



خانصاحب سايڪس
KHANSÁHEB SYKES

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CASE STUDY

Khansaheb Sykes Delivers Dewatering for Meydan Horizon & Eastern Extension, Dubai

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CASE STUDY

Managing Fines Migration During Deep Excavation Dewatering

Khansaheb Sykes was brought in to design and install a dewatering system for a major road and infrastructure scheme, supporting construction of the sewer and stormwater networks along with several pumping and lifting stations.

With excavations running as deep as 10 metres below natural ground level, and groundwater encountered just 2–3 metres below ground level, keeping the site dry and stable wasn't optional. It was fundamental to the work going ahead safely.

The team needed an engineered solution that could keep groundwater under control while adapting to ground conditions while adapting to variable ground conditions and challenges encountered throughout the works.

1 CHALLENGE

The ground itself was tricky: backfilled material with loose to soft sand and silty layers over weak, low-permeability sandstone. The fine soil content brought a real risk of fines migration during dewatering, and clay pockets across the site meant over-bleed had to be factored in too.

Getting reliable drawdown at 10 metres needed more than pumping capacity. It required effective filtration and a method that could adapt to changing ground conditions.



2 SOLUTION

Khansaheb Sykes engineers implemented a combined deep well and sump dewatering system, matching the pumping and filtration approach to the site's ground conditions:

- 3 x **GP 150M 6" diesel sump pumps**
- 1 x **WP 150-60 6" dewatering pump**
- 1 x Wispa 6" booster pump
- 2 x 150 kVA **generators**
- **Deep well drilling machines**
- **Submersible borehole pumps**

Deep wells handled continuous drawdown, sump pumps managed localised over-bleed, and graded filters and screens kept fines under control throughout.



3 OUTCOME

Since operations began in February 2026, the engineered dewatering system has maintained dry and stable excavation conditions across most of the site, with additional measures introduced where ground conditions required them.

Fines migration and over-bleed have been successfully managed at most locations, enabling sewer and stormwater network construction and associated infrastructure works to progress on schedule.





Need dewatering engineered around your site's actual ground conditions?

Khansaheb Sykes provides reliable groundwater control and dewatering expertise for challenging ground conditions across the UAE. Speak to our team today.



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