



Thursday 22 August 2024

ASX Market Announcements  
Via e-lodgment

## **Lucky Bay Garnet Project Update**

Resource Development Group Limited (**ASX: RDG**) (**RDG** or the **Company**) is pleased to provide the following update on its Lucky Bay Garnet Project.

RDG's wholly owned subsidiary Australian Garnet Pty Ltd (**Australian Garnet** or **AGPL**) holds the Lucky Bay tenements, located between the coastal towns of Kalbarri and Port Gregory that are contiguous with the world's largest supplier of high-quality alluvial garnet. High-quality alluvial garnet products are primarily used in the abrasive blasting and waterjet cutting markets.

### **Highlights**

- **Increased attritioning capacity commissioned during June**
- **New Constant Density (CD) tank commissioned during July**
- **Increased Capacity Heavy Mineral Concentrate (HMC) Dryer forecast commissioning mid-October**
- **Scening plant upgrade design completed, procurement well progressed, forecast commissioning 1<sup>st</sup> Quarter 2025**
- **Rehabilitation of off-path sand tailings is underway**
- **Inpit sand tailings disposal commenced during June**
- **Lucky Bay Wind Farm has recently been accredited as a W.A power station; power generation is now fully integrated with site power**
- **Finished products being shipped throughout Australia, USA, Europe, Middle East and Asia**



*Figure 1 Lucky Bay Garnet site view*



**Resource Development Group Managing Director Andrew Ellison commented:**

*“The recent expansion of the attritioning circuit and new CD tank is delivering the step change in product quality and Wet Concentrator Plant (WCP) stability that we had been targeting. This now enables us to push HMC production well beyond the original design capacity of the WCP while maintaining low levels of impurities. Once the larger dryer is commissioned, we are looking forward to increased production capacity. Our construction team have constructed an excellent plant and delivered the plant modifications in record time, working in a safe manner.*

*Power is our second largest cost, so it is very encouraging to see the significant contribution from the low-cost renewable energy we are now achieving from our 4.2MW wind farm located adjacent to the mine. Importantly, the Government’s Clean Energy Regulator has also accredited our wind farm as a W.A power station.*

*We have also achieved two important milestones of relocating the Mining Unit to the pit floor in the eastern strand and commencing tailing into the pit void, finalising the transition from the interim mining and tailing phase to the life of mine phase which will deliver further operational efficiencies.”*

## **Operations Update**

Since commencing operations, we have developed a committed and dedicated management team and workforce who work safely, take pride in their everyday work and as a result have developed an excellent workplace team culture.

Safety, quality and environmental certification of AGPL is well advanced as we work toward achieving the following: ISO9001 Quality Management Systems, ISO45001 Occupational Health and Safety Management System and ISO14001 Environmental Management Systems certification. Stage 1 of this process has been completed, and we are on track to complete the program prior to the end of 2024.

## **Safety Performance**

Australian Garnet is committed to ensure the health, safety and welfare of its employees, contractors, the environment and all people affected by the organisation’s operations. In safeguarding workplace health safety and the environment, Australian Garnet strives to fulfil its statutory duties and pursue best practice.

During the year, the team have maintained and promoted a proactive health, safety and environmental management approach, based around effective communication and consultation, to ensure our people work towards reducing and eliminating workplace injuries and illnesses, environmental harm, equipment damage and business loss.

Since commencing all work onsite:

- The company has maintained a Lost Time Injury Frequency Rate (LTIFR) of 0.00.
- The Total Recordable Injury Frequency Rate (TRIFR) is currently 1.04.



## Mining

The Mining Unit Plant (**MUP**) has now been relocated to the pit floor in the eastern strand. The MUP will now be periodically moved along the pit floor as the mining face advances. The loader now operates on the pit floor with the MUP reducing tramming distance while a dozer pushes down the ore to assist with blending and maintaining a safe working face. Several modifications have been made to the MUP to reduce the shutdown period of relocating the MUP to limit the non-operating time, to increase operating hours.



*Figure 2 Loader operating in the Eastern Strand of the Menari Pit*



*Figure 3 Mining Unit Plant operating in the Eastern Strand*



Mining commenced at the southern end of the deposit and has advanced sufficiently far enough north that the sand tailings can now be deposited back into the pit void. This will ultimately enable the sand to be profiled back to a natural landform ready for the reintroduction of topsoil and vegetation as part of the continuous rehabilitation process.

Prior to this, the sand tailings were stored off-path in an area south of the processing plant and profiling and rehabilitation of this area has already commenced whilst taking advantage of the relatively high rainfall that the region has experienced this year.

### Processing

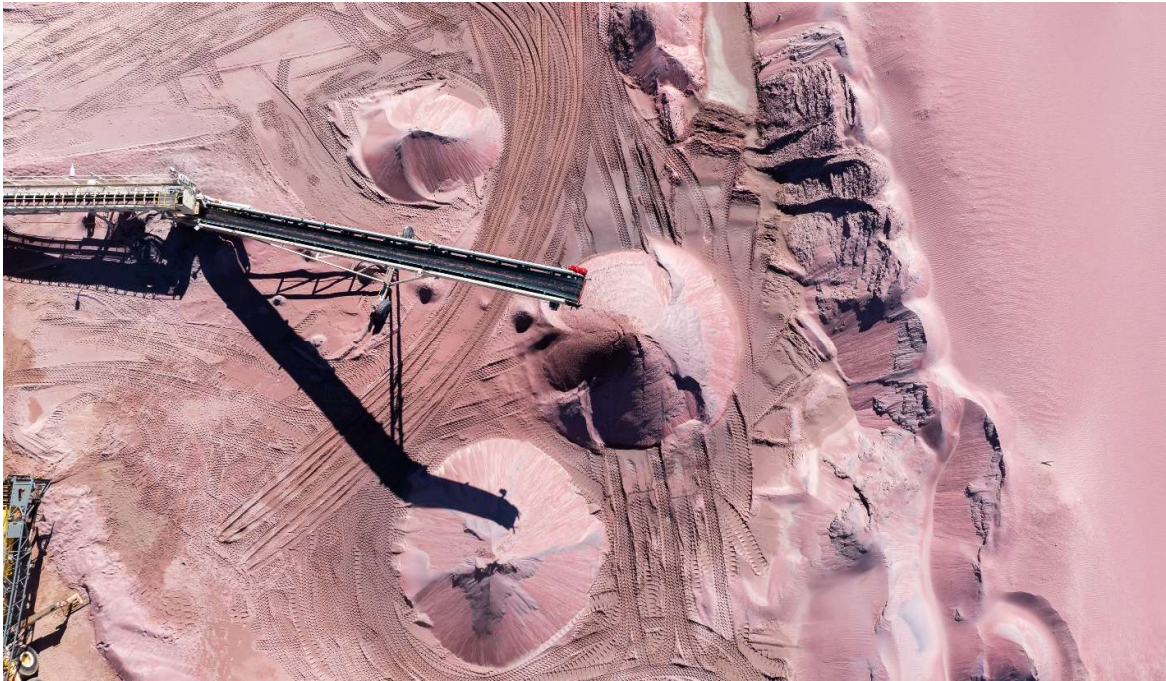
Stability of sand feed to the rougher spirals has suffered due to the performance of the CD tank that was initially installed in the Wet Concentrator Plant (**WCP**). An upgraded design of the CD tank has been installed and recently commissioned with immediate improvements in plant stability resulting in improved Heavy Mineral (**HM**) recoveries and enabling higher throughput.



*Figure 4 Wet Concentrator Plant Spirals at Lucky Bay*



Calcite coatings that are present on some of the garnet grains have the potential to cause calcite dust to be liberated when the product is used in blasting. To further reduce this, AGPL have expanded the attritioning circuit to include two additional attritioners that are now installed and commissioned, providing additional capacity to remove the residual calcite, to ensure the garnet is produced to the highest possible quality in the finished product.



*Figure 5 HMC produced by the Wet Concentrator Plant*

The throughput of the existing HMC dryer has not met our production requirements resulting in lower feed to the Mineral Separation Plant (**MSP**) and subsequently the Sand Screening Plant (**SSP**) than planned. Installation of a new rotary kiln HMC dryer has commenced with the concrete footings now completed whilst installation of the dryer will progress during September, with commissioning to commence on the 15<sup>th</sup> of October. The existing dryer will remain in place for future expansion or as a standby dryer to be used during periods when the larger dryer is shut down for planned maintenance.

Design is complete and procurement is well advanced for the increased processing capacity and flexibility of the garnet screening plant to meet specific requirements of individual customers and maintain product quality at the highest levels achievable.

There has also been significant work carried out to improve water recovery from the sand tailings discharge as this is the source of the main water loss. Improving water recovery remains a focus for the project and several improvements have been implemented since the initial commissioning of the plant. Design has commenced on improving the sand tails stacking methods and as a result, further improvements are planned to improve the efficiency of water recovery.



## Drilling

AGPL has engaged with the Yamatji Southern Regional Corporation (YSRC) to undertake heritage surveys north of the mining leases prior to drilling planned to extend and upgrade the existing mineral resource.

Drilling has already been undertaken to extend the monitoring network of water bores to better understand the capacity and seasonal variability of the aquifers.

A grade control drilling program has also been completed over the planned mining areas for the next 18 months to provide additional information on garnet particle size distribution to optimise the mine schedule.

## Renewable Energy

The Lucky Bay Wind Farm (**Wind Farm**) has seven 600kw wind turbines that are connected to the process plant mine grid, deferring a significant quantity of diesel consumption and lowering the site's overall power costs. The turbines have been contributing to the site's power requirements since commissioning during late 2023 and recent software and power management upgrades have provided further improvements and efficiently improvements to enable the turbines to operate at their optimum efficiently integrated to the mine power grid.

The Australian Government's Clean Energy Regulator has also recently accredited the Wind Farm as a power station. This is significant as it will enable the Company to generate Large-Scale Generation Certificates (LGC's) with effect from October 2023, the first month that electricity was generated from the Wind Farm.

LGC's are a type of greenhouse gas emissions trading scheme with certificates able to be traded between generators, retailers, and other market participants. It is effectively a form of carbon credit that can be bought and sold.



*Figure 6 Lucky Bay Wind Farm*



## Sales and Marketing

### ***The Market***

Global markets for garnet abrasive products remain strong and are forecast to continue to grow. This has been driven by significant investment in oil and gas, shipbuilding, defence and infrastructure assets around the world.

The blast abrasive market for garnet will continue to outperform alternative products because it delivers productivity benefits, is safer to use and better for the environment.

Distributors, blasting contractors and waterjet cutting customers are actively seeking premium quality garnet for their projects and Australian Garnet is well placed to meet their needs.

### ***Australian Garnet's Products***

Australian Garnet products are engineered with precise particle distribution, ensuring superior performance. A range of products are produced to meet the needs of customers, including 20/40 mesh, 30/60 mesh, 80 mesh and 120 mesh.

Blast abrasives are used in a variety of industries including steel fabrication, oil and gas, infrastructure, pipelines and shipbuilding sectors.

Waterjet cutting abrasives are used in various applications including cutting thick metals and stone, to thin and delicate materials like glass and electronic components.

Australian Garnet products contain 100% single-sourced Australian beach alluvial garnet and are tested to meet the highest performance, safety, and quality standards.



***Figures 7 and 8 Garnet applications – blasting and waterjet cutting***

### ***Australian Garnet's Distributors***

Australian Garnet have agreements in place with distributors in key markets around the world, including Australia, Asia, Europe, Middle East and USA.

Our distributors have a long history of providing value added services to the surface preparation and waterjet cutting markets in their respective regions.



Customer feedback on the quality and performance of Australian Garnet products has been positive. With strong demand for premium quality garnet abrasives in all global markets, we are confident sales to our distributors will be in line with forecast production capacity at Lucky Bay Operations.

## Overview

Lucky Bay is located approximately 530km north of Perth and 35km south of Kalbarri. Australian Garnet is a wholly owned subsidiary of Resource Development Group, which Australian Garnet holds two granted mining leases covering 1,572 hectares and two exploration licences totalling 7,394 hectares, which combined make up the Lucky Bay Garnet Project area. Lucky Bay is comprised of the Menari and Menari North Heavy Minerals deposits, as shown Figure 9 below, with a mine life of 27 ½ years.

The Lucky Bay project area is north of GMA Garnet Group's existing garnet operation, which is the world's largest supplier of high-quality alluvial garnet and have successfully been in operation for the past 40 years.

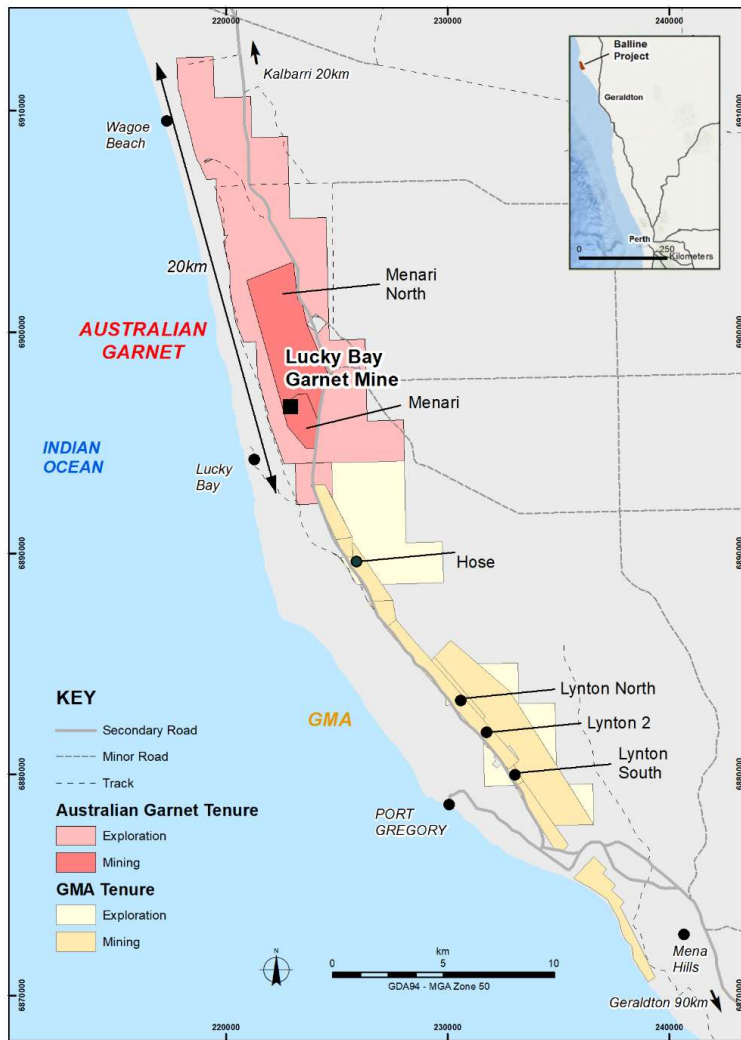


Figure 9: Lucky Bay Garnet Project location





**This announcement dated 22 August 2024 is authorised for market release by the Board of Resource Development Group Ltd.**

**Michael Kenyon  
Company Secretary**

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***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.*