

# Lusail Tunnel, Qatar

Client: Lusail & Qatari Diar Real Estate  
Contractor: Qatar Diar Vinci Grand Projects JV  
Location: Lusail, Qatar  
Products: Megashor / Alshor Plus /  
Superslim Soldiers / GTX Beams

## Case Study

RMD Kwikform is building on its tunnelling experience in Qatar and the Middle East, supporting Qatar Diar Vinci Grand Projects Joint venture (QDVC), with the construction of a 6.5km tunnel.

The tunnel will accommodate train lines for Phase 2B of the Lusail Light Rail Transit system, serving the residents of the new Lusail City, which is currently under construction in Qatar. Having already supported the construction of tunnels on the first phase of the Lusail Light Rail Transit System, known as the Lusail LRT, RMD Kwikform has designed an integrated formwork and shoring solution for the second phase of the project.

Involving a wide range of its equipment and specials, designed and fabricated especially for the project, the solution is being used to construct part of the 6.5km long tunnel.

Tasked with achieving a four day turn around cycle, critical for the programme time targets of the project, RMD Kwikform designed, fabricated and supplied six complete sets of formwork and shoring, that could be used to cast the 1.2 metre thick slabs and walls monolithically. Measuring 14 metres in length, each tunnel set used lightweight aluminium Alshor Plus shoring that was made up into specialist travellers. This in turn supported Superslim Soldier steel primary and GTX secondary beams to form the tunnel roof slab. With Megashor heavy-duty shoring used as back propping, Superslim Soldiers and GTX beams completed the overall design for the construction of the tunnel walls, creating a complete travelling tunnel set.

In addition to the tunnel construction phase of the project, RMD Kwikform has also been commissioned to design and supply all shoring and formwork to the tunnel pumping stations and ventilation shafts.

Commenting on the contract and tender process, Les Ridsdale RMD Kwikform General Manager for Qatar said: "We have now been on the ground in Qatar for 11 years and in that time we have developed a very high level of experience and competence in tunnelling, in addition to being involved with other major infrastructure and building works. This experience was particularly important in winning this job, as it was an extremely competitive and involved tender process. Having proven our expertise on the construction of the New Doha Airport Tunnel in 2008/09, we were able to demonstrate how this experience, combined with our technical knowledge, commercial awareness and local base could benefit the project.

"I think throughout the tender process, what was most important to QDVC was ensuring they selected a formwork and shoring provider that could help them achieve their programme safely, on budget and that could be trusted not to let them down. Having won the tender I think they were confident that we were that business."

Challenged with completing the tunnel in just 12 months, once QDVC had awarded the contract to RMD Kwikform, engineers were able to put the finishing touches to concept designs to identify the amount of equipment needed to support the job. This was then sourced both locally, with additional equipment brought in from the UAE.



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