 April 2023 - "Lithium and VHMS Potential Identified at Carlingup"



*Figure 1: Lithium areas of interest: ultra-fine soil samples over satellite imagery.*

Further review and targeting work was subsequently carried out across a larger portion of the project area. This analysis combined the geochemical work with a number of other datasets including geophysical and geological information. As a result of this work, a further 6 areas of exploration interest have been identified to date (see Figure 2).



*Figure 2: Map of Ravensthorpe area showing Allkem's Mt Cattlin and NIS' Carlingup, with tenements with Lithium rights outlined in white.*

## Mapping and Sampling

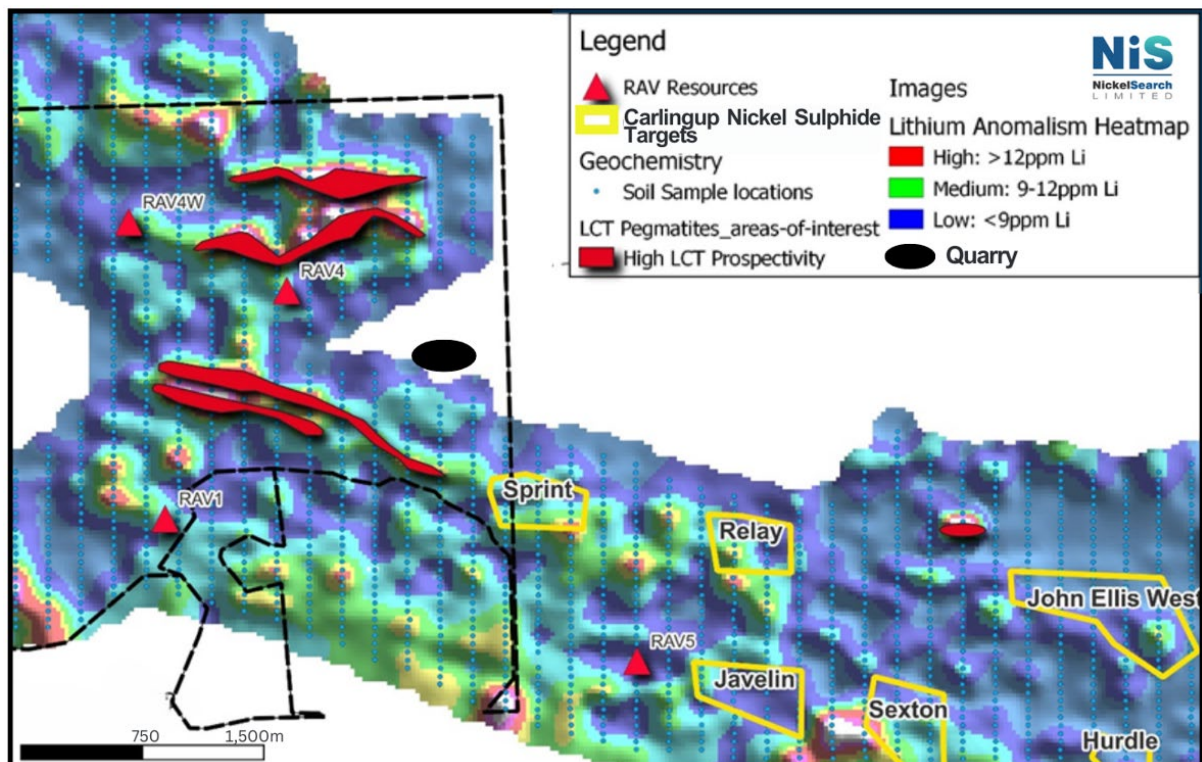
Field reconnaissance has been conducted at most of the areas of interest. NickelSearch has commenced a program of work at the four higher priority targets, consisting of geological mapping, rock chip sampling and infill soil sampling, conducted by Newexco geologists.<sup>2</sup> Planning for the systematic appraisal of the remaining areas of exploration interest is ongoing, with a number of these areas earmarked for further work in the coming weeks.

## Stream Sediment Sampling

In addition, NIS has kicked off a stream sediment sampling program to test the area to the east and south-east of the quarry, where NickelSearch has confirmed high-grade lithium within spodumene-bearing pegmatites (see Figure 3). These grab samples were taken from stockpiles of rock material extracted from the quarry, and their original in-situ location within the pit is not known. Assay results confirmed the significant lithium content of some of the quarry pegmatite samples<sup>3</sup>, including:

- NSR04389: **5.19% Li<sub>2</sub>O**, 43 ppm Ta, 37.8 ppm Nb, 71 ppm Sn, 85.4 ppm Cs
- NSR04388: **4.99% Li<sub>2</sub>O**, 89.6 ppm Ta, 20.6 ppm Nb, 95 ppm Sn, 581 ppm Cs
- NSR04386: **1.27% Li<sub>2</sub>O**, 30.8 ppm Ta, 12.6 ppm Nb, 46 ppm Sn, 65.4 ppm Cs
- NSR04367\*: **1.92% Li<sub>2</sub>O**, 242 ppm Ta, 280 ppm Nb, 52 ppm Sn, 44.1 ppm Cs

\*(field repeat sample of same material as NSR04389)



**Figure 3:** Priority lithium target areas (derived from coincident Li, Cs, Nb, Be anomalous soils) shown in red, overlying a heatmap image of Lithium results. Drilling in area denoted by black dotted outline is subject to the final consent and compensation agreement being executed.

<sup>2</sup> NIS ASX Announcement 26 October 2023 – “Lithium Mapping and Rock Chip Sampling Program at Carlingup”

<sup>3</sup> NIS ASX Announcement 16 October 2023 - “Assays over 5% Lithium Oxide (Li<sub>2</sub>O) at Carlingup”

## Quarry Dewatering

Preliminary mapping by NIS in and around the quarry where the high-grade lithium results were returned indicates that there are preserved pegmatite outcrops within the quarry walls. In order to access a small portion of the quarry at the northern end that is filled with water, the Company plans to commence a dewatering program that is expected to take 2-3 weeks to complete.

This should allow the NIS and Allkem geological teams to safely access the walls and base of the pit for geological mapping and in-situ sampling.



*Figure 4: Google Earth image showing the water-filled pit in the north.*

## Review of Historical Exploration Data

NickelSearch has also commenced reviewing historical exploration data for evidence of potential lithium host rocks and mineralisation. The majority of previous exploration work in the project tenements was targeted at commodities other than lithium.

However, there is the potential that geological and/or geochemical indicators of pegmatites may have been intersected in previous drilling. The exploration database is therefore being interrogated for any such indications, which may lead to the identification of further areas of exploration interest for lithium.

## Next Steps

- Geological mapping and sampling will commence in November by Newexco geologists within the areas of the priority geochemical anomalies;
- NIS has obtained a new access permit from the WA Mining Warden to re-enter the quarry and these priority target areas;
- Negotiations for consent and compensation to these areas will continue and require finalisation (as between the parties) before an exploration program that involves ground disturbance (i.e., drilling) can commence;
- NIS is in the process of agreeing next steps regarding access with the operator of the quarry, including the draining of the quarry pit;
- Regional lithium exploration continues with mapping, rock chip sampling, stream sediment sampling and additional soil sampling continuing across the Carlingup tenements; and
- The NIS exploration database is being interrogated for evidence of potential lithium host rocks and mineralisation.

This announcement has been approved for release by the Board of NickelSearch Limited.

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## Compliance Statement:

The information in this announcement that relates to previously reported exploration results for NickelSearch has been extracted from the Company’s announcement dated 16 October 2023 entitled “*Assays over 5% Lithium Oxide (Li<sub>2</sub>O) at Carlingup*” which was released to ASX and is available on the Company’s website at [www.nickelsearch.com](http://www.nickelsearch.com). NickelSearch Limited confirms that it is not aware of any new information or data that materially affects the information included in the relevant Company announcement.

## About NickelSearch

**NickelSearch Limited [ASX: NIS]** is a dedicated nickel sulphide and lithium explorer focused on advancing its flagship Carlingup Project in Western Australia.

The Project has an existing mineral resource base totalling 155kt contained nickel and is strategically located in the same greenstone corridor as IGO’s Forrestania nickel mining complex, and only 10km from Allkem’s Mt Cattlin Lithium Mine.

**Highly Prospective Tenure  
 Covering +10km Strike**

**Multiple high priority, drill-ready  
 greenfield nickel sulphide targets**

**Proven high grade nickel  
 production of 16.1kt Ni at 3.45%**

**Technical collaboration with Allkem  
 Limited on lithium potential**

### Directors and Management

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