RMD KWIKFORM

Fujifilm Borealis

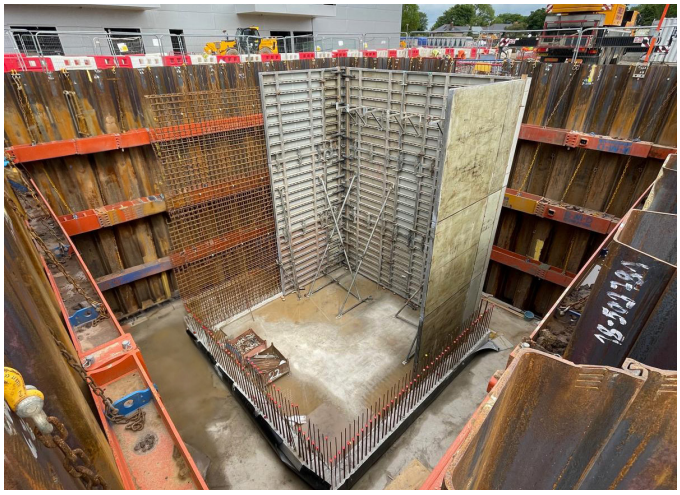
Customer: K Rouse Civil Engineering

Location: Billingham,

Products: GeoBrace, Trench Sheets & Maxima

Case Study

ALTRAD RMD KWIKFORM SUPPORTS LARGE SCALE EXCAVATION FOR BIOTECH MANUFACTURING FACILITY CONSTRUCTION



Temporary works specialist, Altrad RMD Kwikform (Altrad RMDK), recently provided K Rouse Civil Engineering a bespoke integrated ground shoring and formwork temporary works solution to support a challenging excavation for the construction of the new Fujifilm Borealis biotech manufacturing facility in Billingham.

Project Overview

The Fujifilm Borealis facility is a three-storey, multi-platform biotech manufacturing site dedicated to producing vaccines and gene therapy products. The project required extensive site preparation, including a substantial 10-metre-deep excavation as a critical component of the initial construction phase. Altrad RMD Kwikform supplied temporary shoring systems to stabilise the trench, ensuring safety and structural integrity throughout the excavation process.

The work formed part of a £400m investment at Fujifilm Diosynth Biotechnologies' UK site to expand cell culture capabilities, viral vector and gene therapy services, and microbial production. Altrad RMDK collaborated with K Rouse Civil Engineering, contracted to carry out drainage, earthworks, and foundation works on-site.

The Challenge

The primary challenge of the project was managing the depth of the excavation. At 10 metres deep, the excavation posed a significant stability risk in a confined industrial environment. This meant that a versatile and scalable shoring solution was needed to accommodate evolving site conditions and provide robust support during concrete casting of the base and walls. Further complexities arose during the wall construction phase, where reliable formwork was essential to support the concrete pours while maintaining overall stability and safety. The solution needed to meet stringent project timelines and cost-efficiency objectives without compromising safety.

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The Solution

To address these challenges, Altrad RMD Kwikform implemented it's advanced GeoBrace excavation bracing system and Maxima wall formwork system, providing a comprehensive solution for ground shoring and formwork requirements.

The GeoBrace bracing system was pivotal in stabilising the excavation walls. It's modular hydraulic design provided lateral support in conjunction with the sheet piles, minimising movement and ensuring a secure excavation environment. By maintaining full structural integrity at the joints between extensions and the hydraulic ram unit, the system delivered a safe and efficient solution tailored to the project's specific needs making it an ideal choice for supporting deep excavations.

Once the ground slab was cast, the focus shifted to wall construction. The Maxima panel shuttering system, known for its robust and versatile performance, was used to support the concrete pours. Superslim Soldiers were also utilised to enhance flexibility and strength in wall construction. Together, these systems ensured safety and precision during each phase.

The combination of GeoBrace and Maxima systems ensured the structural safety of the excavation, but also optimised workflow, enabling the project team to maintain schedule adherence as well as safety regulations.

Matthew Bell, Senior Sales Representative at Altrad RMD Kwikform, said: "Our ability to offer both ground shoring and formwork solutions as part of an integrated approach allowed us to demonstrate our engineering expertise and deliver a tailored solution that met the project's specific requirements. This collaboration ultimately saved time, minimised risks and ensured the success of the Fujifilm Borealis project."