



**LEO**   
LITHIUM LTD

23 June 2022

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**Leo Lithium Roars to Life**

**Simon Hay**  
*Managing Director*

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## ORE RESERVES AND MINERAL RESOURCES REPORTING

The information in this announcement that relates to production targets, Mineral Resources and Ore Reserves is extracted from the Company's replacement prospectus dated 6 May 2022 (Prospectus) which is available at [leolithium.com](http://leolithium.com).

The Company confirms that all material assumptions underpinning the production targets in the Prospectus continue to apply and have not materially changed and it is not aware of any new information or data that materially affects the information included in the Prospectus and that all material assumptions and technical parameters underpinning the Mineral Resource and Ore Reserve estimates in the Prospectus continue to apply and have not materially changed.

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# LEO LITHIUM INVESTMENT HIGHLIGHTS

## Development of long life, large scale Goulamina Lithium Project underway



Among the world's largest spodumene projects



Large scale, high grade orebody



Development is underway



Quality product



Social licence to operate



Ganfeng JV partnership, investment and offtake



Exposure to the EV and decarbonisation thematics





1.

## Leo Lithium Overview



# LEADERSHIP TEAM

## Experienced Board & Management



**Alistair Cowden**  
**Chairman**

Experienced mining company founder and builder with 41 years' as a mining executive and geologist in the gold, nickel and copper industry in Australia, Africa, Asia and Europe



**Simon Hay**  
**Managing Director**

30+ years' experience with a track record of value creation. Simon was previously the CEO of Galaxy Resources with his role culminating in the A\$5 billion merger with Orocobre to form Allkem, a leading lithium miner



**Amber Banfield**  
**Non-Executive Director**

20+ years' experience in management positions providing strategy and project development support to energy transition, decarbonisation and sustainability-rated investments



**Rod Baxter**  
**Non-Executive Director**

Highly experienced director and business executive with extensive international and multi-sector experience in the mining and resources, engineering and construction and manufacturing sectors



**Mark Hepburn**  
**Non-executive Director**

28+ years' finance industry experience in stockbroking, corporate funding and business management



**Brendan Borg**  
**Non-executive Director**

20+ years' experience as a geologist specialising in "battery materials" lithium, graphite & cobalt



**Alan Rule**  
**Acting Chief Financial Officer**

24+ years' experience as CFO and Company Secretary in the mining industry in Australia and Africa



**Nathan Bartrop**  
**Company Secretary**

Corporate governance professional with 10+ years' experience in ASX Listing Rules compliance, corporate advisory and corporate governance

# GOULAMINA HIGHLIGHTS

Long life, large scale, open pit project with development underway

<b>1</b>	<b>Globally significant project</b> 	<b>Goulamina expected to be amongst the world's largest spodumene projects</b> Forecast annual spodumene concentrate production of 506ktpa increasing up to 831ktpa under Stage 2 <sup>1</sup>
<b>2</b>	<b>Large scale, high grade orebody</b> 	<b>Amongst the largest global hard rock lithium Mineral Resource</b> Mineral Resource of 108 Mt at 1.45% Li <sub>2</sub> O and Ore Reserve of 52Mt at 1.51% Li <sub>2</sub> O (100% basis)
<b>3</b>	<b>Development substantially funded</b> 	<b>One of a limited number of lithium development projects globally which are substantially funded</b> US\$130 million in equity funding already received from Ganfeng and US\$40 - \$64 million in debt expected
<b>4</b>	<b>Quality product</b> 	<b>High quality concentrate with test work validating 6% Li<sub>2</sub>O grade spodumene concentrate</b> Successfully converted Goulamina's spodumene concentrate to battery grade lithium hydroxide
<b>5</b>	<b>Social licence to operate</b> 	<b>Social licence to operate in Mali</b> Relationships with the Malian government and local communities
<b>6</b>	<b>World-class partner</b> 	<b>Project being developed in 50/50 partnership with Ganfeng</b> Providing funding, offtake and operational support to de-risk development
<b>7</b>	<b>Decarbonisation thematic</b> 	<b>Exposure to the electric vehicle and decarbonisation thematics</b> Providing critical metals for a clean energy future

1. Based on first 5 years of steady state Stage 2 production.

# GOULAMINA: A TIER 1 LITHIUM DEVELOPMENT



Updated Definitive Feasibility Study<sup>1</sup> detailed a Stage 2 expansion from 2.3Mtpa to 4.0Mtpa



**US\$2.9 billion**

**Post-tax real NPV<sub>8%</sub> on a 100% basis<sup>3</sup>  
for Stage 2**

Based on spodumene price of  
US\$1,250/tonne for the first 5 years and  
US\$900/tonne thereafter



**80%**

**Recovery**

Test work has resulted in 80% recovery,  
whole of ore flotation



**US\$312/t**

**Cash cost (FOB, LOM, dry)**

Expected competitive cash cost for  
robust cash flow throughout the lithium  
cycle (Stage 2)



**831ktpa<sup>2</sup>**

**6% concentrate production  
(dry, 100% basis)**

Stage 2 expansion places Goulamina as a  
leading spodumene producer



**83%**

**Post-tax ungeared real IRR on a  
project basis (Stage 2)**

Satisfies JV condition and led to  
positive FID for Stage 1 in January 2022

# GOULAMINA LITHIUM PROJECT KEY METRICS

Leading industry experts engaged on the Updated DFS

## Updated DFS Key Metrics (100% project basis)

<b>Ownership</b>	Leo Lithium (45%), Ganfeng (45%), State of Mali (10%) <sup>1</sup>
<b>Mineral Resource</b>	108.5Mt at 1.45% Li <sub>2</sub> O
<b>Mine Life</b>	21 years minimum
<b>Ore Reserves (Proven &amp; Probable)</b>	52Mt at 1.51% Li <sub>2</sub> O
<b>Life of Mine Production (concentrate)</b>	15.6Mt
<b>Spodumene Concentrate Production (Stage 1)</b>	506ktpa
<b>Spodumene Concentrate Production (Stage 2)</b>	831ktpa <sup>2</sup>
<b>Average Spodumene Concentrate Production</b>	726ktpa
<b>Concentrate Specifications</b>	6% Li <sub>2</sub> O, <0.6% Fe <sub>2</sub> O <sub>3</sub> , low mica
<b>Annual Mine Throughput</b>	2.3Mt (Stage 1) rising to 4.0Mt (Stage 2)
<b>Pre-tax NPV<sub>8%</sub> (Stage 1 &amp; 2)</b>	US\$4.0 billion (A\$5.6 billion)
<b>Pre-tax IRR (Stage 1 &amp; 2)</b>	98%
<b>Post-tax NPV<sub>8%</sub> (Stage 1 &amp; 2)</b>	US\$2.9 billion (A\$4.1 billion)
<b>Post-tax IRR (Stage 1 &amp; 2)</b>	83%
<b>Capital Cost (Stage 1)</b>	US\$255 million
<b>Capital Cost (Stage 2, incremental)</b>	US\$70 million
<b>Cash Costs (Life Of Mine, FOB, Stage 2)</b>	US\$312 per tonne concentrate
<b>AISC (Life of Mine, FOB, Stage 2)</b>	US\$365 per tonne concentrate
<b>Spodumene pricing (US\$/t, real)</b>	US\$1,250/t for first 5-years, US\$900/t long term



*Coarse spodumene blades*

Cautionary Statement: The production inventory and forecast financial information referred to in the Stage 2 case comprises Proven Ore Reserves (9.9%), Probable Ore Reserves (53.6%) and Inferred Mineral Resources (36.5%). The Inferred Mineral Resource included in the inventory is 30 million tonnes at 1.3% Li<sub>2</sub>O. The Inferred Mineral Resource has been scheduled on a preliminary basis with all Inferred material mined after the Ore Reserves. The Inferred Mineral Resource does not have a material effect on the technical and economic viability of the Project. There is a lower level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised. Note: All dollar figures are in real terms.

1. The State of Mali is free-carried on its first 10%, with an option to subscribe for an additional 10% at Fair Market Value. The State of Mali has yet to acquire its initial 10% free carried interest in LMSA. It is not currently known whether the State of Mali will take-up this right for the additional 10%; 2. Based on Stage 2 steady state production (first 5 years).



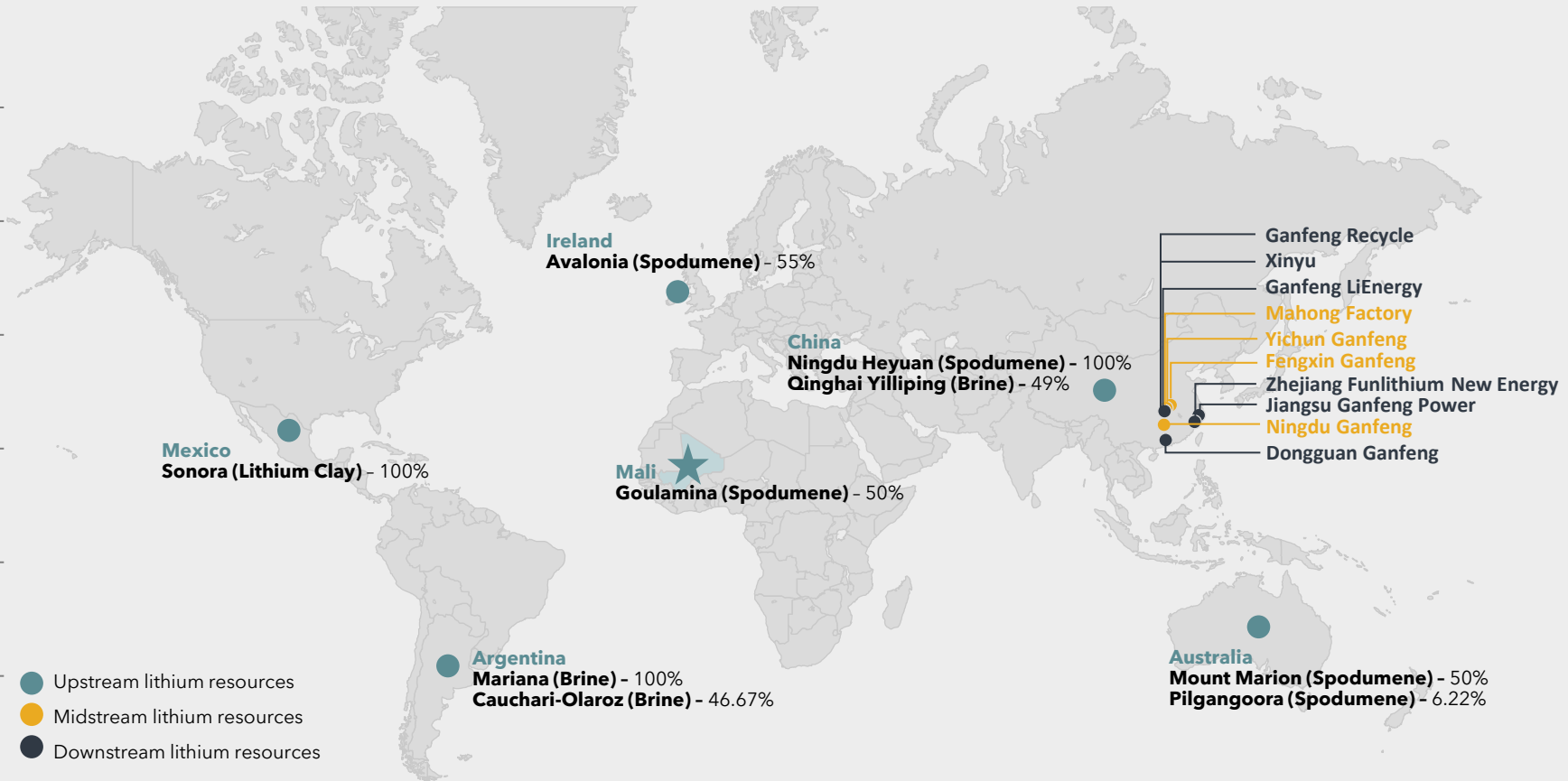
# WORLD CLASS PARTNER

Ganfeng has secured 50% of Goulamina Stage 1 offtake, and up to 100% on debt provision

## Ganfeng Overview

-  Chinese lithium chemical producer, market capitalisation of ~US\$24 billion
-  World number one lithium chemical producer by production capacity
-  Supplier to major tier 1 lithium battery producers and OEMs
-  Large supplier network in China with purchasing power
-  Diversified upstream lithium portfolio with 9 investments/offtake projects
-  Targeting 300ktpa LCE supply capacity by 2025
-  Proven track record supporting and investing in lithium operations

## Ganfeng's Global Lithium Operations



# GANFENG JV FORMALISED

## US\$130 million equity funding received

- **Funds totalling US\$130 million have been received** by Mali Lithium BV (**Goulamina JV**) from Ganfeng
  - Firefinch and Ganfeng each hold a 50% interest in the Goulamina JV
  - Firefinch and Ganfeng will hold 45% each in the Goulamina Lithium Project (post the State of Mali's 10% free carried interest)<sup>1</sup>
- **Leo Lithium to be the operator** of the Goulamina Lithium Project
- **Debt facility expected to be made available to the Goulamina JV by early July 2022**
  - Ganfeng will either procure up to US\$64 million in external debt, or provide US\$40 million of debt itself
  - Ganfeng motivated to complete the debt facility as this will provide Ganfeng with 100% offtake



<b>Corporate restructuring to facilitate JV</b>	✓
<b>Ganfeng US\$130m investment received by Firefinch</b>	✓
<b>Targeting documentation on the Ganfeng debt facility</b>	Early H1 2022

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# GOULAMINA PROJECT STATUS

## Proceeding with early-stage engineering and drilling programmes

- **Procurement of long lead items**
  - Ball mill tender completed and issued to vendors
- **Site works have started**
  - Earthworks contractor mobilised to site
  - Site clearing and road upgrades well advanced
  - Construction of first camp building in progress
- **Sterilisation drilling of the waste rock facility complete**
  - Pegmatites encountered in numerous holes
  - Follow-up holes on best hits completed; assays pending
- **Extensive drilling program for 2022 underway**
  - Infill drilling, resource upgrade and extension along strike
- **Socialisation with local communities well advanced**
- **Recruiting of Perth corporate and Mali project teams underway**







**Drilling at Goulamina**



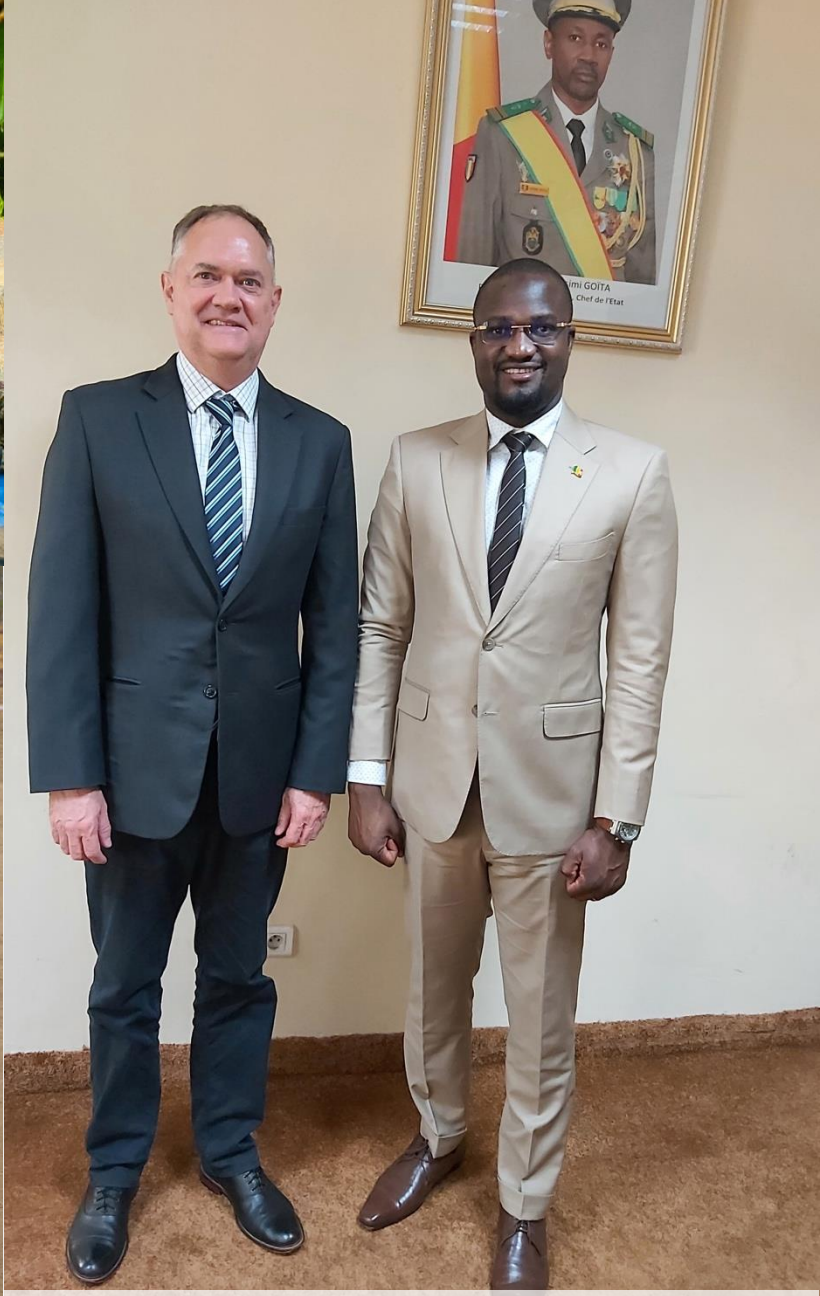
**Meeting with Goulamina village elders**



**Goulamina drill core**



**Site works launching ceremony**



**Leo Lithium MD Simon Hay with His Excellency Lamine Seydou TRAORE, Minister of Mines**



# LEO LITHIUM

**A pure play lithium development company new to the ASX**  
**Bringing the world class Goulamina Lithium Project into production**

<b>1</b>	<b>Among the world's largest spodumene projects</b>	
<b>2</b>	<b>Large scale, high grade orebody</b>	
<b>3</b>	<b>Development is underway</b>	
<b>4</b>	<b>Quality product, SC6</b>	
<b>5</b>	<b>Social licence to operate</b>	
<b>6</b>	<b>Ganfeng JV partnership, investment and offtake</b>	
<b>7</b>	<b>Exposure to the EV and decarbonisation thematics</b>	



# Appendix A

## Supporting Information

# PROCESSING AND TESTWORK UPDATE

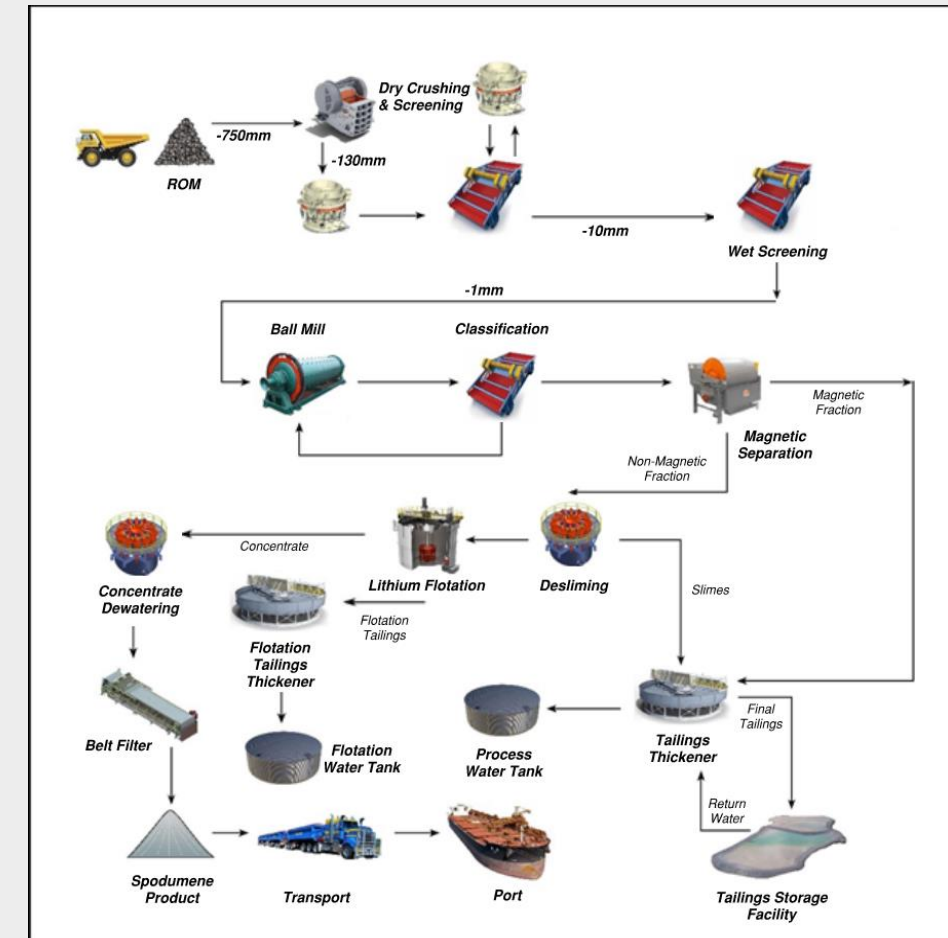
Spodumene successfully converted into battery grade lithium hydroxide (min 99.5% Li<sub>2</sub>O)

- Revised process flowsheet to facilitate an increase in plant throughput from 2.3Mtpa to 4.0Mtpa with key updates being:
  - **Three-stage conventional crushing circuit** replaces two-stage crushing circuit and High-Pressure Grinding Roll crusher
  - **Stack Sizer screens added to circuit**, replacing hydrocyclones
  - **Magnetic separation circuit modified** to a Ganfeng proven flowsheet
- Testwork program indicated **increased recoveries to 80%**

## Goulamina Process Plant Layout



## Simplified Process Flow Design





# GOULAMINA RESOURCE AND RESERVE

Mineral Resource of 108Mt at 1.45% Li<sub>2</sub>O and Ore Reserve of 52Mt at 1.51% Li<sub>2</sub>O

## Goulamina Mineral Resource Estimate

Classification	Tonnes (m)	Grade Li <sub>2</sub> O (%)	Contained Tonnes Li <sub>2</sub> O
Measured	8.4	1.57	133,000
Indicated	56.2	1.48	832,000
Inferred	43.9	1.38	606,000
<b>Total</b>	<b>108.5</b>	<b>1.45</b>	<b>1,570,000</b>

## Goulamina Open Pit Ore Reserve Estimate

Proven	8.1	1.55	125,000
Probable	44.0	1.50	660,000
<b>Total</b>	<b>52.0</b>	<b>1.51</b>	<b>785,000</b>







**For more information**

Simon Hay

Managing Director

[info@leolithium.com](mailto:info@leolithium.com)

+61 8 6149 6100

[leolithium.com](http://leolithium.com)