

ASX Release

17 October 2022

Clarification to Exploration Update – Graphite Bull Project

Buxton Resources Limited (ASX:BUX) refers to the announcement dated 12 October 2022 titled "Exploration Update – Graphite Bull Project" and provides the following additional information to the JORC table which has been requested by ASX.

This announcement was authorised for release by:



Sam Wright
Company Secretary

EXPLORATION UPDATE – GRAPHITE BULL PROJECT

- New metallurgical work on Buxton's 100% owned graphite project has produced >99% C concentrate via a simplified and cheaper process
- Metallurgical and other project work is being scaled up, including evaluation of downstream processing to yield >99.95% C feed suitable for Purified Spheronised Graphite production
- Work on Hydrogeological, Environmental, and Heritage surveys has begun
- Applications for two new Miscellaneous Licenses have been submitted, securing access to site and groundwater supplies
- A significant infill and extensional drill program is being finalised, including Resource enhancement, geophysical, geotechnical, hydrological, and metallurgical components

Buxton Resources Limited (ASX: BUX) ("Buxton" or "the Company") is pleased to provide an update for its 100% owned Graphite Bull project (formerly known as Yalbra) located in Western Australia. For location, see Figures below.

Recently completed metallurgical development work in Perth on diamond core from Graphite Bull has produced graphite concentrates grading from 99.2% to 99.8% C. This equals or exceeds the 99.4% C concentrate grade achieved by previous more complex process testwork in Canada (ASX 9/7/2015). Importantly, every stage of this new, much simplified process is well proven technology using "off the shelf" components.

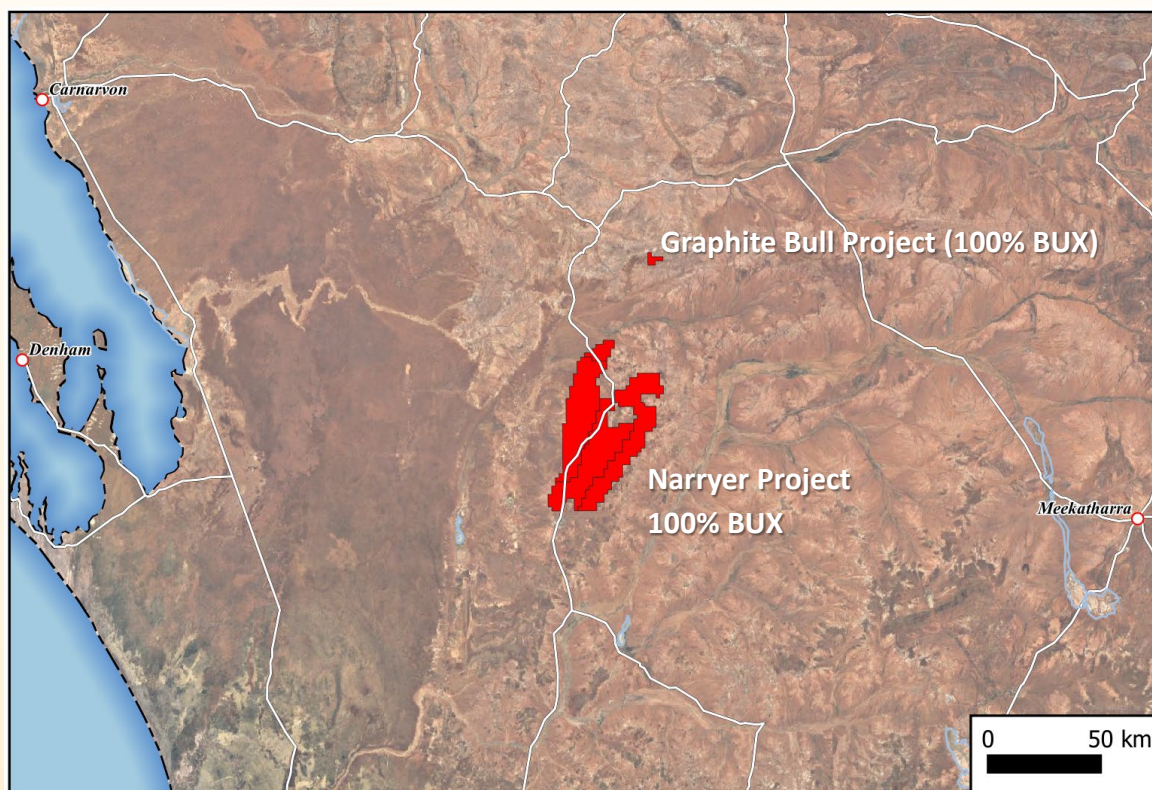


Figure 1 – Location of Buxton's Graphite Bull Project

Following changes in the graphite market, earlier in 2022 Buxton commissioned new metallurgical process development work (ASX 4/5/2022), focused on product purity and process cost, rather than Flake size. Since about 2020, demand for high purity natural graphite product as feedstock for lithium-ion battery anode manufacture has risen significantly, as have prices. That production process includes grinding of graphite down to 2 microns (0.002 mm) before shaping into spheres 12-20 microns in diameter, for significant value-add. Flake size in concentrate is not relevant to this growing market.

This major encouragement in Graphite Bull economics has driven a re-start of project work. Hydrological, Heritage and ground Geophysical EM surveys will commence within the month. Scoping studies on possible operations and site hydrogeology have already enabled application for two new Miscellaneous Licenses, for road access (297 Ha) and Water Search (4,313 Ha).

Recent conductivity testing of 2014 core indicates both ground and down-hole EM will work well to de-risk drilling. An ambitious infill and extensional RC and diamond drilling program commencing as soon as geophysical and Heritage surveys are concluded will upgrade confidence in, and expand, the existing Inferred Resource of 4.0 Mt @ 16.1% TGC (ASX 24/10/2014). Further metallurgical sample will be obtained, with geotechnical, groundwater and other technical, environmental and permitting investigations also progressed.

Buxton looks forward to providing shareholders with regular progress updates on this exciting initiative over coming months.

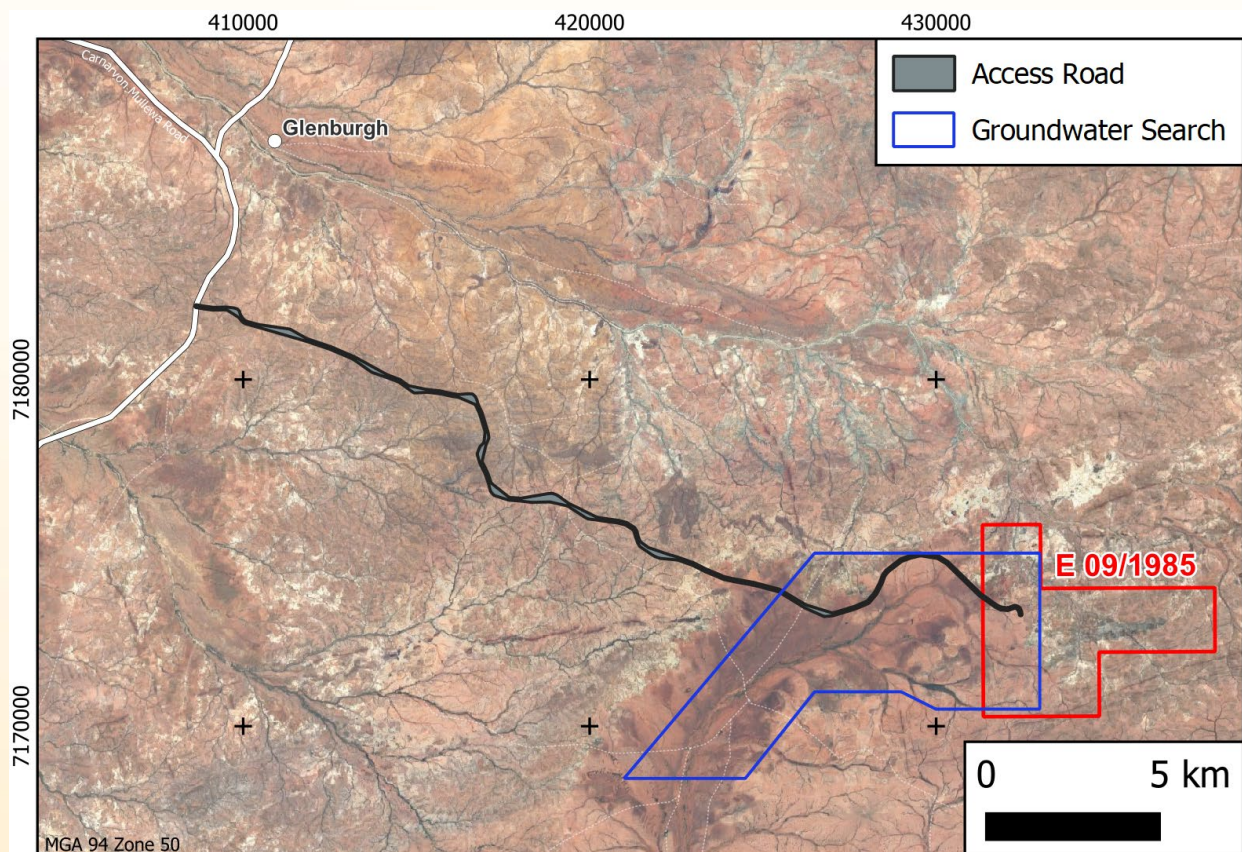


Figure 2 – Detail of Buxton’s Graphite Bull Project including recent Miscellaneous License application areas

This announcement is authorised by Eamon Hannon on behalf of the Board.

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Competent Persons

The information in this report that relates to Exploration Results is based on information compiled by Mr Eamon Hannon, Fellow of the Australasian Institute of Mining and Metallurgy, and Mr Rolf Forster, Member of the Australian Institute of Mining and Metallurgy. Mr Hannon is a full-time employee of Buxton Resources Limited and Mr Forster is Consultant to Buxton Resources Limited. Mr Hannon and Mr Forster have sufficient experience which is relevant to the activity being undertaken to qualify as a "Competent Person", as defined in the 2012 edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hannon and Mr Forster consent to the inclusion in this report of the matters based on the information in the form and context in which it appears.

JORC Code Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><i>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.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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.</i></p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Drilling techniques	<p><i>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).</i></p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Drill sample recovery	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>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.</i></p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Logging	<p><i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i></p> <p><i>Whether logging is qualitative or quantitative in nature. Core (or</i></p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)

	<p>costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	
Sub-sampling techniques and sample preparation	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>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.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>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.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Location of data points	<p>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.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>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.</p> <p>Whether sample compositing has been applied.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Orientation of data in relation to geological structure	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Sample security	<p>The measures taken to ensure sample security.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Audits or reviews	<p>The results of any audits or reviews of sampling techniques and data.</p>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<i>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.</i> <i>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.</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Drill hole Information	<i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i> <ul style="list-style-type: none"> • easting and northing of the drill hole collar • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar • dip and azimuth of the hole • down hole length and interception depth • hole length. <i>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Data aggregation methods	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i> <i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Diagrams	<i>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.</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)

Balanced reporting	<i>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.</i>	Not Applicable. No new data or changes since previously reported (ASX 24/10/2014)
Other substantive exploration data	<i>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.</i>	<p>Previous metallurgical test work was performed by SGS Lakefield (Canada) in 2015 on composited Buxton 2014 drill core from intersections in weathered and fresh host rock. 40 kg composite samples were crushed, homogenized and rotary split to generate 2 kg charges for grinding and froth flotation tests. Composited head grades were 17.2% and 18.3% TGC in weathered and fresh rock respectively. This work showed that graphite was readily liberated and collected through grinding and froth flotation. The flowsheet was optimised for preservation of graphite flake size by avoiding overgrinding. A commercially saleable >95% graphite concentrate grade was not achieved by grinding and flotation alone due to the presence of finely intercalated gangue minerals. However, subjecting the flotation concentrate to caustic bake purification followed by an HF leach produced a product of 99.4% C purity.</p> <p>Following changes in the graphite market, early in 2022 Buxton commissioned further work through Auralia Metallurgy in Perth focused on maximising purity rather than flake size. Two samples of halved PQ diamond core were selected from YBDD002, a 2014 Buxton hole across one of the three mineralised zones within the Inferred Resource. The composite samples (26-29m downhole, weathered, 13 kg, 20.2% TGC, and 29-31m, fresh, 7 kg, 22.3% TGC) were crushed, homogenized and rotary split to generate 2 kg charges for grinding and first stage froth flotation tests. Subsamples of the two first stage froth flotation concentrates were then combined for assessment of the proposed new flowsheet which incorporated secondary flotation and more aggressive regrinding to reduce graphite particle size compared to the 2015 work. Subjecting the resulting upgraded concentrate to caustic bake purification produced excellent results, graphite products of 99.2 to 99.8 % C purity.</p> <p>Analysis of testwork products was by routine ICP-OES techniques applied by two industry commercial laboratories in Perth.</p>
Further work	<p><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></p> <p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	See text in body of release.