

ASX Announcement 26 November 2019

# Bass advances strategic discussions with Urbix, with meetings in the USA

Bass Metals Limited (ASX:BSM) (Bass or the Company) having recently signed a Memorandum of Understanding with leading downstream processor Urbix Resources LLC (Urbix), recently visited Urbix's facilities in Arizona, USA to witness the ribbon cutting celebration of Urbix's pilot facility and advance discussions regarding the proposed Joint Venture (JV) between Bass and Urbix.

## **HIGHLIGHTS**

- Bass Executives, Jeff Marvin and David Round, met with the Urbix executive team and undertook a review of Urbix's pilot plant and their proposal for a large commercial purification plant capable of producing 24,000mt of purified graphite per annum.
- Discussions were conducted around a JV facility in Madagascar capable of producing a purified high value graphite product utilizing Urbix's propriety technology and Bass' natural flake graphite.
- The proposed JV will combine Urbix's expertise in the development of advanced and sustainable downstream graphite products with Bass' natural flake graphite resources, producer status, technical knowledge, government relations and sales relationships.
- Attending the ribbon cutting along with the Bass team were executives of leading European-based graphite buyers, several of whom are current customers for Bass concentrates.



# PROPOSED JOINT VENTURE WITH URBIX

Bass representatives visited with the executive team of Urbix to discuss proposed JV terms, review Urbix' pilot plant and also hold joint discussions with European-based buyers (and current customers of Bass).

The team was pleased with the progress of Urbix's plant development and learned a large commercial plant is to commence construction in the short term with Urbix's plan to be producing commercial quantities of purified graphite in mid-2020.

Representatives of two of Europe's largest users and marketers of graphite, whom are also Bass customers, attended a strategic meeting session with the Bass team and a number of key plans were agreed upon. All parties expressed their strong support for Urbix and Bass' plans and proposals with follow up meetings to be scheduled in the short term.

## URBIX'S PLANT DEVELOPMENT

Urbix recently completed the development of a trial pilot plant and have had significant success in the testing of the plant's capacity to produce purified graphite. The plant relies on Urbix's unique technical intellectual properties and they have undertaken significant testing on graphite concentrate from different locations around the globe and will begin testing on graphite provided by Bass from its Graphmada Mine Complex.

Bass' executives were advised that a plant is currently being developed over the 31,000 sq. feet (10,000 sqm) site at Urbix's new operations in the Falcon District of Mesa, Arizona. Following its completion and successful commercial ramp up, it is proposed to replicate this plant, with Bass, at a proposed site in Madagascar subject to executing a JV.





Figure 1: Jeff Marvin (Bass Director), Nico Cuevas (Urbix Chairman and co-founder) and David Round (Bass CFO and Head of Sales) at Urbix's new purification facility in Arizona.



Figure 2: Part of the Urbix Resource pilot plant in Mesa, Arizona.



# PURIFIED GRAPHITE AND FUTURE DEMAND

Natural flake graphite sold across most market segments at between 90-94% Fixed Carbon (FC) is traditionally used in refractory, foundry and crucible applications, as well as in lubricants, carbon brushes, brake linings and gaskets.

However, the advent of new applications and uses in recent times has challenged flake graphite suppliers to supply concentrates above 94% FC. The higher carbon grade allows industries such as automotive, aerospace, semiconductor, chemical, metallurgical, nuclear and electronics the ability to better utilize the unique properties of natural flake graphite. Some of these new applications include; graphene, lithium batteries, fuel cells, dispersion agents, polymers, fire retardants and a wide variety of manufactured parts for the digital age. Of significant interest in recent times has been its use in lithium battery anode manufacture, fueled by the exponential growth of the Electric Vehicle (EV) market.

Traditionally, to achieve an increase in carbon grade producers would be required to grind graphite to liberate impurities, thus reducing flake size. For applications in lithium battery anodes, flake graphite of sub 150 micron is desirable. Graphite concentrates greater than 180 microns ("large flake") in combination with high carbon grades provide the unique characteristics for graphite's use in specialty applications.

Therefore, the ever-increasing challenge for producers is how to improve carbon grade without grinding and experiencing not only a degradation of flake size but significantly reduced margins due to large flake graphite's higher pricing.

In the past, the necessary purification to achieve high carbon grades have been through the use of hydrofluoric acid, caustic treatment or thermal methods. Both the acid and caustic methods present environmental challenges, while



thermal purification requiring temperatures over 2500 degrees Celsius is energy-intensive and therefore cost-prohibitive in most cases.

Urbix has developed a process that is both revolutionary and environmentally responsible. It helps lift carbon grades without damaging flake size and is the next generation of purification technologies.

With Bass already producing high carbon concentrates with a significant proportion of its production in the large flake categories, Urbix's new-age process allows for cost-effective upgrading of flake graphite to very high levels without loss of flake size or cash margins. Since Bass' concentrates have tested to be highly applicable for lithium battery, expandable and potentially graphene applications, the Urbix process is especially suitable.

Bass' proposed JV with Urbix allows both parties to develop purified graphite and capitalize on the unique opportunities and the high forecast growth in the EV battery and expandable graphite markets segments.

## URBIX CEREMONY AND RECOGNITION

The Bass team also attended a ceremony at Urbix's state-of-the-art facility where Arizona Governor Doug Ducey and Mesa Mayor, John Giles, congratulated Urbix on their growth and development to date and expressed their ongoing support to the Company.

It was recognized that Urbix, in time, will directly employ 100 staff at their facility and that the Company, following a recent round of financing, has received US\$10m worth of shareholder support to enable its development.

Details about the Urbix ceremony are available at <a href="http://www.mesanow.org/news/public/article/2413">http://www.mesanow.org/news/public/article/2413</a>



# JEFF MARVIN, DIRECTOR:

We were highly encouraged with the progress Urbix has completed to date, inclusive of gaining of significant intellectual property and experience with their cutting-edge processing technology. Urbix clearly have significantly invested capital, intellectual capital and resources into their pilot plant and are well supported by their stakeholders.

We were also pleased to attend a strategic planning meeting with the Europeanbased advisers and current customers for Bass concentrates. Bass was highly encouraged with the positive feedback and industry intelligence provided to us.

We strongly believe a growing market exists for purified graphite in order to supply the expected massive growth in the demand for batteries used in EV's and other specialty carbon applications such as expandable graphite. Bass is committed to exploring and developing this unique and potentially highly successful joint venture".

# DAVID ROUND CHIEF FINANCIAL OFFICER / HEAD OF SALES

"We were highly impressed with the Urbix facility and pleased with our progression of JV discussions and are excited with what potentially lies ahead for our two organizations. Over the last 18 months, Bass has made significant progress in sales. We now have sales established to Europe, the USA, India and, most recently, China and are fast approaching a position where we have sold all current inventory, with only 300t as of the 18th November remaining.

Bass has a well-established product in market and is in the position of never having a tonne penalized or rejected. Bass has been strongly encouraged with its customer feedback from end users, with a recurring feedback that value-added products sourced from Bass concentrates and its constituent properties would produce highly sought-after downstream products.



Bass looks forward to continuing to progress discussions with Urbix with a view to establishing a low capital intensity pathway to production of highly valued downstream concentrates and products."

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Tim McManus has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Tim McManus consents to the inclusion of the information in this document in the form and context in which it appears.