



CARBON NEUTRAL | BATTERY GRADE LITHIUM | POWERED BY CLEAN ENERGY | SUSTAINABLE EXTRACTION

# Our Vision:

# Direct Lithium Extraction, powered by clean energy

SEEKING TO BE THE GREENEST LITHIUM SUPPLIER TO THE EV BATTERY MARKET

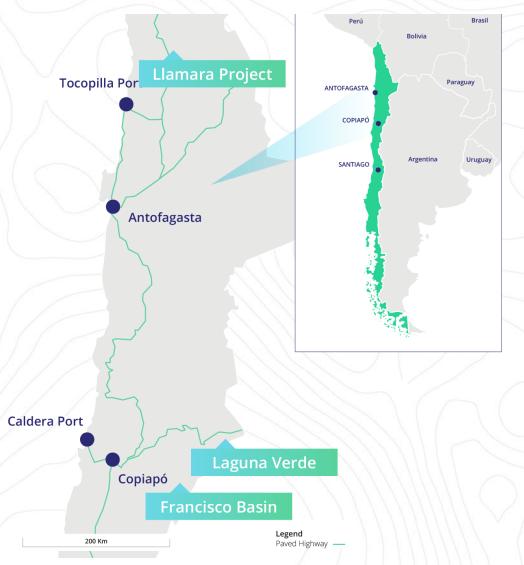
# CTL - A Snapshot



### New path for lithium in Chile – low impact, sustainable lithium extraction

- 3 strategic lithium projects in Chile, >500 km² licence areas
- Total lithium resources exceed 2 million tonnes LCE further upgrades due by Q1 2023
- Wholly owned licenced basins no competing lithium projects in area and no indigenous communities
- Experienced board and management that have developed new major production projects in Chile
- Listed on AIM March 2022 £9.6m raised in pre-IPO and IPO funds

Project	Licence Area	Resource Estimate (JORC)				
#1 Laguna Verde	67 km²	1.5 million tonnes LCE at 206 mg/L Li				
#2 Francisco Basin	110 km²	0.5 million tonnes LCE at 305 mg/L Li				
#3 Llamara *	344 km²	Greenfield exploration				



<sup>\*</sup> The licences will remain applications until they are granted, which the Directors expect will occur in November 2022

# **Board & Management**

### Strong operational experience, local knowledge and commercial understanding

### **Board**



### STEVE KESLER Non-Executive Chairman

- 45 years of executive and board roles in the mining sector
- Direct lithium experience as CEO/Director of European Lithium
- Chile experience with Escondida and as the first CEO of Collahuasi.



**ALDO BOITANO Chief Executive Officer** 

- Co-founder of CleanTech Lithium, 25 years of management roles
- Board member of the International Leadership Association.
- Pioneer in Chile's solar industry with >800MW of projects deployed.



**JONATHAN MORLEY-KIRK** Non-Executive Director

- 30 years of experience including 17 years in Non-Executive Director roles
- Expertise in financial controls, audit, remuneration, capital raisings, taxation/ structuring and risk management



**GORDON STEIN Chief Financial Officer** 

- Commercial CFO with over 30 years expertise in energy & natural resources
- A chartered accountant, has worked with start-ups to major companies, including board roles of six LSE companies.

### **Senior Management**



**SERGIO VIDELA** Chief Operating Officer, Chile

- 32 years of experience in development and execution of projects in the mining industry.
- Former Projects Director at Codelco in design, procurement, construction and start up of process plants.

### **Technical Advisory Board**



**MARCELO BRAVO** Ad-Infintum

- One of the worlds leading lithium processing experts.
- Former head of processing at SQM's Atacama project, the worlds largest lithium production base.





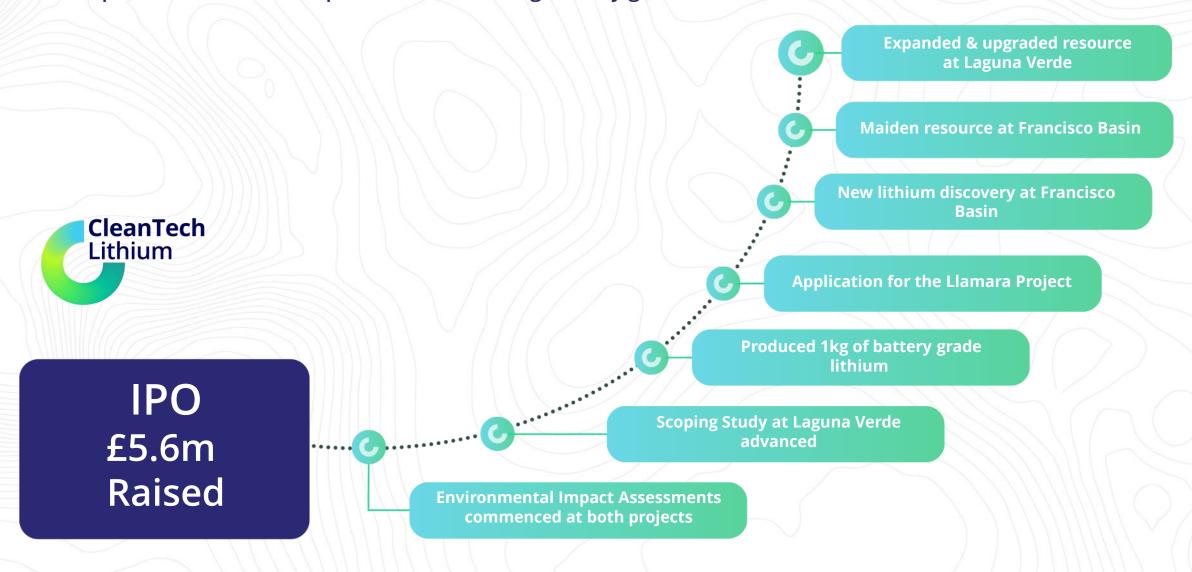
**JASON BAVERSTOCK Executive Strategy & Development** 

• Co-founder of CleanTech Lithium, 20 years finance and mining sector experience in China, HK & Australia.

# Post IPO – Active 6 Months



Exploration, resource expansion and defining battery grade lithium



# Strategy Sustainable value creation



### **Strategic projects**

- Laguna Verde
- Francisco Basin
- Llamara

### Utilise

- Direct Lithium Extraction
- Clean power

Strategic partners/ Off-take Delivering long-term sustainable growth and returns to all stakeholders

Produce battery grade lithium



Resource/Reserve Development



Best in class sustainable technologies

### **Target carbon neutral**

 Lowest environmental impact

### **Direct supply into**

EV market



# Projects

LOCATED IN THE LITHIUM TRIANGLE



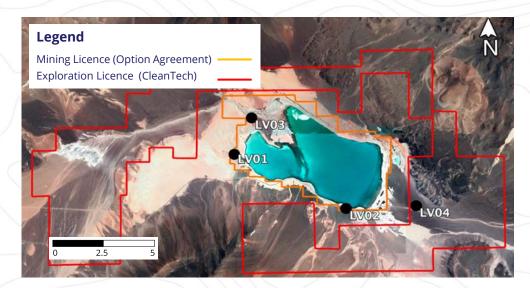




- A resource drill programme comprising four holes completed 1H 2022
- Produced JORC compliant resource estimate of 1.5 million tonnes LCE at 206mg/L lithium
- Majority of resource was upgraded to Measured + Indicated:
- Current estimate has large upside, further upgrade expected 4Q 2022

JORC Resource	Measured	Indicated	M+I	Inferred	Total
Lithium (million tonnes LCE)	0.2	0.6	0.8	0.7	1.5
Grade (mg/L Li <sub>3</sub> CO <sub>2</sub> )	211	205	206	205	206

- Higher grades at depth (up to 409mg/L in deepest samples)
- Strong geothermal influence on brines, average 20–30°C, matches ideal temperature range for DLE process (significant potential opex saving)
- Makes Laguna Verde the shallowest geothermal influenced brine in the world, with these elevated temperature within 65m of surface
- Scoping study advanced, pre-feasibility study planned to commence in Q4 2022
- Environmental Impact Statement baseline studies underway

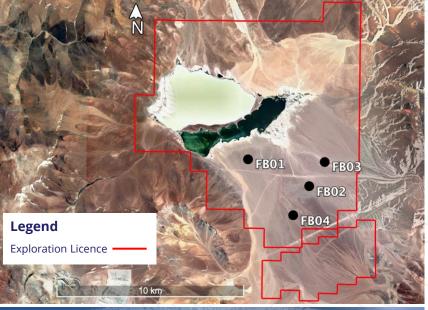






CleanTech Lithium

- New lithium discovery August 2022
- Hole FB01 completed, 34 brine samples collected from aquifer zone, average lithium grade of 305mg/L
- JORC compliant Inferred resource estimate of 0.5 million tonnes LCE, based on FB01results
- Further three drill holes planned post the Chilean winter break
- Planned upgrade resource estimate to Measured + Indicated by early 2023
- Drilling is wide diameter cased bores, convertible to production bores in a commercial operation
- Scoping study to commence Q4 2022, pre-feasibility study planned for 1H 2023
- Environmental Impact Statement baseline studies underway





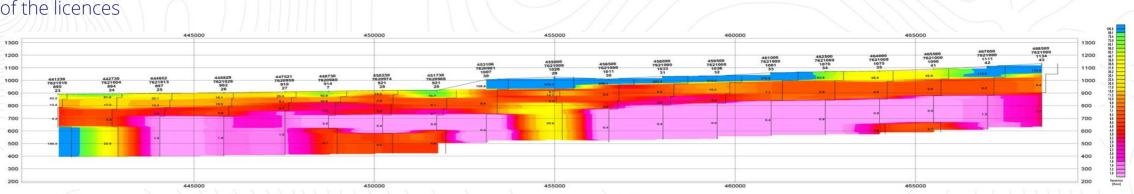




• Greenfields project in one of the largest basins in the lithium triangle, not previously drilled for lithium – total licence area 344 km<sup>2</sup>

Lithium Triangle Basin	Company	Basin Area (km²)		
Atacama	SQM / Abarmale	18,100		
Hombre Muerto	Livent	4,000		
Pampa del Tamarugal	CleanTech	17,150		

- Historical surface sampling within basin: salt crusts up to 3,100ppm Li, hectorite up to 2,400ppm Li. These evaporite deposits indicate lithium prospectivity of basin brines
- Historical geophysics lines intersecting license area indicate very large hypersaline aquifer
- Exploration drill hole planned in Q4 2022 subject to the anticipated grant of the licences







# Environmentally Committed

**DEDICATED TO NET ZERO** 



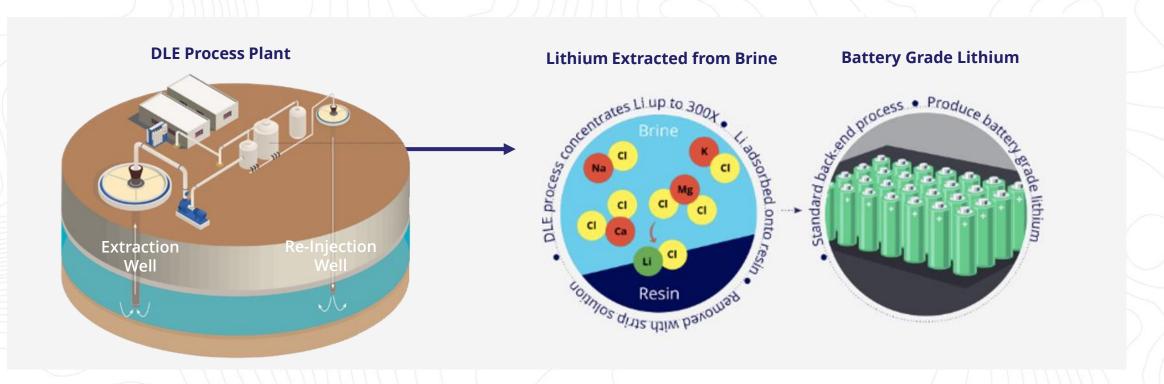
# Direct Lithium Extraction



Low Impact and Sustainable

# Deploying direct lithium extraction (DLE) technology, a revolution in sustainability for lithium extraction:

- Brine is pumped to processing unit, resin used to extract only lithium, spent brine re-injected
- No evaporation ponds, no aquifer depletion~



# DLE: Proven Technology in Various Countries



Pioneering Methodology for Sustainable Lithium Extraction

			Produ	ucers											
Company	CleanTech Lithium	Livent	Lanke Lithium	Zangge Lithium	Jintai Lithium	Eramet/ Qingshan	Standard Lithium	Vulcan Energy	Rio Tinto	CTR	Energy Source Minerals	Berkshire Hathaway	Lake Resources/ Lilac	Compass Minerals	E3 Metals
Asset name	L. Verde / Francisco Basin	Hombre	Qinghai	Qinghai	Qinghai	Centenario- Ratones	Smackover	Zero Carbon Lithium™	Rincon	Hell's Kitchen	ATLiS	Salton Sea	Kachi	Great Salt Lake	Clearwater Lithium
Country	*	0	*	*3	*)	6			0				6		*
DLE provider	SunResin	Proprietary	SunResin	SunResin	SunResin	Proprietary	Proprietary	N/A	Axion	Lilac	Proprietary	Proprietary	Lilac	N/A	Proprietary
Stage	Pilot	Production	Production	Production	Production	Construction	Demo	Pilot	Pilot	Offsite pilot	Pilot	Pilot	Offsite pilot	Pilot	Pilot
Resource (Mt LCE)	2.0	N/A	N/A	N/A	N/A	10	3	16	12	3	N/A	N/A	4	2	7
Lithium Grade (mg/L)	206-305	N/A	N/A	50 - 60	N/A	436	168	181	397	181	N/A	N/A	211	71	75
Geothermal		$\times$	$\times$	$\times$	$\times$	$\times$	$\times$	$\checkmark$	$\times$	$\checkmark$	$\checkmark$	$\checkmark$	$\times$	$\times$	$\times$
Start date	2025	1998	2017	2018	2019	2024	tbc	2024	2025	2024	2024	tbc	2024	tbc	2025
Capacity (ktpa LCE)	40	20	20	20	7	24	21	40	50	20	20	90	25	20-25	20
Valuation (US\$'m)*	\$37	\$5,490	N/A	N/A	N/A	N/A	\$730	\$691	\$825	N/A	N/A	N/A	\$794	\$1,320	\$100

\*Valuations as at 30.09.22

"DLE can massively increase supply, you don't need two years of drying lithium out from the brine. And instead of getting about 40% of lithium out of the brine, you can get more than double the amount."

# Powered by Clean Energy

Chile: Leading renewable energy power grid



- Numerous renewable energy providers:
  - Solar plants in the Atacama region
  - Hydropower in southern Chile
  - Solar (PV and thermal), wind and geothermal power in northern Chile
- Sub-stations which connect to the grid are located in close proximity:
  - 52km and 5km from Laguna Verde and Francisco Basin respectively
- CTL plans to lock in a 100% renewable energy PPA
- The grid operator and PPA supplier would ensure 24/7 year round renewable energy supply

Chile's world leading renewable energy grid and the projects infrastructure advantage provide a ready made solution for CleanTech's clean energy processing plan





# Ambition and Values / our ESG Focus

CleanTech Lithium

Socially minded, environmentally driven and governed by our core values



### **Ambition**

To produce the greenest battery grade lithium for the EV future



### Values:

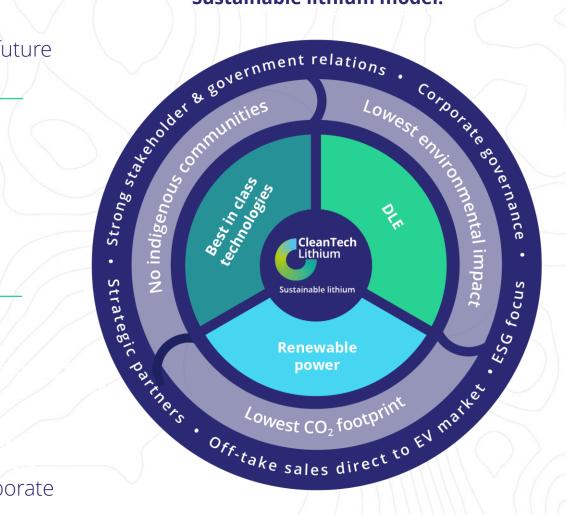
- Seeking to create a safe workplace
- Improving the environment that we operate in
- Transparency, sustainability and integrity



### **ESG** focus:

- Sustainable lithium extraction
- Commitment to carbon neutrality and net-zero
- Low environmental footprint, powered by clean energy
- Strong stakeholder and government relations & good corporate governance

### Sustainable lithium model:





# Chile: The Home of Battery Metals







Highest income country in Latin America (S&P A, Moody's A1)



Strong mining code and laws



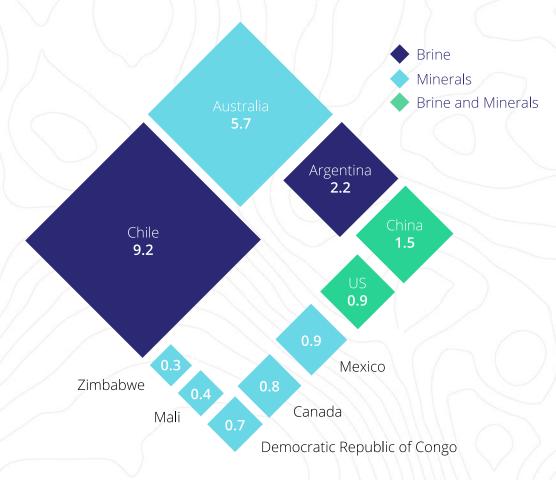
Only major lithium carbonate producer that holds a free trade agreement (FTA) with the US – Recent 'Inflation Reduction Act' requires 80% of minerals in the battery to be sourced from the US or FTA country by 2026



"Let's invest in Chile" action plan announced Sep 2022 by new Chile President, includes:

- Tax incentives for private investment
- Improving access to financing
- Public investment in infrastructure for development
- Promoting foreign investment
- Creating one-stop-shop for permitting
- Promoting public-private partnerships for investment

### **Global Lithium Reserves (Million Tons)**



Source: United States Geological Survey, McKinsey & Company article, 25 May 2022

# Chile: Highly Supportive of Sustainable Extraction



New path for lithium in Chile – strategy aligns with Government agenda



Government emphasis on lowering environmental impact and CO2 emissions of mining



Positive feedback from authorities for CTL's plan on:

- Direct lithium extraction
- Renewable energy based processing



CTL strategy aligns perfectly with the Government agenda for the lithium industry

"It is fundamental to create the conditions for investment to grow. President Boric has tasked us with pushing forward an ambitious agenda, which would allow us to stimulate investment, generating employment, but which at the same time allows us to speed up the transition to a green economy."

- Treasury Minister, Mario Marcel (Sept 2022)

# #1 Current lithium production in Chile - Salar Atacama: large evaporation ponds (~50km²)

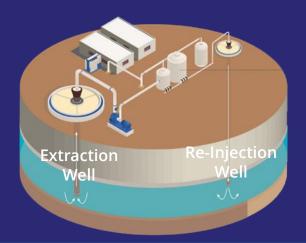


Impacts:

- X Environment
- X Indigenous communities

#2 Future Production - CleanTech Direct Lithium Extraction

- No harm to environment
- No Aquifer depletion
- Small footprint





# Lithium

THE RESOURCE OF THE 21<sup>ST</sup> CENTURY



# **EU Automakers Committed to Carbon Neutral**



### A ready-made market for low carbon lithium production

### **Committed Automotive Industry**



"Mercedes-Benz is getting ready to go all electric by the end of the decade....the world's pre-eminent luxury car company is accelerating toward an emissions-free and software-driven future."

I V E C O G R O U P "Together with other companies from around the world, we have signed The Climate Pledge, where we commit to reaching net zero carbon by 2040, ten years before the target set by the Paris Agreement."



"Developing products and solutions that reduce the  ${\rm CO_2}$  footprint is thus the first priority in our climate strategy. In accordance with this, we have set ambitious and ground-breaking targets to limit global warming."

TR/\TON

"The climate agreement foresees climate-neutrality and zero CO2 emissions by 2050. TRATON GROUP and its brands MAN, Scania, and Volkswagen Caminhões e Ônibus are entirely committed to further reducing greenhouse gas emissions"

### **Lithium DLE - Off-Take Agreements**



Numerous publicly announced DLE off-take agreements with lithium plays



Major automotive companies showing strong support for green lithium



VOLKSWAGEN





TESLA











# EU Demand for Lithium

Demand forecast to increase exponentially

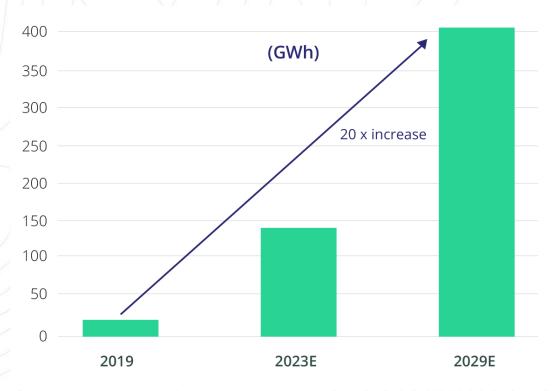




Lithium demand forecast to rise: (\*)

- From 350,000 tonnes LCE in 2020 to 2.5 million tonnes LCE in 2030;
- Over 7 million tonnes LCE in 2040
- Positive long term price trend estimate of US\$22,500/tonne for battery grade LCE from 2027 2040 (\*\*)
- Europe is the key growth market for lithium with demand forecast to increase 20X this decade
- EU recently announced strict CO2 footprint limits on the Li-ion battery supply chain

### **European Ll-ion Battery Cell Forecast**



<sup>\*</sup> Source: Benchmark Minerals, Global Lithium Forecast, Q4 2021

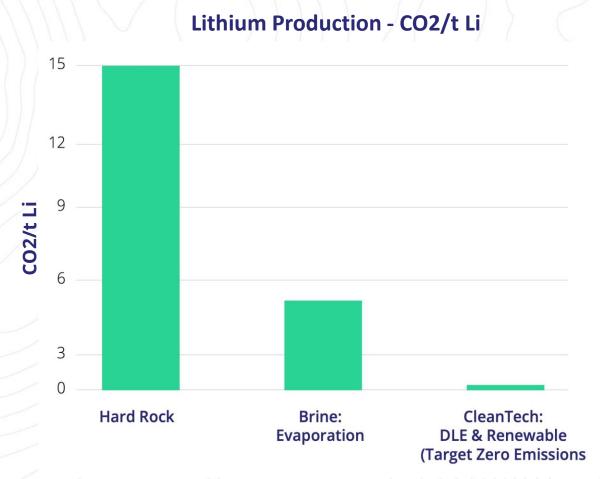
<sup>\*\*</sup> Source: Canaccord Genuity: Rating and Target Price Changes, 22 August 2022

# CTL - Targeting Carbon Neutral Lithium Supply



Zero emissions, green lithium, a critical advantage for the EU market

- Lithium production from hard rock mines and evaporation pond operations generate high emissions:
  - Estimated 5 15 tonnes CO2 per tonne of lithium
- Cleantech Lithium's strategy to integrate renewable energy with DLE with solar
- Unlocking a path to zero emissions, a critical advantage for the EU market



Source (for Hard Rock and Brine): Minviro Study

# Lithium DLE Deals

Realising value through partnerships



Rio Tinto Rincon, Argentina \$825M acquisition 2021

Standard Lithium Koch \$100M Investment 2021 CTR GM - Multi-million investment 2021 Vulcan Energy Inst. investment \$320M Stellantis - A\$76M 2021/22

Eramet Tsingshan \$375M Investment 2021

GanFeng Lithium Lithea, Argentina \$962M Acquisition 2022 Compass Minerals Koch \$252M Investment 2022



# Positioned for Production

**GREEN LITHIUM FOR THE EU BATTERY SUPPLY CHAIN** 



# DLE from Pilot to Commercial Scale

CleanTech Lithium

Target commercial scale and production 2025









SunResin deploying 25,000 tpa LCE Phase 1 units to Salar Diablillos in Argentina, 250km north-east of Laguna Verde, for production in 2023

CleanTech aims to achieve commercial scale construction and production in 2025

SunResin Commercial Scale DLE Adsorption
Columns at Zangge Lithium project, Qinghai
China – Modular Design for Scalability

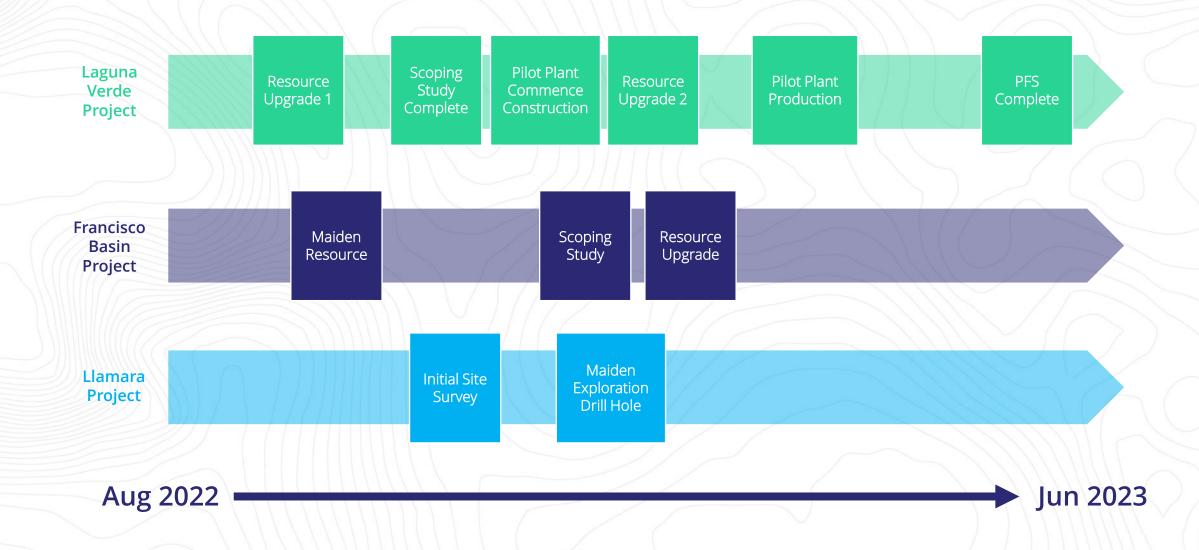


<sup>\*</sup>Independent lab Dorfner Anzaplan (Germany)

# The Path to Production

2022/2023: value catalysts





# Summary: De-risked Path to Production



Driving shareholder value – sustainable lithium for the EV future

















# Appendix

# CleanTech Lithium – Key Data



Market listing: AIM	<b>Ticker:</b> CTL	<b>Market cap</b> : £44.6M	<b>Share price: 56.40</b> p (15.10.22)
Funds raised IPO: £5.6M	<b>Shares in issue:</b> 79,033,242	Research: Canaccord	<b>Price Target:</b> £2.90

**Directors and Significant Shareholders:** 

Percentage not in public hands 33.91%

Share Register as at 9 September 2022

Investor	Holding
Jason Baverstock	12.65%
Aldo Boitano	11.89%
*Regal Emerging Companies Opportunities Fund and Regal Emerging Companies Funds 111	9.32%
Luke Jarvis	5.06%
Timothy Graheme Leslie (Tim Leslie)	3.80%
Argonaut Investments Pty Ltd and Argonaut Partners Pty Limited	3.35%
Gordon Stein	0.77%
Steve Kesler	0.44%
Jonathan Morley-Kirk	0.43%

<sup>\*</sup>The Regal Funds are two separate funds, each of which are managed by the same investment manager, being Regal Funds Management Pty Limited (ACN 107 576 821).

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