

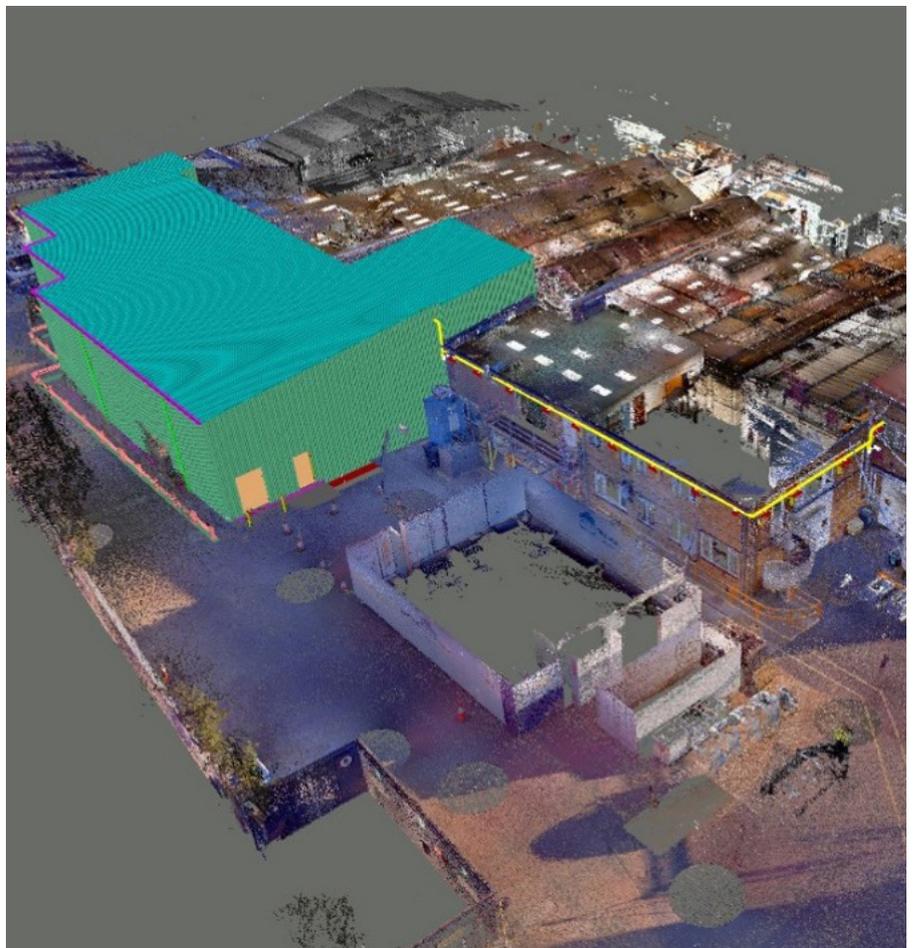
FOOD & DRINK

# Smart engineering keeps complex food facility project on budget

The original project was given the go-ahead with a fixed budget in summer 2021, but due to various delays, including planning permission, it did not progress until December 2023, with the budget remaining unchanged.

## BACKGROUND

RB Plant was brought on board in January 2024 to support design, project engineering, and management functions that were not originally costed but were recognised by the client as essential due to limited in-house capacity.



## PROJECT SCOPE

To build a new facility adjacent to the client's existing production facility. It is a two-storey building matching up with the existing facility at various points.

- **Ground Floor:** Installation of a new jar pasteurisation plant and conveyor system, transferring product from the existing building, processing it, and returning it for labelling and packing.
- **First Floor:** Installation of four 1000L sauce cooking vessels with tote bin lifters. The system cooks sauces and transfers product via a new pigged line to filling lines in the existing facility.

## CHALLENGES AND ACHIEVEMENTS

- ✔ Project delays while maintaining a fixed budget created significant cost pressures. RB reviewed and rationalised the building design to improve costs, buildability, and reduce areas of cost risk.
- ✔ Lack of early-stage project structuring (e.g. stage gate approach) increased risk.
- ✔ Significant value engineering was required after the main contract had already been awarded.

## THE SOLUTION

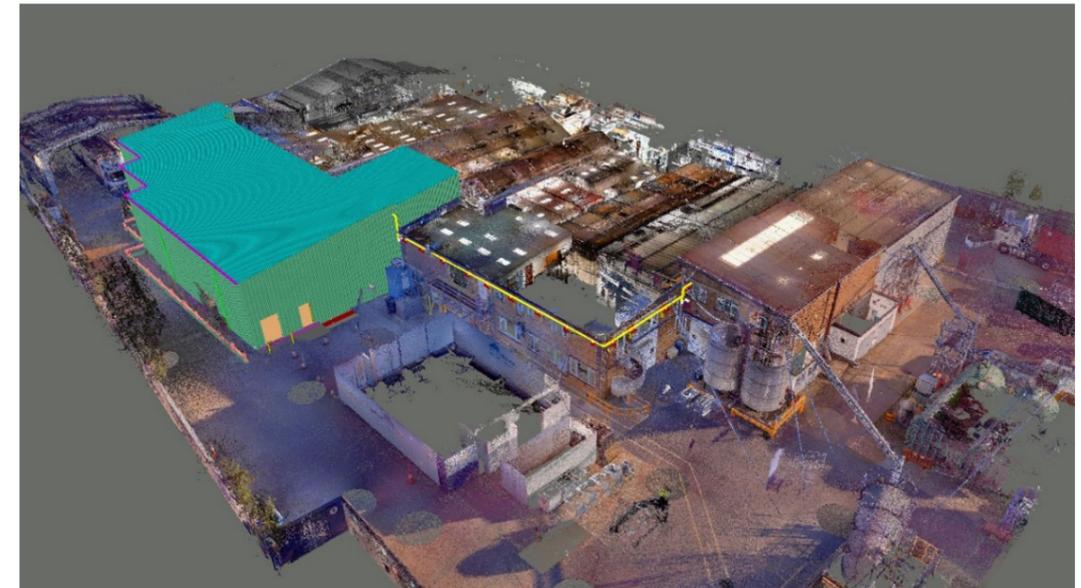
The RB team reviewed and rationalised the building design to enhance cost efficiency, improve buildability, and minimise areas of cost risk including:

- ✔ The original building fit-out specified white wall hygienic composite panels, as on previous food-related projects. The cost was considered too high, and following a short design review RB Plant specified a more cost-effective solution. The cost of this big-ticket item was reduced by 40%, and the order was placed immediately.
- ✔ Regarding the main food process, the initial P&ID reflected all requirements the client considered necessary. However, a detailed review of the product range allowed us to remove a number of feeds, their pipework, valves and their associated control system requirements. These would be put into the system at a later date, as and when required. As a result of this exercise, it was determined that the future expansion plans could be carried out more effectively by providing new feed systems that are not parasitic on existing feeds, as was initially the case.
- ✔ We even reviewed the building's doors. The original specification came from another food project. When costs came in, and following discussions with the Client, Supplier, and the Main Contractor, an alternative door system was used, saving the project £20,000.
- ✔ The initial P&ID incorporated all requirements identified by the client. However, a detailed review of the product range enabled the removal of several feeds, along with associated pipework, valves, and control system components. These elements can be incorporated at a later stage as and when required. As a result, future expansion can now be implemented more efficiently by introducing independent feed systems, rather than relying on extensions to existing infrastructure, as originally proposed.



## THE BENEFIT

This work was carried out after the main contract had been let and has been a painful but ultimately successful value engineering exercise, which was necessary to keep to the original budget of £2.8M. The project has suffered from lack of a stage gate approach, but one could argue that the project may have failed the gate if these savings had not been made.



## ABOUT RB PLANT

RB Plant provides professional engineering consultancy, design, project, and construction management services across a wide range of sectors from Pharmaceuticals to Heavy Engineering – applying vision, purpose, and cutting-edge expertise.

We undertake every stage of a project lifecycle from initial conception to commissioning, both globally and within the UK.

Our highly skilled and qualified Process, Mechanical, Civil and Structural, HVAC, CDM, Electrical, Control & Instrumentation Engineers undertake engineering projects of all sizes. These range from smaller scale projects such as plant modifications, expansions,

and upgrades, through to multi-million construction projects. We apply the same levels of client focus and professionalism to every project, regardless of size.

Our high proportion of repeat business coupled with an organically growing new customer base is no accident and reflects our unique approach that make us stand out in the market-place.



### FIND OUT MORE

- ✔ Our experienced engineering team could support you on your next project. Why not contact Genghis Perriman our Business Development Manager to discuss further for a no-obligation discussion.

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