



# FROM AN EMPTY PLOT TO A 3D MODEL: ENGINEERING A NEW GREENFIELD PLANT FOR MINERALZ

After the execution of a conceptual design for Mineralz in 2019, Bilfinger Tebodin received the award for the Basic Engineering for the new Mineralz greenfield plant. The core business of

Mineralz (a subsidiary of Renewi) is cleaning and recycling of mineral waste streams. Mineralz separate metals from residue of waste-to-energy plants and clean the residue until there are no

more specific charges or regulations, resulting in new raw materials that can be reused.

In order to expand their operations, Mineralz intends to build a new greenfield plant. Bilfinger Tebodin received the order to further develop the conceptual design, that had been created in 2019, into an optimized process and Basic Engineering Package including wastewater treatment in which a maximum reuse of water will take place. In this new process, even all the collected rainwater on site is used.

logistics of the site, clarifying technical designs with vendors and evaluating offers.

The engineering included a +/- 10% CAPEX estimate, supported by equipment quotations and vendor clarification meetings. Regular CAPEX updates throughout the project allowed the team to make adjustments immediately where needed.



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plot from Mineralz into a 3D model ready for realization to the full satisfaction of the client.

"We are proud that Mineralz chose to award us the Basic Engineering after successfully executing the conceptual design for them," says Cor Faber, Project Manager at Bilfinger Tebodin. "The core business of Mineralz is a great example of the circular economy, which is an important topic for Bilfinger Tebodin."

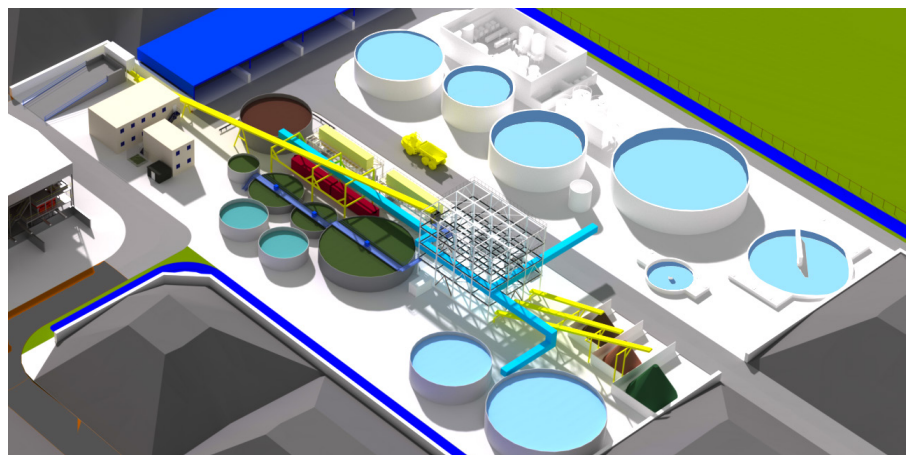
## PROJECT DELIVERY WITHIN TIME AND BUDGET

Although the planning was tight and some changes had to be incorporated, Bilfinger Tebodin finalized the Basic Engineering in March 2021. The team transformed the empty

"We are very pleased with the performance of Bilfinger Tebodin," says Onno Veenendaal, Manager engineering & maintenance at Mineralz. "They delivered the basic design of our new greenfield plant on time and within budget. The team showed they possessed the skills and expertise needed for this project and delivered the agreed quality."

## CLIENT INTEGRATED TEAM

A client integrated and combined team between Mineralz and Bilfinger Tebodin worked hard on the design, taking into account all on-site logistics. Mineralz provided specialists with specific knowledge of the dry and wet cleaning of mineral waste streams and Bilfinger Tebodin brought in the required technical disciplines and Process Safety consultants ensuring a clear project structure. This close collaboration proved fruitful in keeping the project on track and, amongst others, designing the layout and



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