Appendix 3 – Kathleen Valley – JORC Code 2012 Table 1 Criteria

The table below summarises the assessment and reporting criteria used for the Kathleen's Corner, Mt Mann deposits and Kathleen Valley Lithium Project Mineral Resource estimate and reflects the guidelines in Table 1 of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.*	• Sub-surface samples have been collected by reverse circulation (RC) and diamond core drilling techniques (see below). • Drillholes are oriented perpendicular to the interpreted strike of the mineralised trend except in rare occasions where limited access necessitates otherwise.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. *Aspects of the determination of mineralisation that are Material to the Public Report.* *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• RC samples are collected by the metre from the drill rig cyclone as two 1 m cone split samples in calico bags and a bulk sample in plastic mining bags. • The 1 m samples from the cyclone are retained for check analysis. Only samples of pegmatite and adjacent wall rock (~4 m) are collected for assay. • Diamond core has been sampled in intervals of ~ 1 m (up to 1.18 m) where possible, otherwise intervals less than 1 m have been selected based on geological boundaries. Geological boundaries have not been crossed by sample intervals.
Drilling techniques	*Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	Drilling techniques used at Kathleen Valley comprise: • Reverse Circulation (RC/5.5") with a face sampling hammer • NQ Diamond Core, standard tube to a depth of ~450 m. • HQ Diamond Core, standard tube to a depth of ~200-250 m. • PQ Diamond Core, standard tube to a depth of ~200m. • Diamond core holes drilled directly from surface or from bottom of RC precollars. Core orientation was provided by an ACT REFLEX (ACT II RD) tool.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Sample recoveries are estimated for RC by correlating sample heights in the green mining bag to estimate a recovery for each metre. • For diamond core the recovery is measured and recorded for every metre.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	• RC drill collars are sealed to prevent sample loss and holes are normally drilled dry to prevent poor recoveries and contamination caused by water ingress. Wet intervals are noted in case of unusual results. • For diamond core loss, core blocks have been inserted in sections where core loss has occurred. This has then been written on the block and recorded during the logging process and with detailed photography of dry and wet core.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• It has been demonstrated that no relationship exists between sample recovery and grade. No grade bias was observed with sample size variation.
Logging	*Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource*	• All RC drillholes are logged on 1 m intervals and the following observations recorded: o Recovery, quality (i.e. degree of contamination), wet/dry, hardness, colour, grainsize, texture,

Criteria	JORC Code explanation	Commentary
	estimation, mining studies and metallurgical studies.	mineralogy, lithology, structure type and intensity, pegmatite and vein type and %, lithium mineralogy and %, alteration assemblage, UV fluorescence. • Diamond core is logged in its entirety as per detailed geological description listed above. Geotechnical logging has been completed for the entire hole.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• Logging is quantitative, based on visual field estimates. • Diamond core is photographed post metre marking, for the entire length of the hole, two trays at a time, wet and dry.
	The total length and percentage of the relevant intersections logged.	• Holes are logged in their entirety.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	• The core has been cut in half and then quartered for sample purposes. Half core will be used for metallurgical studies with the remaining quarter stored as a library sample. • Density measurements have been taken on all quarter core samples using the Archimedes method.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• RC samples are collected as rotary split samples. Samples are typically dry.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• Sample preparation follows industry best practice standards and is conducted by internationally recognised laboratories; i.e. ○ Oven drying, jaw crushing and pulverising so that 80% passes -75 microns.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• Duplicates and blanks submitted approximately every 1/20 samples. • Standards are submitted every 20 samples or at least once per hole. • Cross laboratory checks and blind checks have been used at a rate of 5%.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	• Measures taken include: ○ regular cleaning of cyclones and sampling equipment to prevent contamination ○ industry standard insertion of standards, blanks and duplicate samples • Analysis of duplicates (field, laboratory and umpire) was completed and no issues identified with sampling representatively. • Analysis of results from blanks and standards indicates no issues with contamination (or sample mix-ups) and a high level of accuracy.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	• Sample size is considered appropriate for the preparation of a Mineral Resource Estimate
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Initial assaying (2017) completed by ALS Perth. Subsequent assaying (2018 onwards) completed by Nagrom laboratories Perth. • Both laboratories use industry standard procedures for rare metals such as Li and Ta. Analytical techniques are total.
	For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	• None used.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	• Duplicates and blanks submitted approximately every 20 samples. • Standards are submitted every 20 samples or at least once per hole. • Cross laboratory checks and blind checks have been used at a rate of 5%. • Analysis of reference blanks, standards and duplicate samples show the data to be of acceptable accuracy and precision for the Mineral Resource estimation and classification applied.
	The verification of significant intersections by either independent or alternative company personnel.	• Internal review by alternate company personnel.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	*The use of twinned holes.*	• 12 diamond holes have been drilled as twins or in close proximity to existing RC drill holes. Results compare well with the original RC drill holes.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Drilling and logging data is entered directly into Microsoft Excel spreadsheets onsite while drilling is ongoing. Data is then entered into Access Database and validated before being processed by industry standard software packages such as MapInfo and Micromine. • Representative chip samples are collected for later reference.
	Discuss any adjustment to assay data.	• Li% is converted to Li_2O% by multiplying by 2.15, Ta ppm is converted to Ta_2O_5 ppm by multiplying by 1.22.
Location of data points	*Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• All drill collars and geochemical samples are initially located using a handheld GPS. • Drill collars are subsequently surveyed accurately by a licensed surveyor using DGPS techniques. Eastings and northings are measured to within +/- 2cm while elevations are measured to within +/- 10cm. • All RC drillholes have been surveyed by a multi-shot digital downhole camera provided by the drilling contractor. • All diamond drillholes have been surveyed with a REFLEX EZI-SHOT (1001) magnetic single shot camera.
	Specification of the grid system used.	• GDA 94 Zone 51
	Quality and adequacy of topographic control.	• Initial collar elevations are based on regional topographic dataset and GPS. • Drillhole collars are surveyed post drilling with DGPS. • Further topographic data (20cm contours) has been provided for the Project by a LIDAR flown by Fugro.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	• Varies due to initial drill programmes largely designed to test the down-dip potential of mineralised outcrops. The drill section spacing is 40 m to 100 m and on-section spacing is generally 30 m to 60 m.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	• The data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation and classification applied.
	Whether sample compositing has been applied.	• None undertaken.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• Drilling is typically oriented perpendicular to the interpreted strike of mineralisation. • KVRC0015 was oriented at 45° to strike due to access issues and the need to test the main outcrop zone.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Drilling orientation intersects the mineralisation at appropriate angles so as to be mostly unbiased and suitable for resource estimation of the major pegmatite bodies.
Sample security	*The measures taken to ensure sample security.*	• Sample security is not considered to be a significant risk given the location of the deposit and bulk-nature of mineralisation. • Nevertheless, the use of recognised transport providers, sample dispatch procedures directly from the field to the laboratory, and the large number of samples are considered sufficient to ensure appropriate sample security. • Company geologist supervises all sampling and subsequent storage in field. The same geologist arranges delivery of samples to Nagrom laboratories in Perth via courier.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	• Independent, expert competent person reviews have been completed by Michelle Wild of Wildfire Resources Pty Ltd and Christine Standing of Optiro

Criteria	JORC Code explanation	Commentary
		Limted on the resource drilling, sampling protocols and data. • This included a laboratory visit to Nagrom by Michelle Wild. • Results have not indicated any significant discrepancies.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	• The Kathleen Valley Project is located ~680 km NE of Perth and ~45 km NNW of Leinster in Western Australia. The Project comprises four granted mining leases - MLs 36/264, 265, 459, 460 and one Exploration License - E36/879. • The mining leases (MLs) were acquired from Ramelius Resources Limited via a Sales Agreement completed in 2016. The MLs have been transferred to LRL (Aust) Pty Ltd, a wholly owned subsidiary of Liontown Resources Limited (Liontown). • Ramelius acquired 100% of the Kathleen Valley Project MLs in June 2014 from Xstrata Nickel Operations Pty Ltd (Xstrata). Xstrata retains rights to any nickel discovered over the land package via an Offtake and Clawback Agreement. • LRL (Aust) Pty Ltd has assumed the following Agreement: • Bullion and Non-Bullion Royalty Agreement of a 2% Gross Production Royalty affecting M36/264-265 and 459-460. • The EL is in the name of Liontown Resources Limited with no third-party obligations apart from statutory requirements. • The tenements are covered by the Tjiwarl Determined Native Title Claim (WC11/7). Liontown has signed Access Agreements with the NT group. • LRL (Aust) Pty Ltd has received Section 18 consent to drill on certain areas within M36/459 and M36/460
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• All tenements are in good standing.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• Multiple phases of exploration have previously been completed for gold and nickel. • There has been limited sporadic prospecting for Li, Ta and Sn, principally by Jubilee Mines (subsequently taken over by Xstrata). Work comprised geological mapping, broad spaced soil sample lines and rock chip sampling of the pegmatites. Details of the methods and procedures used have not been documented. • There has been no previous drill testing of the Li and Ta prospective pegmatites prior to Liontown acquiring the Project.
Geology	*Deposit type, geological setting and style of mineralisation.*	• The Project is located on the western edge of the Norseman- Wiluna Belt within the Archaean Yilgarn Craton. • The Kathleen Valley Project contains a series of quartz-feldspar-muscovite-spodumene pegmatites hosted in mafic rocks related to the Kathleen Valley Gabbro or the Mt Goode Basalts. • The pegmatites are LCT type lithium bearing-pegmatites.
Drillhole Information	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar* • *elevation or RL (elevation above sea level in metres) of the drillhole collar* • *dip and azimuth of the hole*	• When reporting Exploration Results, see figures and appendices in accompanying report • When reporting Mineral Resource Estimate, diagrams in the announcement show the location of and distribution of drill holes in relation to the resource.

Criteria	JORC Code explanation	Commentary
	• *down hole length and interception depth* • *hole length.*	
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.*	• Li_2O intercepts calculated using 0.4% cut off with a maximum 2m internal dilution typically applied except where drill hole logging (e.g. continuous pegmatite) and assays indicate wider dilution is warranted as overall grade is high enough to allow mining to take entire geological unit. • Higher grade intervals calculated using 1.5% Li_2O cut off. No upper cuts applied. • Ta_2O_5 values only quoted when lithium intersections reported. • Not relevant when only reporting definition of Mineral Resource Estimation.
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	• Estimates of true widths provided at end of Appendices attached to ASX announcements which list drill hole statistics • Not relevant when only reporting definition of Mineral Resource Estimation.
Diagrams	*Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• When reporting Exploration Results, see figures and appendices in accompanying report • Not relevant if only reporting definition of a Mineral Resource estimate.
Balanced reporting	*Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• All recent exploration results reported and tabulated. • Not relevant if only reporting definition of a Mineral Resource estimate.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Where relevant, this information has been included or referred to elsewhere in this Table.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• Further RC and diamond core drilling to expand and infill current MRE • Option studies to define parameters for DFS. • DFS.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.*	• Drill hole data was extracted directly from the Company's drill hole database, which includes internal data validation protocols. • Data was further validated by Optiro upon receipt, and prior to use in the estimation.
	Data validation procedures used.	• Validation of the data was confirmed using mining software (Datamine) validation protocols, and visually in plan and section views.
Site visits	*Comment on any site visits undertaken by the Competent Persons and the outcome of those visits.*	• Liontown personnel Mr. Richards and Mr. Day have visited the site on numerous occasions to supervise the drilling programmes. • Ms. Wild (Principal Geologist and Director of Wildfire Resources Pty Ltd) and Mrs. Standing (Optiro Pty Ltd) have visited the site on separate occasions during resource definition drilling programmes to review sampling procedures. • Ms. Wild reported that, in general, site practices

Criteria	JORC Code explanation	Commentary
		were quite good, core quality was excellent and RC sample quality was moderate. • Mrs. Standing has confirmed site practices are appropriate and satisfactory for the preparation of a Mineral Resource Estimate.
Geological interpretation	*Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit.*	• The confidence in the geological interpretation is reflected by the assigned resource classification.
	Nature of the data used and of any assumptions made.	• Both assay and geological data were used for the mineralisation interpretation. • The lithium mineralisation is defined by a nominal 0.4% Li_2O cut-off grade. • Continuity between drill holes and sections is good.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	• No alternative interpretations were considered. • Any alternative interpretations are unlikely to significantly affect the Mineral Resource estimate.
	The use of geology in guiding and controlling Mineral Resource estimation.	• Geological logging (including spodumene crystal orientation from the diamond core) has been used for interpretation of the pegmatites.
	The factors affecting continuity both of grade and geology.	• The mineralisation is contained within pegmatite veins that are readily distinguished from the surrounding rocks. • Sectional interpretation and wire framing indicates good continuity of the interpreted pegmatite veins both on-section and between sections. • The confidence in the grade and geological continuity is reflected by the assigned resource classification.
Dimensions	*The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Nineteen mineralised pegmatites have been identified at the Kathleen Valley Project which extend from surface to a depth of 480m. • At Mt Mann, two steeply-dipping (-70° west) pegmatites have been drilled over a strike length of 1,200m and to a vertical depth of 480m. The two pegmatites are up to 35m thick and have average thicknesses of 9m and 16m. At Kathleen's Corner, 17 sub-horizontal pegmatites have been drilled over an area of 1,800m by 1,300m. These pegmatites outcrop in the northeast, are up to 40m thick with an average thickness of 8m and extend down-dip for 850m to 950m, where they merge with Mt Mann pegmatites at approximately 250m to 300m below surface to form a single, thick (35m to 75m) mineralised body.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*	• Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. • Lithium oxide (Li_2O) % and tantalum pentoxide (Ta_2O_5) ppm block grades were estimated using ordinary kriging (OK). Optiro considers OK to be an appropriate estimation technique for this type of mineralisation. • The nominal spacing of the drill holes is 50m by 50m. The along section spacing ranges from 30m to 100m and on-section spacing ranges from generally 30m to 60m. • Almost 93% of the assay data for within the mineralised pegmatites is from samples of 1m

Criteria	JORC Code explanation	Commentary
		intervals, 1% is from sample of >1m (to a maximum of 1.6m) and 6% is from intervals of less than 1m. The data was composited to 1m downhole intervals for analysis and grade estimation. • Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of Li_2O and Ta_2O_5. • Li_2O mineralisation continuity was interpreted from variogram analyses to have an along strike range of 50m to 168m and a down-dip (or across strike) range of 48m to 100m. • Ta_2O_5 mineralisation continuity was interpreted from variogram analyses to have an along strike range of 50m to 117m and a down-dip (or across strike) range of 100m to 142m. • A maximum extrapolation distance of 50m was applied along strike. Down dip extrapolation was generally 30m, however, the geological interpretation (and thus grade extrapolation) of the feeder zone (below Mt Mann) was extended by 30m depth and up to 150m down dip to include intersections with visible spodumene mineralisation (that have not yet been assayed) and where assay data confirmed along strike extensions of this deeper mineralisation. • Kriging neighbourhood analysis was performed in order to determine the block size, sample numbers and discretisation levels. • Three estimation passes were used for Li_2O and Ta_2O_5; the first search was based upon the variogram ranges; the second search was two times the initial search and the third search was up to seven times the second search and second and third searches had reduced sample numbers required for estimation. • Almost 87% of the total Li_2O block grades were estimated in the first search pass, 12% within the second search pass and only 1% estimated in the third search pass. A few blocks (0.6%) were not estimated within three of the pegmatites and the average estimated block grade for each domain was assigned to these blocks. Blocks with assigned grades comprise 0.002% of the total resource model. • The majority of Ta_2O_5 block grades (almost 91%) were estimated in the first pass, 8% in the second pass and 0.3% in the third pass. • The Li_2O and Ta_2O_5 estimated block model grades were visually validated against the input drill hole data and comparisons were carried out against the declustered drillhole data and by northing, easting and elevation slice.
	Description of how the geological interpretation was used to control the resource estimates.	• Geological interpretations were completed on sections which were wire framed to create a 3D interpretation of the mineralised pegmatites. • The interpretation of mineralisation was by Liontown based on geological logging and Li_2O content. A nominal grade of 0.4% Li_2O was used to define the mineralisation within the interpreted

Criteria	JORC Code explanation	Commentary
		pegmatites. • The mineralised domain is considered geologically robust in the context of the resource classification applied to the estimate.
	Discussion of basis for using or not using grade cutting or capping.	• Li_2O and Ta_2O_5 have low coefficients of variation (CV). Some higher-grade outliers were noted and the Ta_2O_5 grades were capped (top-cut). The top-cut level was determined using a combination of top-cut analysis tools, including grade histograms, log probability plots and the CV.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• The Mineral Resource was first estimated for the Kathleen's Valley Lithium Project in August 2018 and was updated in July 2019. The July 2019 Mineral Resource comprising 74.9 Mt at an average grade of 1.3% Li_2O and 140 ppm Ta_2O_5 was reported above a Li_2O cut-off grade of 0.5% for open pit potential (above 200mRL) and 0.7% for underground potential (below 200 mRL). • Since the July 2019 Mineral Resource was estimated an additional 33 reverse circulation holes, for a total of 13,051m (including 10 pre-collars) and 22 diamond core holes (for a total of 4,523m) have been drilled. These have extended the mineralisation at Mt Mann at depth (from 390m in 2019 to 480m in 2020) and at Kathleen's Corner to the northwest by 700m. • The resource tonnage has increased from 74.9Mt in 2019 to 139Mt in 2020 and the average grade of the resource of 1.3% Li_2O and 140 ppm Ta_2O_5 is the same for both resource estimates. • In addition, the cut-off grade used for Mineral Resource reporting have been changed to reflect the combination of potential mining methods. • No production has occurred.
	The assumptions made regarding recovery of by-products.	• No assumptions have been applied for the recovery of by-products. • Metallurgical test work is ongoing to determine the recoveries that could be expected.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	• Deleterious elements were not considered for the Mineral Resource estimate. • Metallurgical test work is in progress. Results to date indicate low levels of Fe within the interpreted mineralised pegmatite domains. • Sulphur assays have been determined for more than 27,000 host rock samples – results indicate that acid mine drainage will not be a significant environmental factor.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• Grade estimation was into parent blocks of 10mE by 10mN by 3.0mRL. • Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. • Sub-cells to a minimum dimension of 2.5mE by 2.5mN by 0.5mRL were used to represent volume.
	Any assumptions behind modelling of selective mining units.	• Selective mining units were not modelled.
	Any assumptions about correlation between variables.	• Li_2O and Ta_2O_5 are not correlated. Both Li_2O and Ta_2O_5 were estimated independently.

Criteria	JORC Code explanation	Commentary
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	• No production has taken place and thus no reconciliation data is available.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages have been estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off grade of 0.55% Li_2O has been selected to represent the portion of the resource that may be considered for eventual economic extraction by a combination of open pit and underground mining methods. • This cut-off grade has been selected by Liontown Resources in consultation with Optiro based on current experience and in-line with cut-off grades applied for reporting of Mineral Resources of lithium hosted in spodumene bearing pegmatites elsewhere in Australia.
Mining factors or assumptions	*Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous.*	• The mineralisation at Kathleen Valley extends from surface and would be suitable for open pit mining. High grade mineralisation is present at depth and would be suitable for underground mining. • The Kathleen Valley Lithium Project is located in a well-established mining region and in close proximity to existing close to existing transport, energy and camp infrastructure. • On the basis of these assumptions, it is considered that there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.
Metallurgical factors or assumptions	*The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous.*	• A Pre-feasibility level test work programme was conducted at ALS in Perth to provide sufficient test data to develop the process design criteria for the project. A total of 81 intercepts from across the three main areas (Mt Mann, Kathleen Corner and Kathleen Valley North) were selected for the Pre-feasibility Study. A master composite was created for testing from these samples which are representative of the whole deposit and include a range of grades and depths. No variability testing has been undertaken at this time. • Key aspects of the metallurgical test work included the following: ○ head assay ○ SMC testing on five comminution samples ○ size by size assay ○ crushing and wet screening at three sizes ○ heavy liquid separation (HLS) at three crush and screen sizes•Dense media separation of a bulk sample ○ bond ball work index on DMS middlings ○ magnetic separation to remove ferrous materials ○ rougher flotation to examine collector choice, residence time, desliming and conditioning ○ cleaner flotation to examine residence time and number of stages ○ thickening of flotation and slime tailings (in progress)

Criteria	JORC Code explanation	Commentary
		○ filtration of concentrate ○ rheology of tailings. • Key results from the test-work indicated that: ○ Samples were moderately competent, with comminution results similar to other pegmatites. ○ Wet screening data indicated that there was a trade-off in crush size and screen size with liberation. A finer crush size increased liberation in the HLS stage but increased fines production. A crush size of 6 mm was selected. ○ DMS testing indicated that a saleable concentrate with a grade of more than 6% Li2O could be produced together with a low-grade coarse tail. ○ Grind optimisation of the flotation feed indicated that a primary grind of 125 microns gave the best recovery and was thus selected for subsequent test work. ○ Rougher flotation test work indicated that a modified oleic acid collector gave the best flotation performance. ○ Batch cleaner flotation results indicated that a concentrate with a grade of more than 6% Li2O could be produced. ○ Concentrate filtration test work, currently being finalised, has indicated that vacuum filtration will be adequate for dewatering. ○ Rheology test work indicated that the tailings have low viscosity at the proposed tailings density. • The overall metallurgical recovery estimated from the flowsheet testing was 76% based on a combination of dense media testing and batch flotation. The proposed metallurgical process is used in several lithium projects currently operating in Western Australia. The process has been tested at Pre-feasibility level in the laboratory and further work is planned during the DFS.
Environmental factors or assumptions	*Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.*	• Baseline flora and fauna studies have been completed and it is considered unlikely, given current knowledge that impacts on conservation significant flora, fauna and ecological communities will result from development of the project. • Further baseline studies are scheduled during the DFS.
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density was measured for 2,665 core samples (including 1,988 samples of pegmatite) from diamond holes using Archimedes measurements. • The density data for the pegmatites has a range of 2.12 to 3.46t/m^3. • A bulk density of 2.71t/m^3 was assigned to the oxide and transitional mineralised pegmatite and 2.73t/m^3 was assigned to the fresh mineralised pegmatite.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	• Mineral Resources have been classified as Measured, Indicated or Inferred. • In general, the pegmatites that have been tested by the 50 m by 50 m spaced drill holes have high

Criteria	JORC Code explanation	Commentary
		confidence in the geological interpretation and, having higher estimation quality, were classified as Measured. • Areas where the drill spacing is up to 60m by 10m that have good confidence in the geological interpretation and where the majority of block grades were estimated within the first search (but where the estimation quality is lower than the Measured areas) were classified as Indicated. • Areas where the drill spacing is up to 60m by 100m, that have good confidence in the geological interpretation and where the majority of block grades were estimated in the second and third search passes or in areas of grade extrapolation have been classified as Inferred.
	Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	• The Mineral Resource has been classified on the basis of confidence in geological and grade continuity and taking into account the quality of the sampling and assay data, data density and confidence in estimation of Li_2O and Ta_2O_5 content (from the kriging metrics).
	Whether the result appropriately reflects the Competent Person's view of the deposit	• The assigned classification of Measured, Indicated and Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	• The Mineral Resource has been reviewed internally as part of normal validation processes by Optiro. • No external audit or review of the current Mineral Resource has been conducted.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person.*	• The assigned classification of Measured, Indicated and Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.	• The confidence levels reflect potential production tonnages on a quarterly basis, assuming open pit mining.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• No production has occurred from the deposit.