

# Saadiyat Island Five Star Resort

Client: Bin Otaiba Investment Group  
 Contractor: Ghantoot Group  
 Location: Abu Dhabi, UAE  
 Products: Kwik Column / GTX Beams / Kwikflex /  
 Rapidclimb / Rapidshor



## Case Study

Faced with the challenge of building the USD 234 million, 91,000m<sup>2</sup> Saadiyat Island five star resort in Abu Dhabi, contractor Ghantoot Group turned to formwork and shoring specialist RMD Kwikform, to support the full range of concrete construction works for the project.

Funded by Bin Otaiba Investment Group, the resort boasts a 295-room hotel, beach villas, restaurants, spa and leisure facilities. The construction of the four buildings that form the main structure, each comprised of seven storeys, required a full range of formwork and shoring, with new Kwik Column and specialist Kwikflex curved wall formwork, amongst the solutions developed for the project.

Faced with a tight programme time and the need to overcome some architecturally challenging concrete works, RMD Kwikform worked hand in hand with the Ghantoot team to develop designs, method statements and training programmes for the project, which will see up to 900 tonnes of formwork and shoring equipment used onsite.

With the first phase of the project requiring hundreds of columns to be poured, the Ghantoot team opted to use 75 sets of the newly designed RMD Kwikform lightweight Kwik Column formwork system, reusing them across the whole site.

Firstly, the panels are formed using GTX beams and Kwik Column walers, with special corner connectors and web ties. The outer scaffold frames assist the construction of the columns, and the bracing members support



the columns in-situ. In order to strike the system, the full column shutter is removed from each corner in two parts.

To support the construction of the main basement slab 36,500m<sup>2</sup> square metre, one metre thick transfer slab and a further 5,400m<sup>2</sup> square metres of additional slabs, RMD Kwikform designed a shoring solution using 80kN leg load, Rapidshor shoring.

Because the transfer slab was cast in 11 zone pours, the Rapidshor shoring was designed into table forms, allowing the erection team to strike and move the tables onto the next pour, using standard castor units.

Due to the availability of onsite cranes, the Ghantoot team opted to use the Rapidclimb climbing formwork system to construct the four main cores on the project. Thanks to the inbuilt access platforms on the system, the erection team was able to safely fix the rebar for the next pour, using the integrated ratchet system to pull back and strike the wall formwork. This reduced the time it took from one pour to the next, allowing the lower floor slabs to be poured simultaneously.

One of the more challenging concrete features of the project was the main curved wall in the luxury spa complex. To achieve the right curvature for the design, RMD Kwikform engineers created a solution using its Kwikflex curved wall formwork. Here 4.20m high panels were installed to form the 300m long curved wall with adjustable walers and clamps used to secure the system together.

Commenting on the project, Ahmed Atalla of RMD Kwikform said: "With such a large amount of varying types of equipment used on the project, the main initial challenge was the coordination of delivery schedules and logistics. This is why we had a team of site assistance technicians to provide both logistical support and onsite training to the erection teams.

"By creating dedicated design and method statements for every erection sequence and section of the project, we were able to work with Ghantoot to ensure the swift and safe use of equipment at every phase. By conducting pre-pour inspections of each formwork and shoring installation, the site assistance team was also able to enhance the programme and site safety."