

PROJECT REPORT



CHELSEA FLOWER SHOW 2000 - SECURING TEMPORARY STRUCTURES

Client: De Boer Structures

Requirements

At the 2000 Chelsea Flower Show, two giant temporary structures were erected by De Boer Structures to house the main arenas for this famous annual event.

Measuring 65m x 110m and 65m x 85m and covering 3.2 acres, the structures replaced the old canvas style 'Grand Marquee'.

De Boer's required a reliable, cost-effective method of securing the structures to prevent any wind uplift or movement. The anchors also needed to be re-usable as the structures are due to return for the next nine Chelsea shows.



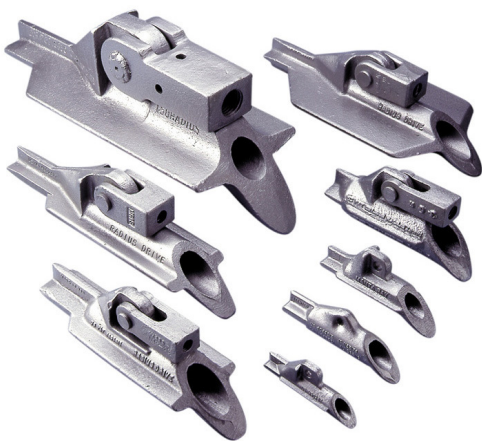
The two large temporary structures secured by Duckbill Stingray anchors

Solution

Following previous good experience at similar events, such as the Fleet Motor Show at Donnington, De Boer's consulting engineer recommended the structures were made totally secure by using the well proven Duckbill mechanical ground anchors.

The vast Delta System structures were erected in just seven days on very poor quality ground, consisting of original silts overlaid with rubble and a reconstructed ground. They were then levelled before a total of 46 Duckbill Stingray anchors were installed. The Stingray is the latest addition to, and the largest anchor, in the Duckbill range, capable of accepting immediate proof loads of up to 300kN.

Each of the 5m long stainless steel anchors was driven into the ground and tensioned to a working load of 80kN. The anchors' load plates were then bolted to the steel frames which sat on pre-formed concrete pads. After the event was over, and the structure removed, the corrosion resistant stainless steel Duckbill anchors were capped off and concealed to enable them to be re-used for the next nine Chelsea Flower Shows.



The Duckbill range of mechanical ground anchors with the new Stingray anchor pictured top left.