

ASX ANNOUNCEMENT | ASX : LTR

24th November 2021

## **Chairman's Address and AGM Presentation**

Liontown Resources Limited (ASX: LTR, "Liontown" or "Company") is pleased to provide a copy of the Chairman's Address and the Managing Director's Presentation to be made at the Company's Annual General Meeting today.

This announcement has been authorised for release by the Managing Director.

A. Altaniais

TONY OTTAVIANO

Managing Director 11<sup>th</sup> November 2021

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## Liontown

#### ASX ANNOUNCEMENT | ASX : LTR

#### 24th November 2021

## **Chairman's Address to 2021 Annual General Meeting**

#### Fellow shareholders,

It is a great privilege to report on what has been an exceptional year for Liontown Resources and its shareholders.

I begin today by acknowledging the traditional custodians of the land we are meeting on, the Whadjuk people, and pay my respects to their Elders past and present. I wish to acknowledge and respect their continuing culture and the contribution they make to the life of this city and region. I would also like to acknowledge the Tjiwarl Native Title Holders on whose land we will be developing the Kathleen Valley Project. Liontown recognises the importance of our ongoing relationship with the Tjiwarl community.

When I stood before you at last year's AGM, we had just completed our Pre-Feasibility Study, the upturn in the global lithium market was in its infancy and the outlook for the sector was less certain after a number of challenging years.

Today, the EV revolution is in full swing, and we have just released a Definitive Feasibility Study (DFS) which has confirmed that we are on the cusp of developing a Tier-1 global lithium project at Kathleen Valley. A Downstream Scoping Study (DSS), released at the same time as the DFS, further highlights the project's outstanding underlying fundamentals and exceptional growth profile.

Buoyed by a remarkable turnaround in the lithium market – which has seen the spot price for spodumene concentrate recently hit record levels of over US\$2,500 a tonne – Liontown is now firmly established on a trajectory to build a world-class battery materials business with sector-leading sustainability credentials.

The achievements of the year are not simply a product of the turnaround in the market. They also reflect another year of outstanding quality work, diligence, commitment and tenacity by our small but incredibly hard-working team in progressing Kathleen Valley towards development.

The strong momentum that we built up towards the end of last year has well and truly continued during the year, with the achievement of numerous important milestones that have put us on track to develop a new world-class lithium processing hub.

The DFS delivered outstanding results including a substantial increase in Net Present Value to \$4.2 billion, delivers annual after tax free cashflow of A\$570m and an Ore Reserve which underpins a 23-year mine life at a planned initial processing rate of 2.5Mtpa, ramping up to 4Mtpa in Year 6 of operations. Production of first concentrate has also been brought forward 12 months from the PFS timeline and is now scheduled to commence during second quarter 2024.

This would make Kathleen Valley one of the largest new lithium producers globally, with production commencing at approximately 500,000 tonnes of spodumene concentrate per annum, ramping up to around 700,000tpa at globally competitive cash operating costs.

Building on the production profile outlined in the DFS, the updated DSS has strongly reinforced the substantial additional value that can be unlocked through the inclusion of an integrated refinery at Kathleen Valley to produce battery-grade lithium products.

Liontown Resources Limited | ABN 39 118 153 825 Level 2, 1292 Hay Street, West Perth WA 6005, Australia | PO Box 284, West Perth WA 6872 **T:** +61 (0) 8 6186 4600 | E: info@ltresources.com.au | www.ltresources.com.au This study indicated downstream processing to produce battery-grade lithium hydroxide would more than double the project's Net Present Value to \$9.6 billion. This is clearly a hugely compelling opportunity, with the Company now proceeding with a Pre-Feasibility Study to further assess this downstream potential.

We have now provided our shareholders and potential future shareholders an insight into Kathleen Valley's full potential as an integrated producer of lithium products in a tier one jurisdiction. This underpins its strategic importance and the future upside we can capture as the market continues to evolve.

Last week, I travelled to site with several of my fellow directors and senior members of our team to sign a landmark Native Title Agreement for Kathleen Valley with the Tjiwarl Native Title Holders. This agreement represents the culmination of more than two and a half years of active and collaborative negotiation between the two Parties, with a good deal of respectful give-and-take on both sides.

I am immensely proud of this agreement, which represents an outstanding example of how resource companies and Traditional Owners can work respectfully together to deliver positive outcomes for both parties.

With this Native Title Agreement in place, Liontown can now proceed to finalise the submission of the remaining key permits for Kathleen Valley and continue discussions with potential funding partners.

The Native Title Agreement also reflects our broader commitment to achieve best-in-class performance across all ESG metrics, including a commitment to establish a climate strategy roadmap which aims to put us on a net-zero emissions trajectory. Our first-ever ESG Report will be released shortly, representing an important milestone for the Company.

On the corporate front, we recently completed the de-merger of our non-lithium Western Australian exploration assets via Minerals 260 Limited (ASX: MI6), which undertook a highly successful \$30 million IPO and listed on the ASX in October.

Liontown shareholders had the opportunity to maintain a fully undiluted interest in the Minerals 260 assets via the pro-rata in-specie distribution of Minerals 260 shares and having a pro-rata entitlement to participate in the IPO. The Liontown shareholders showed their support for Minerals 260, which is led by Liontown's former long-serving Managing Director David Richards, with demand for the IPO having been very strong and it closing significantly oversubscribed.

The AGM marks the retirement of David Richards as a Director of Liontown as he now focusses his attention on leading Minerals 260. David joined Liontown in 2010 and served as Managing Director until May this year and since that time as Technical Director. David has been instrumental in building the foundations of what is now an ASX-300 company and led the team that discovered the Kathleen Valley lithium deposit. I would like to thank David personally for his outstanding contribution to the Company and support and leadership through the highs and lows of running a listed exploration and development company. David's input has been invaluable and on behalf of the Directors and shareholders, I express our thanks and best wishes to David, as he pursues similar success with Minerals 260.

We were absolutely delighted to welcome Tony Ottaviano to the role of Managing Director in May, with Tony bringing a wealth of experience to the company after a long and distinguished career at BHP. Tony will provide a detailed update on the Company's activities shortly.

We now also welcome Jenn Morris to the Board as an independent Non-Executive Director. Jenn's appointment will add further experience, independence and diversity to the Board as Liontown continues on its rapid growth trajectory.

I would like to acknowledge everyone who has contributed to this pivotal year for the company – including David and Tony, my fellow Directors, our senior management team, consultants and advisers.

I would also like to acknowledge the exceptional ongoing support of our shareholders and welcome all new shareholders particularly those that participated in the landmark \$52 million capital raising we completed in July to support our ongoing activities at Kathleen Valley. The coming year looks set to be an even bigger year for Liontown as we look to conclude important offtake negotiations, consider various funding alternatives to finance and develop the Kathleen Valley Project and move rapidly towards our goal of building a world-class battery materials company. Along with Tony and the team I look forward to continuing to build this underlying value for all of our stakeholders.

Tim yourd

Tim Goyder Chairman

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#### **Competent person statement**

The Information in this Announcement that relates to Production Target and DFS for the Kathleen Valley Project is extracted from the ASX announcement "Kathleen Valley DFS confirms Tier-1 global lithium project with outstanding economics and sector-leading sustainability credentials" released on 11 November 2021 which is available on <u>www.ltresources.com.au</u>.

The Information in this Announcement that relates to the DSS for the Kathleen Valley Project is extracted from the ASX announcement "Updated Downstream Scoping Study Highlights Next Growth Horizon for Kathleen Valley Project" released on 11 November 2021 which is available on <u>www.ltresources.com.au</u>.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates or production targets or forecast financial information derived from a production target (as applicable) in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

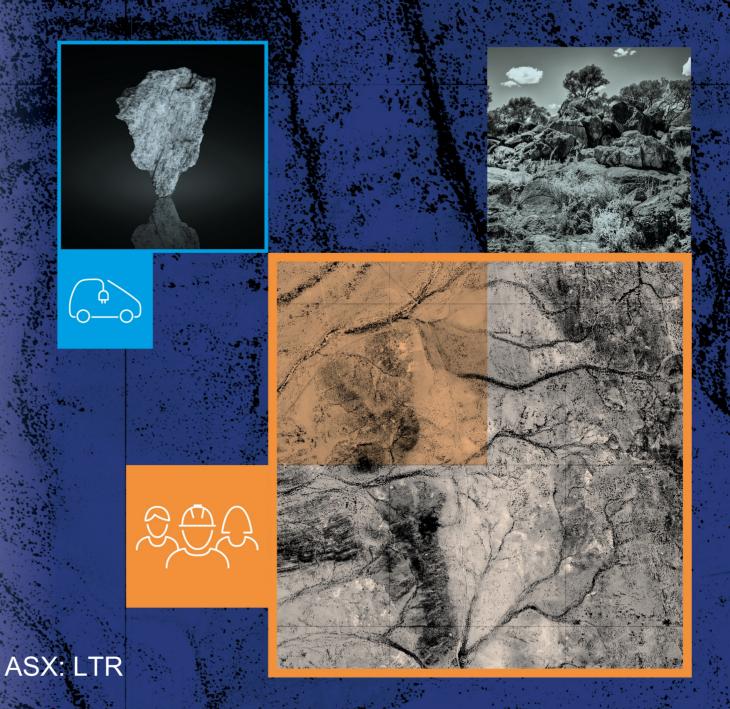
#### **Forward-looking statements**

This report contains forward-looking statements which are identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects', or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this report, are considered reasonable. Such forward-looking statements are not a guarantee of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the Directors and the management. The Directors cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this report will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. The Directors have no intention to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this report, except where required by law or the ASX listing rules.



## AGM Presentation

November 2021



## **Important information**

#### **Cautionary Statement**

The production targets and forecast financial information referred to in the Definitive Feasibility Study (DFS) and Downstream Scoping Study (DSS) were based on Proven Ore Reserves (3.3%), Probable Ore Reserves (79.5%) and Inferred Mineral Resources (17.2%). The Inferred material included in the inventory was 14.3Mt @ 1.1% Li<sub>2</sub>O & 120 ppm Ta<sub>2</sub>O<sub>5</sub>. The Inferred material was scheduled such that less than 10% of the Inferred material is mined in the first ten years, with the remainder mined through to the end of the mine life.

The Inferred material does not have a material effect on the technical and economic viability of the project.

There is a low 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.

#### Forward looking statements

This Presentation contains forward-looking statements which are identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects', or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this Presentation, are considered reasonable. Such forward-looking statements are not a guarantee of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the Directors and the management. The Directors cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this Presentation will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. The Directors have no intention to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this Presentation, except where required by law or the ASX listing rules.

#### Disclaimer

Whilst care has been exercised in preparing and presenting this presentation, to the maximum extent permitted by law, Liontown Resources Limited and its representatives:

- Make no representation, warranty or undertaking, express or implied, as to the adequacy, accuracy, completeness or reasonableness of this Presentation;
- Accept no responsibility or liability as to the adequacy, accuracy, completeness or reasonableness of this Presentation; and
- Accept no responsibility for any errors or omissions from this Presentation.

#### Competent person statement

The Information in this Presentation that relates to Exploration Results and Mineral Resources for the Kathleen Valley Project is extracted from the ASX announcement "Strong progress with Kathleen Valley Definitive Feasibility Study as ongoing work identifies further key project enhancements" released on 8 April 2021 which is available on <u>www.ltresources.com.au.</u>

The Information in this Presentation that relates to metallurgical testwork and process design, Ore Reserves, Production Target and DFS for the Kathleen Valley Project is extracted from the ASX announcement "Kathleen Valley DFS confirms Tier-1 global lithium project with outstanding economics and sector-leading sustainability credentials" released on 11 November 2021 which is available on <u>www.ltresources.com.au</u>.

The Information in this Presentation that relates to the DSS for the Kathleen Valley Project is extracted from the ASX announcement "Updated Downstream Scoping Study Highlights Next Growth Horizon for Kathleen Valley Project" released on 11 November 2021 which is available on <u>www.ltresources.com.au</u>.

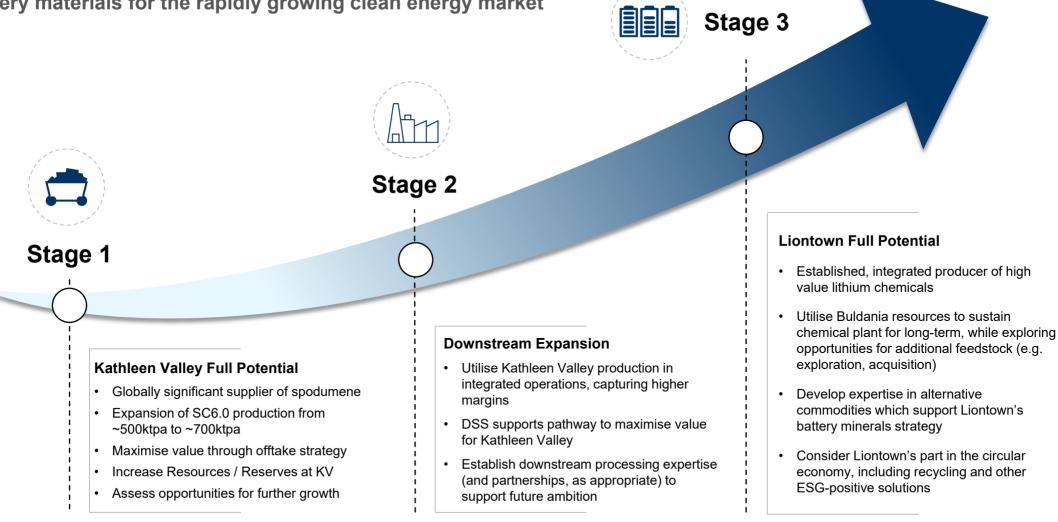
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#### Authorisation

This Presentation has been authorised for release by the Board.

## **Liontown's Strategy**

We aim to be an ESG-leader, and a globally significant provider of battery materials for the rapidly growing clean energy market



## **Highlights**



Kathleen Valley (KV) is a globally significant lithium resource, located within a stable and established mining jurisdiction with a strong ESG position with growth optionality. The project is well positioned, with start of production expected to coincide with a significant spodumene market deficit

	Globally significant Tier 1 project	<ul> <li>World-class lithium deposit with a globally significant Mineral Resource Estimate (MRE) of 156Mt @ 1.4% Li<sub>2</sub>O</li> <li>Exceptional economics, delivering a post-tax NPV<sub>8</sub> of A\$4.2bn and post-tax IRR of 57%</li> </ul>
****	Low cost, long-life scalable operations	<ul> <li>Current resource base supports an initial ~23 year life of mine, with Liontown targeting further expansion</li> <li>Low cash operating costs of US\$314/dmt (Years 1-5)<sup>1</sup> and capital intensity below other spodumene development projects</li> </ul>
	Timed to perfection	<ul> <li>Significant supply deficits forecast to emerge from 2024, expected to align with start of production at KV</li> <li>KV is positioned to become one of very few projects advanced enough to meet demand, with full offtake optionality</li> </ul>
	Strong ESG focus	<ul> <li>Liontown is on a net zero trajectory, with a climate strategy roadmap in place targeting net zero emissions by 2034</li> <li>Leveraged underground mining approach to achieve a strong ESG profile relative to peers</li> </ul>
	Clear and achievable long-term strategy	<ul> <li>DFS contemplates an expansion of SC6.0 production from ~500ktpa to ~700ktpa facilitating downstream ambition</li> <li>Updated Downstream Scoping Study (post-tax NPV<sub>8</sub> of A\$9.6bn, IRR of 56%) provides value maximising pathway</li> </ul>
FI	unding & Offtake Advanced	<ul> <li>Actively progressing all funding options. Board confident that funding will be in place prior to FID Q2 2022</li> <li>Offtake discussions well advanced with potential customers, diversified by geography and stage in the value chain</li> </ul>
	luding royalties IONTOWN RESOURCES	November 202 <sup>-</sup>

## Liontown's ESG Focus



#### Environment



- Aspiring to have Best-in-class Scope 1 and 2 emissions and reduced impact on local surroundings due to UG<sup>4</sup> approach
- ~60% renewable energy target to reduce Scope 2 emissions
- Minimising water usage through recycling
- Social and corporate governance
- Landmark Native Title Agreement signed with the Native Title Holders (the Tjiwarl)
- Social licence fundamental to sustainable, long-term operation
- Best-in-class reporting aligned with GRI<sup>1</sup>, TCFD<sup>2</sup> and SASB<sup>3</sup> standards
- First sustainability report expected Q4 2021

## **Climate Strategy Roadmap**

First Production	
2024	

#### Design & build for the future

- ~60% renewable power with built in expansion potential
- Conventional mine fleet with future proofed UG infrastructure
- Alternative fuels for mine and transport fleet
- Redesigned mine-plan with a focus on reduced ground disturbance

### Refine

2029

1<sup>st</sup> Goal

- Target >75% renewable power
- Upgraded mining fleet with electric trucks
- Target 50% biofuel powered road transport & LV fleet
- Reduced site water consumption via greater recycling

#### Net Zero

2034

#### Consolidate

- Target 100% renewable power
- Target 100% electric or clean fuel powered mining & LV Fleet
- Net zero to ship loading

## 10 years to net zero<sup>5</sup>

Customers

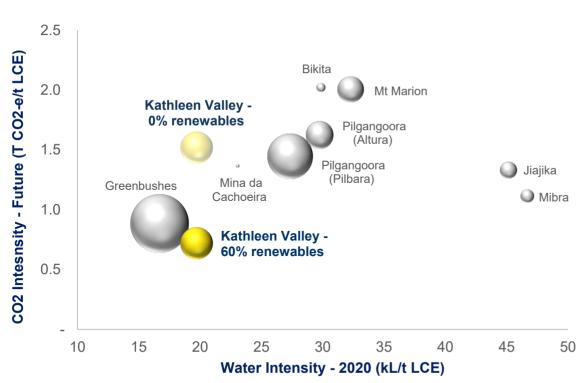
- Automotive OEMs increasingly demand environmentally-friendly, low-carbon batteries to achieve Scope 1-3 targets
- Carbon footprint labelling and transparency will enable end-consumer choice for ESG

## Liontown's ESG Focus (cont.)

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Underground mining provides significant sustainability advantages compared to peers, owing to higher ore quality and grades and minimisation of waste

#### **Sustainability Benchmarking**



Liontown is expected to be one of the first new mining

companies in Australia to have 60% renewable power at start-up

#### Social Engagement

#### Tjiwarl input has been included in the project initial design to ensure areas of cultural significance are respected

- Landmark Native Title Agreement (NTA) signed with Native Title Holders (the Tjiwarl) sets a new benchmark for positive collaboration and partnership between mining companies and Traditional owners
- Agreement talks to areas that matter for the Tjiwarl:
  - Communication
  - Land and Water Management
  - Aboriginal Heritage Management
  - Cultural Awareness & Access
  - Compensation
  - Social Opportunities and Development
  - Employment and Contracting
- NTA is a key enabler for project permitting

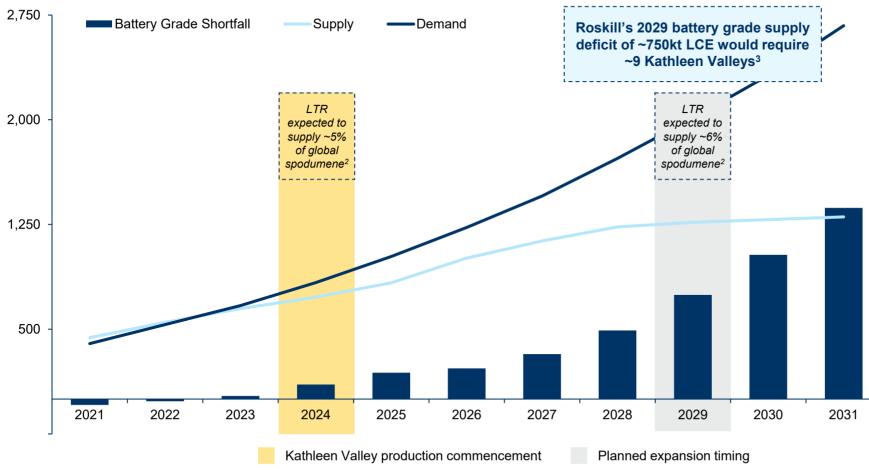


Source: Peers – Roskill and Kathleen Valley numbers are internal estimates Bubble size represents annual production of spodumene on a LCE basis

## **Lithium Market Dynamics**

Production at Kathleen Valley is expected to commence in 2024, coinciding with a forecast market deficit that is expected to continue and grow beyond 2024. Liontown has optionality to further increase production towards the end of the decade to capitalise on the widening deficit

#### Global lithium market balance (battery grade), 2021-31, kt LCE



#### Demand

- 25% forecast CAGR for Lithiumion Battery demand – driven by stronger GHG regulations and improving EV adoption
- 25% forecast CAGR for lithium hydroxide – as preferred product for cathodes

#### Supply

- Liontown is a globally significant source of supply – Liontown forecast to supply ~5% of global spodumene in 2024 and ~6% in 2029<sup>2</sup>
- Significant supply constraints Constraints on peers (e.g. environmental, permitting, customer agreements) make Liontown one of few viable options to meet supply deficit
- 17% cost advantage for hard rock – compared to producing LiOH from brine<sup>1</sup>

#### Source: Roskill, MineSpans

2. Liontown expected to supply 5% of global spodumene and 4% of global lithium in 2024 and Liontown expected to supply 6% of global spodumene and 4% of global lithium in 2029

3. Kathleen Valley 2029 production of ~681kdmt SC6.0 equivalent to ~86kt LCE (converted at 7.93t SC6.0 = 1t LCE)

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<sup>1.</sup> Costs represent indicative 2025 cost base for typical brine and spodumene operations; Source: MineSpans

## **November 2021 DFS Key Metrics**

Based on April 2021 MRE – 156Mt @ 1.4%  $\rm Li_2O$  and 130ppm  $\rm Ta_2O_5$ 

NPV <sup>1</sup> (post-tax)	A\$4.2B
IRR / Payback	57% / 2.3 years
SC6 Opex Years 1-5 <sup>3</sup> (FOB)	US\$402/dmt US\$314/dmt (excl. royalties)
SC6 Opex Years 1-10 <sup>3</sup> (FOB)	US\$417/dmt US\$319/dmt (excl. royalties)
AISC Years 1-10 <sup>4</sup> (FOB)	US\$452/dmt
Ave. SC6 Price Years 1-10⁵ (FOB)	US\$1,287/dmt (Based on Roskill price)
Capex <sup>6</sup>	A\$473M (incl. \$107M Pre-production)



Reserve

68.5Mt @ 1.34% Li<sub>2</sub>O &120ppm Ta<sub>2</sub>O<sub>5</sub>



**Total Production Inventory** 

82.7Mt @ 1.30% Li<sub>2</sub>O & 117ppm Ta<sub>2</sub>O<sub>5</sub>



Production

SC6: 511Ktpa (increasing to 658Ktpa)

**Ta<sub>2</sub>O<sub>5</sub>** (30%): 428tpa (increasing to 587tpa)



Mining

2.5 Mtpa (increasing to 4Mtpa)



**Opex<sup>3</sup> and AISC (Years 1-10)** 

Opex: US\$417/dmt

#### AISC: US\$452/dmt



**Total Free Cash Flow after tax** 

+A\$12.2B

1. 8% (real). FX assumption of 0.73

- 2. Refer Cautionary Statement on Slide 2.
- 3. Operating costs include all mining, processing, transport, state and private royalties, freight to port, port costs and site administration and overhead costs (includes tantalum credits). Excludes sustaining capital.
- 4. All in Sustaining Capital Costs (AISC), as referred to in this announcement, are cash operating costs including all mining, processing, transport, freight to port, port costs, site administration/ overhead costs, tantalum credits, state and private royalties and sustaining capital.

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5. Based on Roskill November 2021 price forecasts
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6. Project totals exclude working capital, finance costs, sustaining capital and corporate costs associated with project development

## **November 2021 DFS – NPV Sensitivity Analysis**

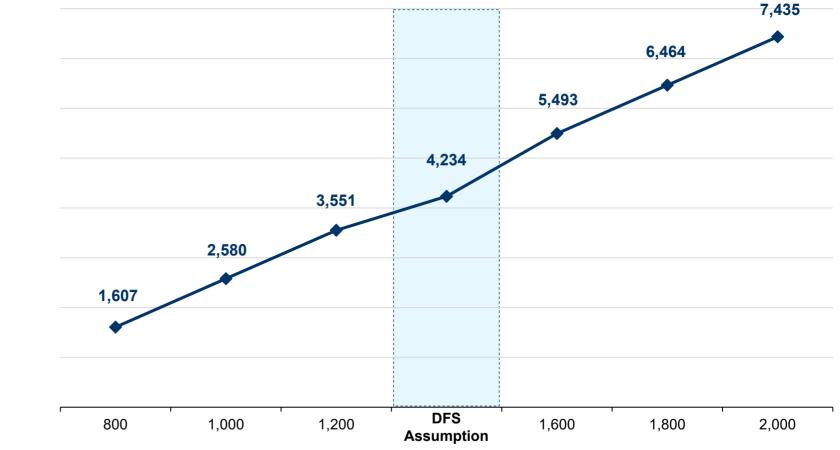


The DFS represents the potential for a world-class project at Kathleen Valley, with exceptional economics including an NPV of A\$4.2B. Liontown recognises the potential for upside and downside based on variation of actual outcomes against assumptions.



## Kathleen Valley NPV Sensitivity (A\$m)

Spodumene Price (US\$/dmt, FOB)



Spodumene Price (US\$/dmt, FOB)

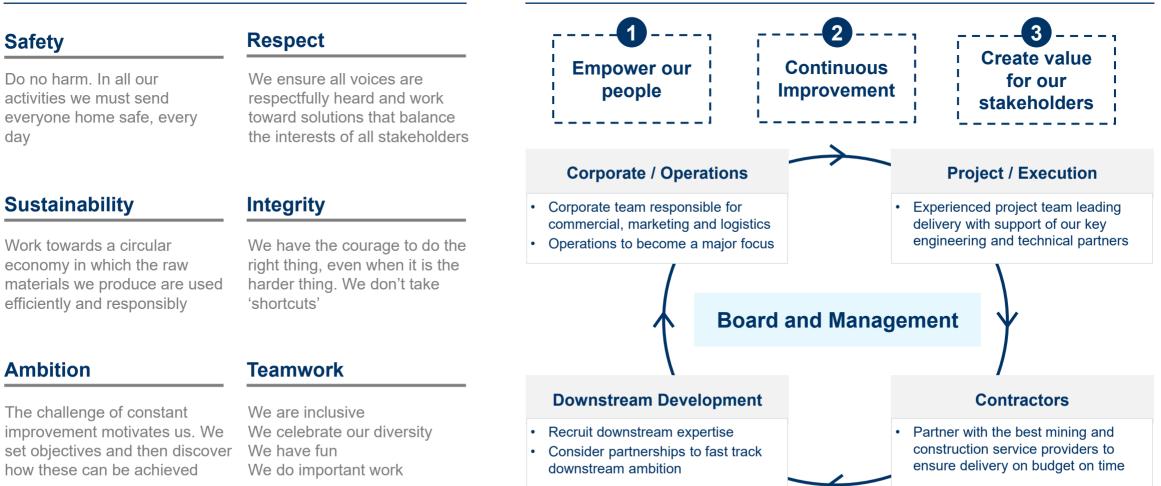
## We aim to accelerate the schedule to meet expected market shortfall



## **Building A Sustainable Company Starts With Good People**

Sustainability and governance has been approached to date with a clean slate and a small team, allowing the fundamentals to be established early to provide a valuable blueprint as the employee numbers and the company grows through aligned values

### **Our Values**



## Our Principles

## **Offtake Strategy**

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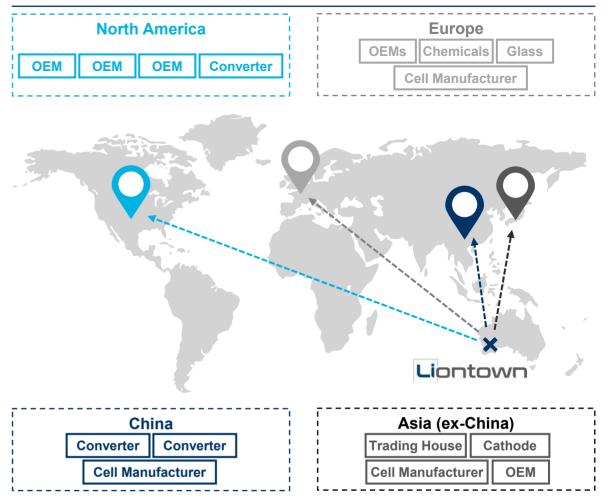
Liontown intends to put in place large foundation offtake agreements, aiming to deliver diversification by geography and stage in value chain

#### **Offtake Strategy**

- Discussions held with in excess of 50 parties who have expressed interest in offtake
- Leveraging strong position given full offtake optionality, patience has been a strength in the rapidly improving lithium market
- Offtake pricing likely to be determined with reference to the lithium hydroxide price, exposing Liontown to higher value end product
  - Liontown expects spodumene pricing calculated with reference to hydroxide price will provide potential for realised prices in excess of a spodumene index priced offtake
- Discussions are in advanced stages with a number of parties, diversified by geography and stage in value chain
- Offtake for tantalum by-product is also being explored with customers
- Any uncontracted production intended to be sold into the spot market

   various options are being explored, including auction platforms
   (such as the Battery Mineral Exchange, where other spodumene
   producers have recently achieved outstanding results)

#### **Geographic Breakdown and Indicative Target Customers**



## **Downstream Processing Opportunity**

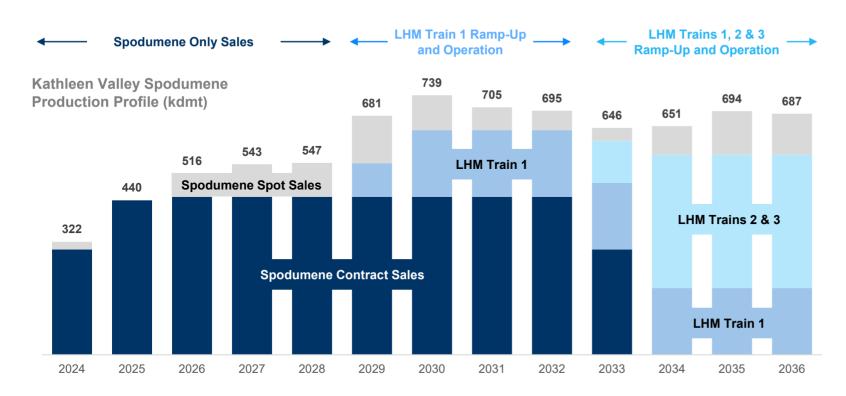
The updated DSS confirms: Value maximizing pathway for Liontown is a staged-build, integrated mining, processing and refining operation producing Lithium Hydroxide Monohydrate ("LHM")



The Integrated Project has the potential to make Liontown the 3rd largest supplier of LHM in the world (based on 2031 Roskill LHM projections) producing ~86ktpa LHM



Refinery will be included in our Climate Strategy Roadmap and benefit from the energy renewables developed during the operation of KV reducing its carbon footprint



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## Value Maximising Pathway

Exposure to higher margin endproduct more quickly

Capture highly favourable market environment

Unlocks additional offtakers (particularly OEMs) with potential for nearer-term discussions

Value maximising pathway with significant NPV value upside

Liontown progressing to prefeasibility study phase for downstream opportunity

## **November 2021 Downstream Scoping Study Key Metrics**

Downstream Scoping Study updated for new input assumptions from the Kathleen Valley DFS

NPV <sup>1</sup> (post-tax)	A\$9.6 Billion
IRR	56%
LOM Free Cash Flow	A\$32 Billion
LHM Opex <sup>3</sup> (US/t LHM)	US\$5,864/t LHM
Avg. LHM Price <sup>4</sup> (2029-2046)	US\$29,401/t LHM
Design Production	28.8ktpa LHM (per train) 86.4ktpa LHM (3-trains)
Capex⁵	A\$2 Billion (incl. KV mine and SC6.0 processing plant)



**Production** 

86.4ktpa LHM



Weighted Avg. Conversion Cost

US\$3,303/t LHM



**Product Sold** 

LHM: 1.3M dmt

SC6.0: 5.3M dmt



Spodumene Feedstock

Processing feed of ~570 ktpa SC6.0



LHM Opex<sup>3</sup>

US\$5,864/t LHM



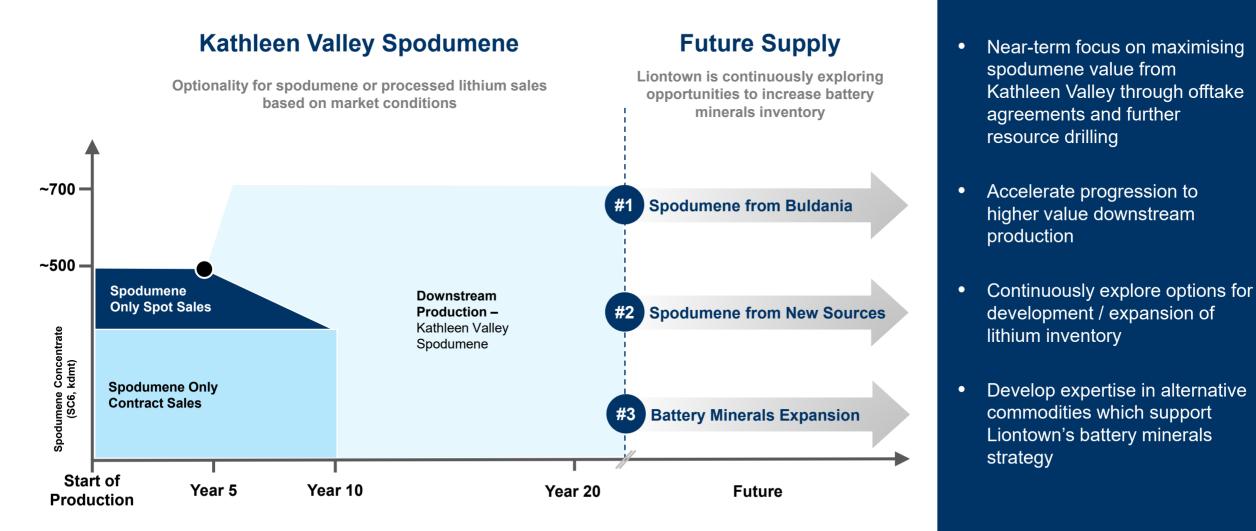
Total Free Cash Flow (after tax)

A\$32.4B

(1) 8% (real) | (2) Refer Cautionary Statement on Slide 2. | (3) Cash operating costs during the years of refinery operation include all mining, processing, downstream refining, transport, state & private royalties, freight to port, port costs, site administration, overhead costs and tantalum credits. Excludes sustaining capital. | (4) Based on Roskill November 2021 price forecasts | (5) Integrated CAPEX for LHM production includes \$538M for the mine / 6% Li<sub>2</sub>O (SC6.0) processing plant (DFS) and \$1.5B for the downstream refinery. Excludes working capital, finance costs, sustaining capital and corporate costs associated with project development. SC6.0 plant capital to DFS level +/-15% accuracy, DSS to +/-30% accuracy. DFS included no contingency on SC6.0 operating costs, DFS included (\$31M) capital contingency, DSS includes (\$258M) contingency on capital costs.

## Liontown's Long-Term Strategy

Liontown is planning for the future



## **Liontown's Investment Proposition**

Tier 1 Asset

## **ESG-Positive**





Kathleen Valley is a world-class lithium deposit, with exceptional economics and growth optionality Net zero trajectory, with a climate strategy roadmap in place targeting net zero emissions by 2034 Timed To Perfection



Significant supply deficits forecast to emerge from 2024, which is expected to align with start of production at Kathleen Valley Integrated Opportunity



Integrated, long-term lithium producer, positioned to capture value from mine to enduse in the electric vehicle market

## **Near Term Priorities**

- Execute attractive offtake agreements to support final investment decision
- Progress and finalise project funding
- 3 Secure long-lead items to support accelerated development timeline
- Appoint industry leading EPCM contractor to spearhead Kathleen Valley development



Continue to develop downstream strategy



## **Liontown** Thank You

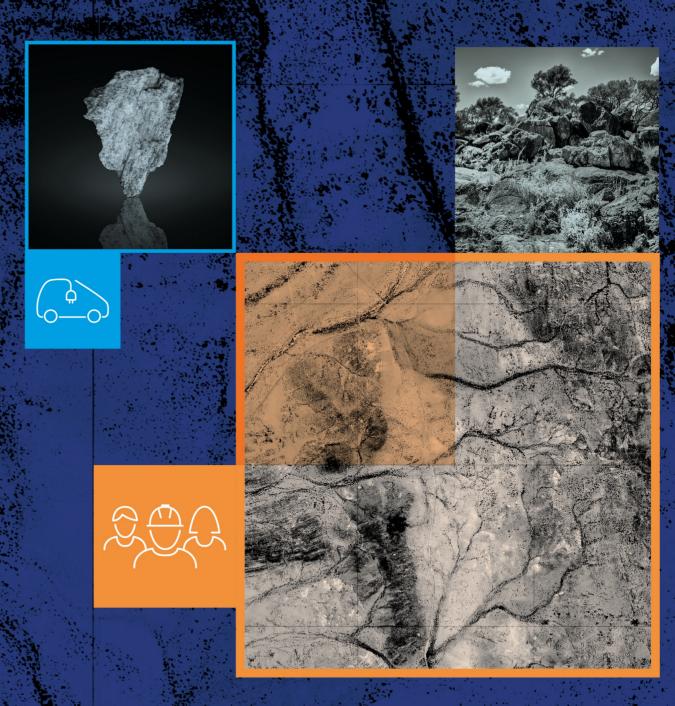
For More Information:

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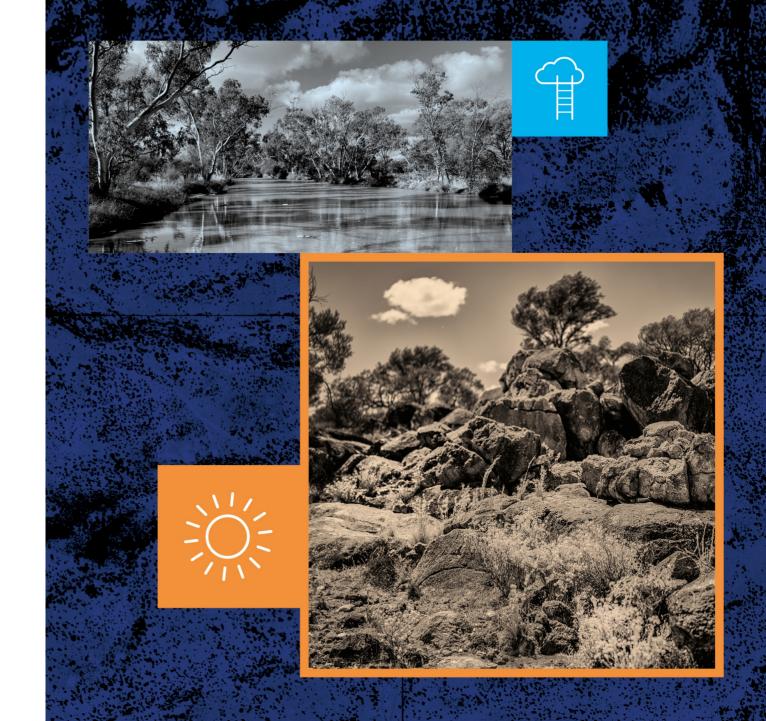
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## **APPENDIX 1**

Kathleen Valley Project Additional Information



## **Resources & Reserves**

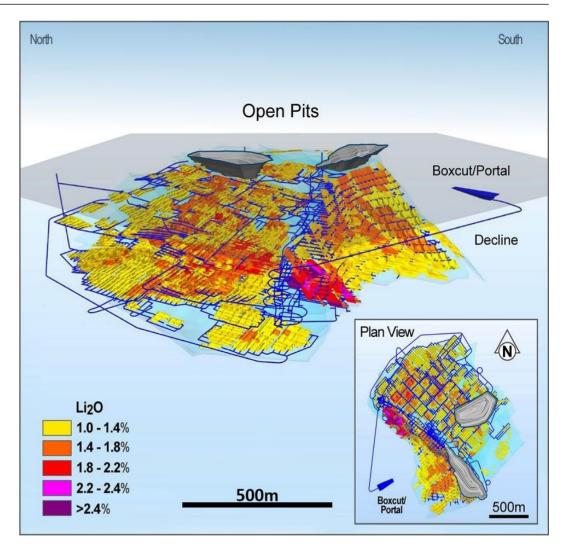
Kathleen Valley is a globally significant, high-grade resource

Mineral Resource Estimate <sup>1</sup> – April 2021				
Cut-off Li <sub>2</sub> O%	Resource Category	Million Tonnes	Li <sub>2</sub> 0%	Ta₂O₅ (ppm)
0.55	Measured	20	1.3	145
	Indicated	109	1.4	130
	Inferred	27	1.3	113
TOTAL		156	1.4	130

### **Ore Reserve – November 2021**

Category		Million Tonnes	Li₂O%	Ta₂O₅ (ppm)
Underground	Proved	-	-	-
	Probable	65.4	1.34	119
	Sub Total	65.4	1.34	119
Open Pit	Proved	2.7	1.30	141
	Probable	0.5	0.93	148
	Sub Total	3.2	2.23	142
TOTAL		68.5	1.34	120

1. Inclusive of ore reserve



## **DFS Key Parameters And Assumptions**



General and Economic	DFS <sup>1</sup>
Discount rate (real, post-tax)	8%
Weighted average LOM SC6.0 (FOB Geraldton)	US\$1,392/t <sup>5</sup>
Weighted average Tantalum LOM 30% conc. (FOB Fremantle)	US\$84/lb <sup>6</sup>
Exchange rate – AUD/USD	0.73
Mining and Production	
Average LOM strip ratio (Open Pit)	6:8:1
Processing rate	2.5 to 4Mtpa
Life-of-Mine Production Target (79.6Mt UG & 3.2Mt OP)	82.7 Mt ore
$Li_2O \& Ta_2O_5$ grades (diluted) years 1-10 processed (% / ppm)	1.4% / 126 ppm
LOM average $Li_2O \& Ta_2O_5$ grades (diluted) processed (% / ppm)	1.3% / 117 ppm
LOM average Test Work Li <sub>2</sub> O recovery <sup>2</sup>	78%
Overall $Ta_2O_5$ recovery (% including off-site upgrade losses of ~4%)	38%
SC6.0 grade	6%
Ta <sub>2</sub> O <sub>5</sub> Concentrate final grade	30%
Moisture content of SC6.0 concentrate	9%
Average steady state annual tonnes of SC6.0 (Years 2-5 / Years 6-22)	511ktpa / 658ktpa
Average steady state annual tonnes of 30% $Ta_2O_5$ concentrate (Years 2-5 / Years 6-22)	428tpa / 587tpa

Cost Assumptions	DFS <sup>1</sup>	
LOM avg open pit mining costs <sup>3</sup> (A\$/dmt ore mined <sup>4</sup> )	28	
LOM avg U/G mining costs <sup>3</sup> (A\$/dmt ore mined <sup>4</sup> )	45	
LOM average processing cost (A\$/dmt ore processed)	22	
Logistics and transport (A\$/wmt conc. incl. Port Charges)	69	
General and admin (A\$/dmt ore processed incl. mining)	8	
Private and state royalties (A\$/dmt)	145	
Corporate tax rate	30%	
Estimated opening tax losses (A\$M)	55	

1: Refer Cautionary Statement on Slide 2 | 2. Based on test work derived grade recovery relationship for DFS was 81%, for purposes of financial modelling a figure of 78% has been applied. | 3: Includes ROM rehandle | 4: Excludes preproduction | 5: Based on Roskill November 2021 price forecast, adjusted to FOB. | 6: Based on Roskill September 2021 price forecast, adjusted to FOB.

## **DSS Key Parameters And Assumptions**



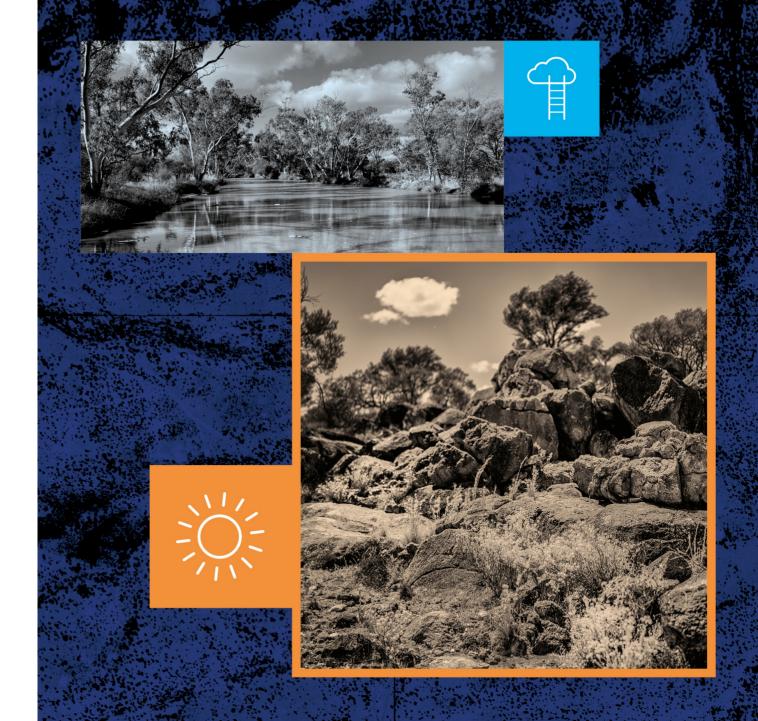
General and Economic	DSS <sup>1</sup>
Discount rate (real, post-tax)	8%
SC6.0 weighted average price (FOB)	US\$1,289/t <sup>2</sup>
Weighted average LHM price (FOB)	US\$29,401/t
Weighted average tantalum 30% conc. (FOB Fremantle)	US\$84/lb <sup>3</sup>
Exchange rate – AUD/USD	0.73
Downstream Integrated Refinery	
Number of processing trains	3
Recovery Li (%)	90
Calcination temperature (°C)	1,100
Sulphuric Acid Addition (mol/mol)	1.25 (H <sub>2</sub> SO <sub>4</sub> :Li <sub>2</sub> O)
Acid Roast Temperature (°C)	250
Acid Leaching Residence Time (minutes)	120
Lithium Crystalliser Stages (per train)	3
Design Production	28.8ktpa LHM

Cost Assumptions	DSS <sup>1</sup>
SC6.0 LOM average operating cost excl. transport <sup>4</sup> (US\$/dmt SC6.0 produced)	378
SC6.0 Transport cost (to Geraldton incl. Port Charges) (US\$/dmt SC6.0 sold)	55
LHM weighted average processing conversion cost (US\$/dmt LHM)	3,303
LHM Transport cost (to Fremantle incl. Port Charges) (US\$/dmt LHM)	70
Royalties	As per DFS, based on spodumene feedstock market value
Corporate tax rate	30%
Estimated opening tax losses (A\$m)	55

1: Refer Cautionary Statement on Slide 2 | 2: Based on Roskill November 2021 price forecast, adjusted to FOB. | 3: Based on Roskill September 2021 price forecast, adjusted to FOB. | 4: Includes royalties and tantalum credits, excludes sustaining capital. Refer to separate DFS announcement published 11<sup>th</sup> November 2021

## **APPENDIX 2**

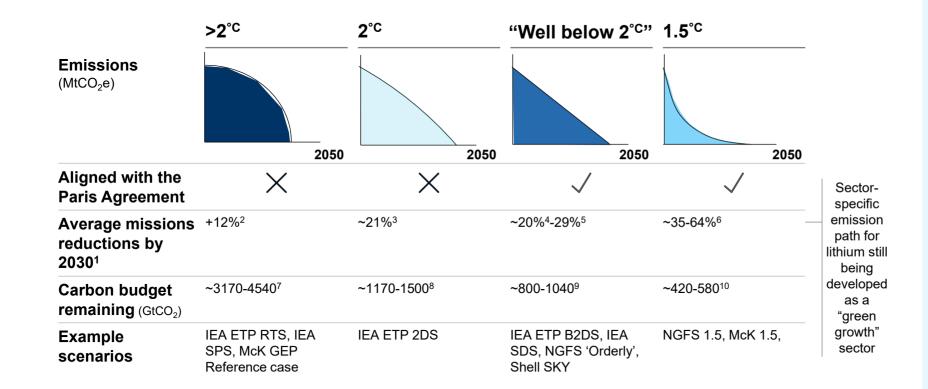
Kathleen Valley Project Net Zero Definition



## Liontown will firm up its net-zero trajectory aspiration before FID

Selected examples of different "net zero" pathways





There are many different ways to meet "net zero" by 2050

1: Approximations, compared to 2020, based on published scenarios | 2: IEA ETP 2017 RTS (assuming 33.5 GtCO2direct emissions from energy in 2020) | 3: IEA ETP 2017 2DS (assuming 33.5 GtCO2direct emissions from energy in 2020) | 4: Based on IEA 2020 WEO SDS scenario, direct  $CO_2$  emissions from energy, global | 5: NGFS 2020 'Orderly'  $(CO_2)$  | 6: NGFS 2020 1.5 with CDR and with limited CDR respectively | 7: IPCC AR5, RCP6.0, 720-1000ppm  $CO_2e$ , cumulative emissions 2011-2100: 3620-4990, minus 9 years emissions of ~50GtCO\_2e/year since 2011 = 3170-4540, approximation of  $50GtCO_2e/yr$  based on Climatewatch data | 8: IPCC SR15 report, budget starting from 2018, for 2C, at 67<sup>th</sup> and 50th percentile | 9: IPCC SR15 report, budget starting from 2018, for 1.75C, at 67th and 50th percentile | 10: IPCC SR15 report, budget starting from 2018, for 1.5C, at 67th and 50th percentile

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