



**Thursday, 10 June 2021**

**ASX Market Announcements**

**Via e-lodgment**

## **Resource Development Group Approves Lucky Bay Garnet Project**

The Board of Resource Development Limited (“RDG” or the “Company”) (ASX: RDG) is pleased to announce that its 100% owned Lucky Bay Garnet Project (formerly the Balline Garnet Project) has been approved for development.

### **Project Summary**

- **Funding secured through commissioning and first production via a \$60 million loan**
- **Approval to commence onsite construction during Q3 2021**
- **Mining equipment selected and processing plant detailed design nearing completion**
- **Orders for long lead items placed**
- **First production scheduled for Q1 2022**

RDG has recently undertaken a drilling program and is expecting to be able to provide a resource update within the next month. Previously disclosed Mineral Resources indicate an eight-year mine life.

Construction is estimated to take approximately six months by RDG subsidiary Central Systems and, during this time, the project will employ 70 people onsite. Capital cost is estimated at \$60 million.

The project is targeting production of 130ktpa garnet with the product to be exported through the Ports of Fremantle and Geraldton to global markets.

#### ***Managing Director Andrew Ellison commented:***

*“Results of the recent drilling program have provided us with confidence in the continuity of mineralisation at Lucky Bay, with the updated resource to be released later this month.”*

*“The detailed design of the mining and process plant has been completed and long lead orders are in place. With all of our approvals also in place, we are aiming to commence construction in the coming quarter.”*

*“This is an extremely exciting project for RDG and will see us move the Lucky Bay Garnet Project into production. This 100 per cent owned project is a significant milestone for RDG and we’re really pleased to be able to deliver this project for our shareholders. In keeping with our capital management framework, we are targeting a greater than 20 per cent return on capital investment.”*

#### **Overview**

On the 1<sup>st</sup> February 2021 RDG announced that it had successfully acquired the Balline Garnet Project.

RDG set about fast tracking development of the project by commencing early onsite works, drilling to upgrade and extend the resource, establishing ground water production bores and finalising geotechnical designs to enable earthworks to commence by Q3 2021.



The project is fully funded and technical support is being provided by RDG's major shareholder, Mineral Resources Limited (ASX:MIN). The table below (Table 1) provides a breakdown of the overall estimated cost to build the plant and commence operations.

Area	A\$
Mining Unit & Earthworks	4.2
Wet Concentrator Plant	11.4
Mineral Separation Plant	3.6
Screening & Bagging Facility	12.0
Utilities	10.0
Infrastructure	4.5
Construction Indirects / Commissioning	8.5
Owners Costs	3.3
Contingency	2.5
<b>TOTAL</b>	<b>60.0</b>

*Table 1 Capital Cost Estimate*

Detailed engineering and design of the Mining Unit Plant (MUP), Wet Concentrator Plant (WCP), Mineral Separation Plant (MSP) and the Screening and Packaging Plant (SPP) is now complete with detailed electrical design well underway.

Contracts for long lead items have been executed to ensure the equipment is delivered on time and all equipment vendors remain on target to meet their delivery schedule. Offsite fabrication of key components of the plant will commence during July.

The modular design of the processing plant will enable the construction division of RDG, Central Systems, to efficiently transport the modules to site and rapidly complete construction and assembly.

Initial marketing enquiries confirms strong interest in the premium garnet products that will be produced at the Lucky Bay Garnet mine, especially from distributors in Europe and North America.



*Figure 1 Lucky Bay Garnet Mine process plant layout*

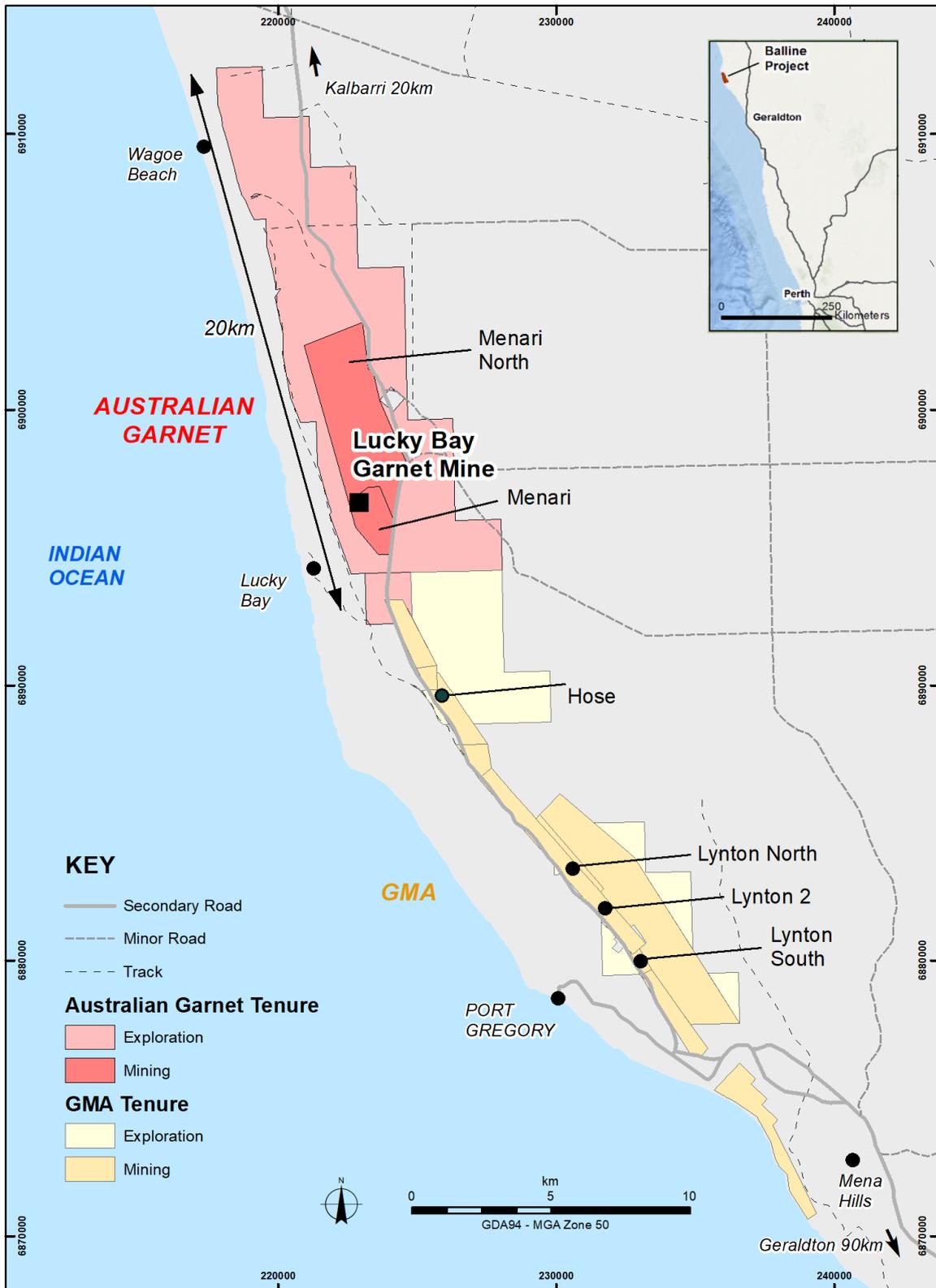


Figure 2 Lucky Bay Garnet Mine location diagram



## Mineral Resources

The Menari deposit has an existing Measured Mineral Resource of 23Mt @ 5.3% HM (announced 10<sup>th</sup> December 2020).

Commodity: Mineral Sands								
Deposit	Type	Tonnes (Mt)	HM (%)	HM (Mt)	Slimes (%)	Garnet (%)	Garnet (Mt)	Resource Category
Menari	Dune	20.0	4.4	0.9	3.8	83.6	0.7	Measured
	Strand	3.0	11.2	0.3	6.4	76.6	0.3	Measured
<b>Total</b>		<b>23.0</b>	<b>5.3</b>	<b>1.2</b>	<b>4.1</b>	<b>82.7</b>	<b>1.0</b>	<b>All</b>

Table 2 Menari Mineral Resource at 2%HM cut-off (JORC 2012)

Drilling north of Menari undertaken by Westralian Sands from 1990 to 1999 and Iluka from 1997 to 2001 identified several zones of Heavy Minerals (HM). Drilling undertaken by Haddington Resources in 2007 to 2008 confirmed these areas of HM, dominated by garnet. The previous owners undertook two further drilling programs in the area north of Menari prior to the acquisition by RDG. In 2016, 114 aircore holes were drilled for a total of 3,327 metres and in 2020, 235 aircore drill holes for a total of 7,892m.

The most recent aircore drilling program, conducted by RDG in March 2021, consisting of 103 holes for a total of 2,935m, has further extended the known mineralisation to the north and south of the existing Resource. Results from this drilling program are being validated and will be added to the geological database. RDG will be in a position to release these results and an updated Mineral Resource statement later this month.



Figure 3 Aircore Resource drilling at the Balline Garnet Project



## Mining & Processing Plant Design

The Mining Unit Plant (MUP) is designed to be fed by a Front-End Loader (FEL) (see Figure 4) at a rate of up to 600tph. This will easily achieve the 3.6Mtpa required to feed the Wet Concentrator Plant (WCP) plant at its design capacity. The ore passes over a coarse vibrating screen and then conveyed to a trommel to remove remaining over size material greater than 2mm. The fine sand is then slurried and pumped to the WCP. The mobile MUP is located on the mining pit floor and periodically relocated closer to the mining face as mining advances. Oversize material remains on the pit floor.

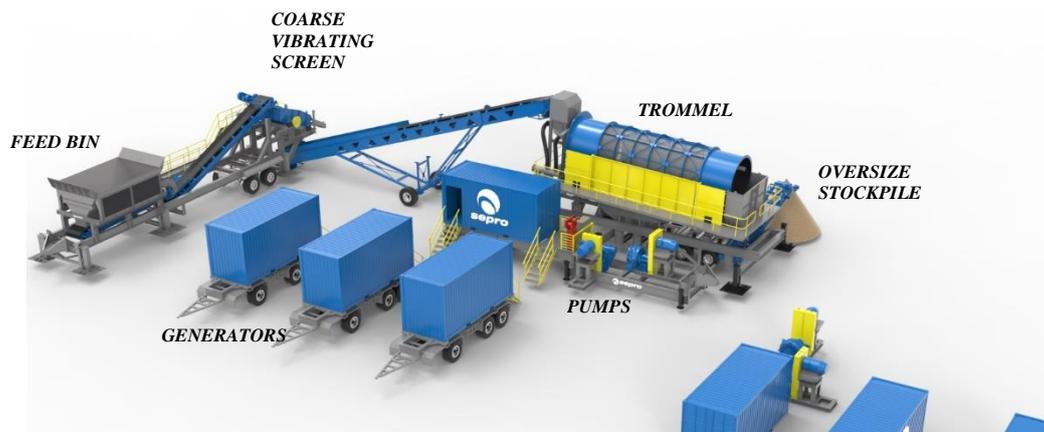


Figure 4 Lucky Bay Garnet Mine Mining Unit Plant

The MUP feed is passed through deslime cyclones whereas unmineralised sand, predominantly silica is removed in spiral circuits. The clay fraction (slimes) are sent to a thickener to recover the water and then pumped to solar drying pads established atop the sand tailings.

Dewatered sand tailings are returned to the mining void where they are contoured. The slimes are then blended with the sand tails before returning the stockpiled soil and vegetation material as part of the post mining rehabilitation.

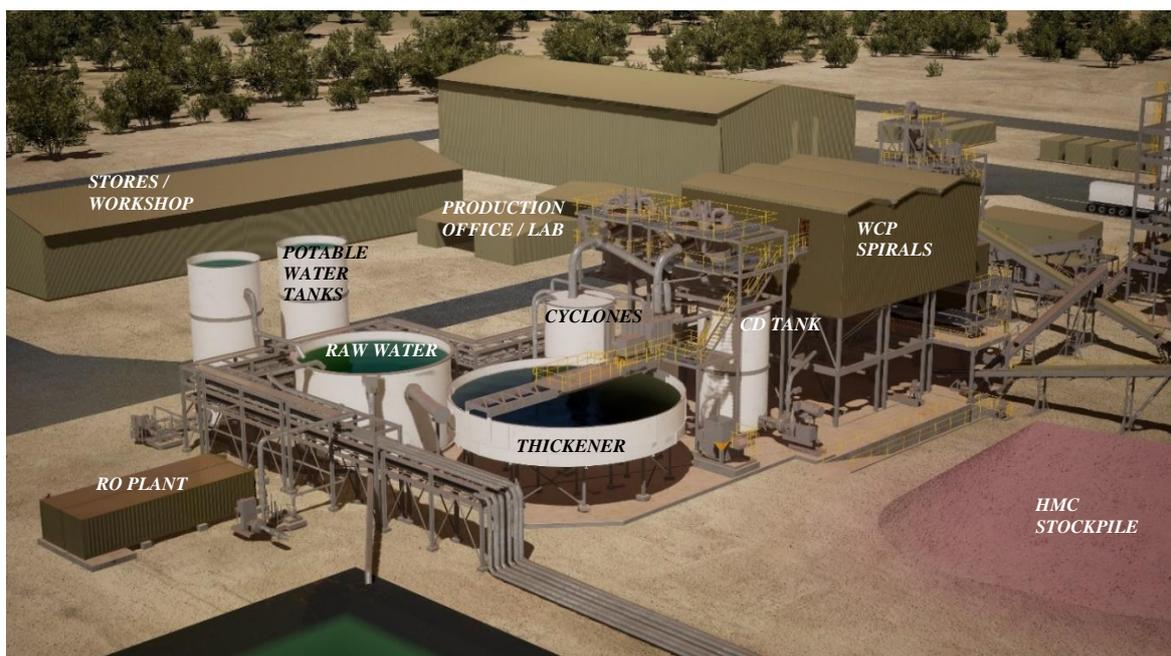


Figure 5 Lucky Bay Garnet Mine Wet Concentrator Plant



The Heavy Mineral Concentrate (HMC) produced at the WCP is further processed at a Mineral Separation Plant (MSP). The HMC is dried in a rotary drier then screened and fed through a series of magnets to separate the garnet from the HMC. The remaining Fine Heavy Mineral Concentrate (FHMC) that includes the ilmenite, zircon and other HM is stockpiled for future bulk shipping to customers. The plant is designed to produce 125,000-135,000t of bulk garnet and 30,000t of FHMC per year.



Figure 6 Lucky Bay Garnet Mine Mineral Separation Plant

The bulk garnet produced by the MSP is then screened into one of five different products of various size fractions that meet specific customer requirements for either abrasive blasting (20/40#, 30/60#, 80#) or water jet cutting (80#, 120#).

These screened products are stored in silos before being bagged or transferred to overhead storage bins allowing road trains to be loaded for bulk product transport.

The bagged products are stockpiled at site and despatched to Fremantle port where shipping containers are loaded and shipped to global distributors.

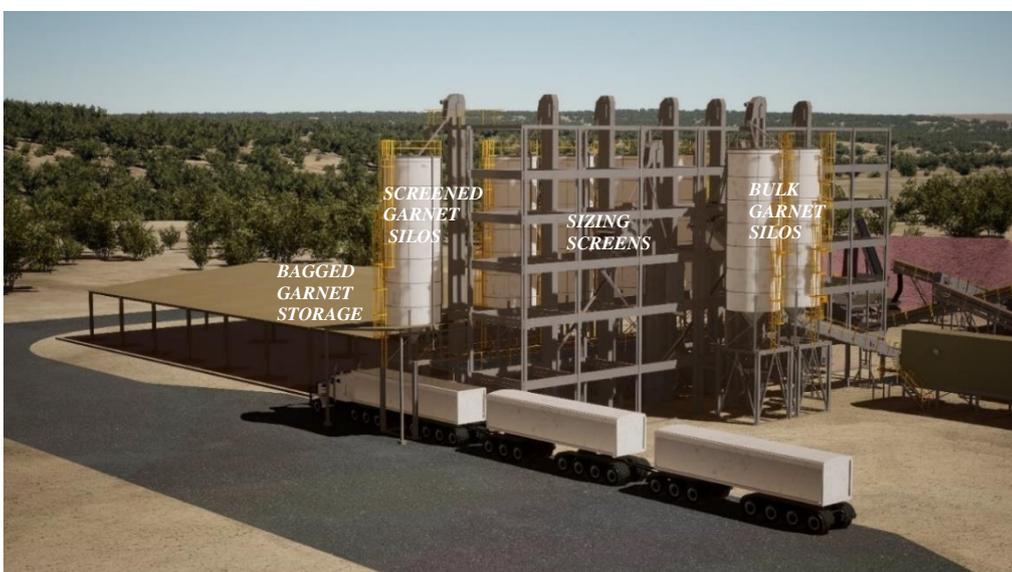


Figure 7 Lucky Bay Garnet Mine Screening and Bagging facility



**ENDS**

**This announcement dated 11<sup>th</sup> June 2021 is authorised for market release by the Board of Resource Development Group Ltd.**

**Michael Kenyon  
Company Secretary**

**For further information, please contact Michael Kenyon on (08) 9443 2928 or at [michael.kenyon@resdevgroup.com.au](mailto:michael.kenyon@resdevgroup.com.au)**

***Competent Person's Statement***

*The information in this report that relates to the Mineral Resources is based upon work compiled by Mr Richard Glen Stockwell. Mr Stockwell is a full-time employee of Placer Consulting Pty Ltd and a Fellow of The Australian Institute of Geoscientists. Mr Stockwell has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he has undertaken to qualify as a Competent Person as defined in the JORC Code, 2012. Mr Stockwell consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

***Forward Looking Statement***

*This ASX announcement may contain forward looking statements that are subject to risk factors associated with garnet exploration, mining and production businesses. It is believed that the expectations reflected in these statements are reasonable but they may be affected by a variety of variables and changes in underlying assumptions which could cause actual results or trends to differ materially, including but not limited to price fluctuations, actual demand, currency fluctuations, drilling and production results, metallurgy, Reserve estimations, loss of market, industry competition, environmental risks, physical risks, legislative, fiscal and regulatory changes, economic and financial market conditions in various countries and regions, political risks, project delay or advancement, approvals and cost estimate*