

CONSULTANT/ENGINEER:

Tellus Design

CONTRACTOR

Zarco

CLIENT

Dubai Municipality

INSTALLER

Al Khaja Innotech

Issue

Dubai Municipality sought an environmentally friendly alternative to traditional pre-cast concrete blocks for anchoring a floating pontoon on Jumeirah Island, Dubai. Conventional concrete blocks posed a significant environmental impact and suffered a buoyancy loss of approximately 60% when submerged. The client required a solution that maintained stability and buoyancy without these disadvantages.

Testing

Prior to installation, rigorous testing was conducted to ensure the selected anchoring solution met the project's performance requirements. The Vulcan AS-120 Earth Anchors, made of 16mm 316 stainless steel for marine-grade durability, were chosen for their proven strength and resilience. Training sessions were carried out in Bahrain to familiarise the installation team with proper procedures, and all anchors were pre-tested for load-bearing capacities ranging from 20-50 kN. The proof-loading phase confirmed that the anchors could sustain the required loads without performance degradation.



Solution

Tellus Design was commissioned to develop a tailored anchoring solution that utilised 60 AS-120 Vulcan Earth Anchors. These anchors provided superior load-bearing capabilities compared to traditional concrete blocks, while also offering a more sustainable and environmentally friendly alternative. The installation team, led by Al Khaja Innotech, was trained to deploy the anchors using specialised marine installation equipment. The anchors were driven subsea to a depth of 3 metres, ensuring a secure and stable foundation for the floating pontoon.



Result

The installation was successfully completed, with all anchors meeting the specified load requirements. The solution proved to be not only environmentally sustainable but also highly effective, eliminating the buoyancy-related weight loss issues of concrete. The project was executed efficiently, with minimal on-site plant and vehicle usage, demonstrating the versatility and reliability of Anchor Systems' solutions. The success of this project underscores the effectiveness of Vulcan Earth Anchors in marine applications and highlights Anchor Systems' commitment to providing innovative, sustainable anchoring solutions.

Floating Pontoon

Anchoring Solution – Jumeirah Island, Dubai

NUMBER OF ANCHORS INSTALLED

60 AS-120 anchors

INSTALLATION DEPTH

Driven subsea to a depth of 3 meters

