

A close-up photograph of a worker's hands wearing white gloves with black palms, holding a long, cylindrical metal rod. The rod has several red and black markings. The worker is wearing an orange high-visibility vest over a dark shirt. In the background, there are many more of these green metal rods stacked in a tray. The worker appears to be inspecting or preparing the rods for transport.

RioTinto

Jadar Project

2022



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Rio Tinto

At Rio Tinto, we produce essential materials the world needs for a low-carbon future: aluminium for lightweight cars, copper to help things work more efficiently – from renewables to the power in your home. Iron ore for the steel in our electricity infrastructure. Lithium electric vehicles and battery storage. And many of the materials we produce are essential for the things in everyday life too: Borates that help crops grow, titanium for paint – and diamonds that celebrate the best things in life.

We were founded on the banks of the Rio Tinto river in Andalusia, Spain, in 1873, and today we work in 35 countries – in mines, smelters and refineries, as well as in sales offices, data centres and research and development labs.

The transition to a low-carbon world offers a unique opportunity for us to grow, and to play an important role in tackling this global challenge. We must switch to renewables at scale, electrify everything we can electrify, work across our entire value chain and accelerate the development of new technology.

And to achieve this, we will work closely with governments, customers, communities, universities and other partners.



Jadarite

In 2004 we discovered a unique mineral of international importance in the vicinity of Loznica, western Serbia. The mineral was officially registered in 2006 and named “jadarite”, after the river Jadar, in whose valley it was discovered.



Due to the high concentration of lithium the Jadar deposit is considered one of the most important lithium deposits in the world. Lithium is an essential ingredient needed for low-carbon technologies including the electrification of transport – such as electric and hybrid cars, large-scale batteries and energy storage. The Jadar deposit is on the doorstep of the European automotive industry, which is rapidly entering the era of electric vehicles in line with Europe’s green transport programme.



About the Jadar project

Rio Tinto foThe proposed Jadar project, currently in the Feasibility phase, consists of an underground mine, sustainable industrial processing, waste facilities and associated infrastructure spanning approximately 400 hectares in the Loznica and Krupanj municipalities. The Jadar project is managed by our subsidiary Rio Sava Exploration, registered in Serbia in 2001 with license to conduct geological explorations.

If the project is approved, we will produce three industrial products for the market: battery grade lithium carbonate, boric acid and sodium sulphate.

To date, we have invested more than \$400 million to explore the deposit, design a proprietary process to extract lithium from jadarite, and to study potential health, safety, environmental and community impacts, as well as find ways to mitigate those impacts.



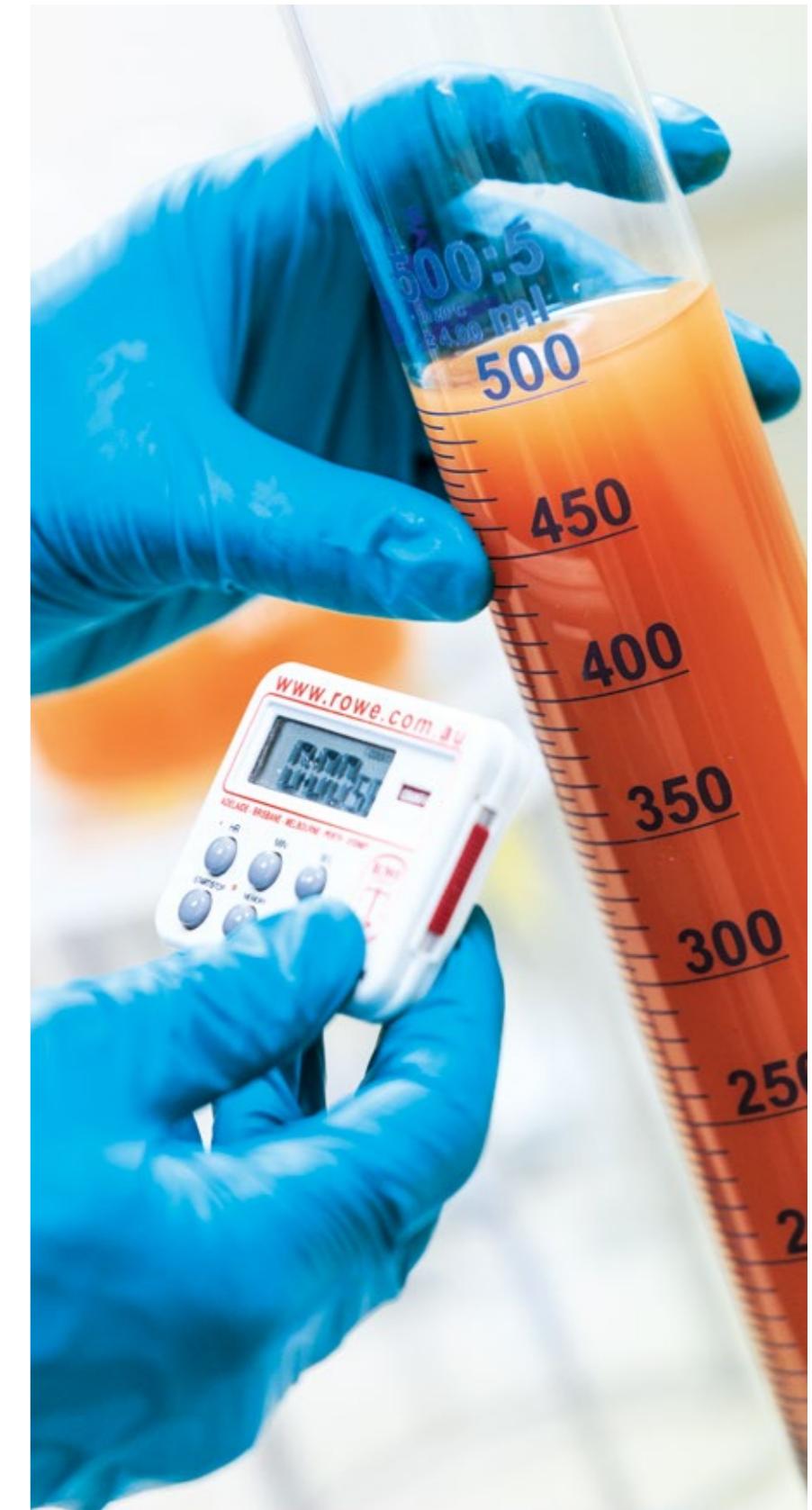
What is next?

In July 2021, we committed \$2.4 billion to the development of Jadar lithium-borates project in Serbia. The project remains subject to receiving all relevant approvals, permits and licences and ongoing engagement with local communities, the Government of Serbia and civil society.

The next steps are the completion of the Feasibility Study and the Environmental Impact Study. After obtaining the approval on the exploitation field, the process of approving the study on environmental impact can be formally started, which includes a public debate in which all interested citizens can participate. These studies are a prerequisite for obtaining future permits, including a construction permit. According to the revised dynamics of project development, based on current estimates, and subject to obtaining all relevant approvals, permits and licenses, it is expected that the first commercial production of the Jadar Project will be in 2027 at the earliest.

We remain committed to the development and improvement of the Jadar Project, and we recognize that in the further progress of the project we must listen to and respect the views of all stakeholders.

We are committed to respecting the highest environmental standards, applying the regulations of the Republic of Serbia and European Union standards, in order to implement the construction and management of future production activities in a sustainable way, with full respect for the local community and Serbia.



Environmental impact assessment (EIA)

We are working hard to build our understanding the risks and impacts our operations may pose to the environment, and ways we can manage them. We will continue to engage and involve the local community and concerned stakeholders in the EIA process.

The EIA helps us to build a comprehensive picture of the environment, predict possible impacts – including cumulative impacts of future operations – and define measures to minimise them. The work is being completed by a team of over 100 local scientific experts, including 40 renowned professors from the University of Belgrade.

To date, scientists have conducted a total of 2,000 tests to confirm the viability of the production process for lithium-carbonate, boric acid and sodium sulphate. We also engaged experts to conduct five independent audits of the processing operations, which delivered safety, environmental protection and production efficiency improvements.



We are always looking for ways to improve our processes. For example, our technical experts developed a stable and reliable process to transform processing waste from slurry (tailings) into filter cakes. This means we can reduce the volume of waste that needs to be stored.

We will focus on finding ways to re-use more of our waste within the project and conduct research and testing to identify opportunities to use our waste within other industries (such as agricultural products or input to cement manufacturing). The aim for the project is to find alternate uses for our waste that minimise future landfill development requirements.

When the feasibility and EIA studies are concluded, we will make the full EIA report available to the public and a consultation period will begin.



Employment opportunities

Once operational, the Jadar project will create around 1,000 direct highly skilled jobs – 90% of which will be locally based in Serbia. Across the economy more broadly, Jadar will underpin more than 5,000 new jobs. We will also maintain close collaboration with Serbian education institutions to build, attract and retain skills in Serbia.



2,000 | **1,000**

jobs will be provided
during peak of
construction

Around
1,000

jobs will be directly
created for highly
qualified employees

Partnering with local communities



We recognise that to progress this project, we must listen to and respect the views of all stakeholders. We are willing to be upheld to the highest environmental standards and building sustainable futures for the communities we operate in.

Mining by its very nature requires disturbance to the land and environment and can have impacts on surrounding communities. At the same time, mining also delivers significant economic and social benefits to communities, including employment, small business development, tax and royalty streams and education and health programmes. Our goal is always to maximise the benefits and minimise any impacts as much as possible.

We know we are temporary custodians of these lands and so it's essential we plan our operations with the future in mind, and work with local communities to improve our practices and minimise our impact on the environment.

To make sure we could continue to engage with communities throughout the pandemic, in 2021 we held four online meetings including representatives from Rio Sava, as well as independent experts, professors and scientists. These were in addition to the "Open Days" we held at our information centres in Loznica and Brezjak before COVID-19. We answered more than 150 questions during these sessions, and we will continue to listen to the concerns raised by community members and share information about the steps we're taking to address them.

Land acquisition programme

We understand the weight of the decision facing the owners, and the important role agriculture plays in the local community. We also know that, for some people, no amount of financial compensation will address their connection to their land. Our approach to acquisitions is to provide people with as much as support as we can, through every step of the process.

Our land acquisition programme is conducted through negotiated agreements with landowners which recognise their personal and

cultural attachment to their land and the local community. The programme is implemented in accordance with all applicable laws of the Republic of Serbia and applies global best practices in accordance with the International Finance Corporation standards (IFC standard 5, World Bank Group). These standards define measures such as fair compensation and improved living conditions of people undergoing a resettlement process. In addition, Rio Tinto standards also apply if they exceed the scope of the International Finance Corporate standard.

Since the beginning of land acquisition, we have followed an extensive process of consultation and engagement. Importantly, our procedures consider the local circumstances with great attention to livelihoods impacts, vulnerable groups and transition support.



Environmental stewardship

Environmental stewardship

We are aware that the Jadar valley includes areas of environmental importance and we recognise the concerns raised by community members about potential impacts on the ecosystems in and around the proposed mine.

As part of this project, we are conducting environmental impact assessment studies of the proposed underground mine, processing plant and industrial waste storage area. The studies will define all measures necessary to minimise or eliminate potential impacts.



We are investing over US\$100 million in equipment and systems to minimise potential environmental impacts, including US\$35 million for water purification systems. We must meet strict Serbian law regulations regarding water usage, waste management and air emissions practices and are required to carefully monitor and report on these areas to the competent institutions.

Responsible water sources

We know we must manage the water resources carefully and make sure we don't impact local supplies.

We are designing the operation to maximise the reuse of process water and minimise the total volume of water that needs to be treated. The portion of water not reused will be treated in a modern wastewater facility. Certain amount of excess water from the process will be treated to meet strict environmental regulations and must be the same quality or better before being reintroduced into the Jadar river.

Minimising waste

The mine and processing plant will produce two types of waste: waste rock from the mine (mined rock material that does not contain jadarite) and industrial waste generated by the ore processing.

Our goal is to produce zero waste – but we have some more work to do to help us reach that goal. We're already working with universities to help us find ways to turn waste into products for other industries.

The leftover liquid from crystallizing lithium carbonate will be further processed into sodium sulphate, a by-product used in detergents and glass. Around 30% of the waste generated by the ore processing will be used to backfill voids in the underground mine to prevent surface subsidence. The remaining waste material will be dried, stacked, compacted and revegetated with native plants and grasses in an industrial waste landfill facility adjacent to the mine site. This entire site will be cladded with an impermeable material that will protect groundwater and the surrounding area.

All waste management procedures will meet or exceed the conditions defined by the Republic of Serbia and the European Union.

Supporting agriculture

As part of our support and cooperation with local communities, we have implemented the “Supporting Access to Agricultural Advisory Services” project, in collaboration with local partners. This long-term project was aimed to work with the agricultural community, provide education and support on the latest techniques to help improve livelihoods, economic opportunities, and the surrounding environment. The project has been implemented in cooperation with Poljosevet and the Regional Development Agency, with support from the town of Loznica. The service was providing:

- Continuous provision of services to local agricultural producers
- Transfer of knowledge focused on all key aspects of agricultural production
- Demonstration of new technologies in planting that can be transferred in commercial raspberry production
- Demonstration of modern technologies in planting and growing berries
- Production of high-quality raspberry seedlings – the basis for self-financing of the project and its future sustainability

From the start until 2021 when its finalised, around 1,000 community members have participated in the project.



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