











## **AGAINST THE PRESSURE: FOUNDATIONS FORGED BY INNOVATION**

With the increasing complexity of construction projects across Australia's urban and infrastructure sectors, the demand for geotechnical innovation and delivery certainty has never been higher. CF Group is redefining industry standards through advanced shoring and foundation systems, including Cutter Soil Mixing (CSM), diaphragm walls, and secant piling.

With a reputation for precision, innovation, and delivery under pressure, CF Group has cemented its status as a leader in shoring and foundation systems across Australia. Specialising in cuttingedge techniques like CSM (Cutter Soil Mixing), diaphragm walls, secant piles, and sheet piling, the company offers full design geotechnical environments.

Construction Manager Murat Cobanoglu describes CF Group as a specialist team of problem-solvers who thrive on engineering challenges that others might avoid. This spirit has been key to their success on a diverse range of high-profile infrastructure and residential developments.

A flagship development for the Gold Coast, Iconica Surfers Paradise presented both geographic and engineering extremes. Located just metres from the ocean, the project required the installation of an 800mm-thick CSM shoring wall to support a five-level basement—all while navigating high water pressure and neighbouring infrastructure like the light rail.

"This was our first time using a CSM system in Queensland on this scale," explains Murat. "We had to win over the consultants and demonstrate the benefits-particularly the water-cutoff capabilities and soil stabilisation of CSM."

CF Group also introduced high-tension anchor bars (rated up to 100 tonnes) to retain the structure, a Queensland first. Where anchoring wasn't possible due to

sensitive structures, secant buttress walls were installed instead. The complexity of the design, combined with the excavation depth and water management challenges, meant the project ran over 1.5 years—a true testament to CF Group's engineering discipline and strategic foresight.

a national milestone. The company executed Australia's deepest sea assembly, reaching depths of up to 40m. This three-level basement required the development of a hybrid CSM system that effectively operated like a diaphragm wall—filled with concrete and steel reinforcement to form structural

"We had to rethink traditional methods," said Murat. "Each panel took two days and required precise coordination. This wasn't just about drilling and pouringit was about matching grout mixes, cage installation, and alignment of coupling for slab connection."

CF Group replaced 10 critical panels with reinforced concrete and adapted batching plans in real time. To support future construction phases, the team also installed deep sheet piles to accommodate high-load lift coils. The job required months of planning, development, and rigorous

Working on Australia's largest infrastructure development, the Western Sydney Airport, CF Group was entrusted with the construction of a secant pile wall shaft—the launching point for the tunnel boring machines.

"These kinds of infrastructure projects demand absolute precision," says Murat. "You're not just working with a developer you're working with state-level stakeholders and rigid compliance standards."

The project required CF Group to meet tight tolerances, manage complex logistics, and ensure seamless coordination with other contractors. The secant wall needed to endure both static and dynamic loading, all while maintaining absolute integrity in the placement, alignment, and cure of each pile.

"This was about delivering structural excellence under national scrutiny," Murat added. "And we delivered."

What connects these three projects—coastal towers, infrastructure tunnels, and deep basements—is CF Group's core approach: integrity, expertise, and adaptability. From pioneering deep-sea CSM installations to delivering critical infrastructure components, CF Group doesn't just take on challenging projects—they transform them.

"With every project, we're raising the bar," says Murat. "And as engineering challenges evolve, so do we."

From the drawing board to delivery, CF Group is building confidence into every foundation they touch—especially where the ground beneath is anything but ordinary.

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