

Polypipe Middle East Helps Shape the Future of Urban Water Management

CASE STUDY

Project

Museum of the Future

Client

North 25

Products

- Polystorm
- Terrain Pleura Vent System

Application

Soakaway

Polypipe Middle East supplies the Museum of the Future with Polystorm and Terrain Pleura.



The Museum of the Future is no ordinary museum. Instead of ancient relics behind velvet ropes, visitors find themselves immersed in innovative, tech-inspired exhibitions that take you on a journey through potential futures and challenge the limitations of what we believe to be possible.

This theme extends beyond the content of the museum and is embodied in the design of the building itself. The circular building represents humanity, the green mound it sits atop represents the earth, and its central void represents the unknown future. In fact, the Museum of the Future has even been described as an

engineering and architectural marvel, given the absence of supporting columns within the 30,000m² space.

Polypipe Middle East worked closely with lead consultant, Killa Design, and main contractor, DBB, to provide an equally innovative vent and drainage solution that aligns with the challenging specifications. The solution was required to work with the architectural demands of the building, whilst also creating a safe and comfortable space for its high volume of visitors, and providing the best possible on site stormwater management solution.

A building as uniquely shaped as this requires equally innovative engineering solutions to match. And since conventional vertical drainage was out of the question, an active ventilation solution, Terrain Pleura Vent System, was selected, enabling a closed drainage system with no visible roof penetration for vent pipes, saving large amounts of drainage piping. Its nature as a localised active ventilation system is proven to better protect water trap seals and minimise unpleasant odours by balancing the internal air within the drainage system.

Museum of the Future - Dubai, UAE

In addition to this, and staying true to its mission to explore innovative solutions to modern sustainability challenges, the Museum of the Future also opted for the installation of a Polystorm soakaway tank. Installed beneath the 212m bridge linking the museum to the Emirates Towers metro station, the revolutionary soakaway system alleviates concerns surrounding rainwater drainage. By offering a controlled and sustainable way to re-introduce water run-off back into the ground, the solution minimises flood risk and avoids silt and contamination. With its 95% void ratio, Polystorm essentially creates a void underground that is specifically designed to optimise stormwater collection, proving itself more effective than the originally specified gravel soakaway method.



Polystorm geocellular tank - a SuDS solution

For this project, Polypipe Middle East was able to add value beyond the product itself. The Polystorm tank was delivered to site preassembled, helping to minimise installation times and associated costs. Their modular nature meant they were well suited to the limited space, fitting perfectly around existing infrastructure and utilities. A layer of gravel aggregate was then strategically placed around the tank to filter sediments and fine materials that could otherwise block the geotextile over time.



Emirates Towers metro bridge



Gravel aggregate to protect the tank from blockages

Designed specifically for the extreme and unpredictable weather events native to the region, Polystorm provides a sustainable urban flood management strategy that ensures the museum and its surrounding area is well-prepared for any amount of rainfall.

The revolutionary Polystorm soakaway system offers a controlled and sustainable way to re-introduce rainwater run-off back into the ground, minimises flood risk and avoids silt and contamination.

Ultimately, Polypipe Middle East's provision of expert technical advice, sustainable urban drainage solutions, efficient installation, and professional service, meant that we were able to successfully enhance water management and in turn contribute to an engineering marvel that fully embodies the values it represents.

“We are always thrilled to work with partners who share our commitment to a more sustainable future, and we're honored to have played a role in the construction of what has become known as the most beautiful building in the world.”

Lina Abolail, Regional Director
for Water Management Solutions

Polystorm – the Soakaway Solution of the Future

