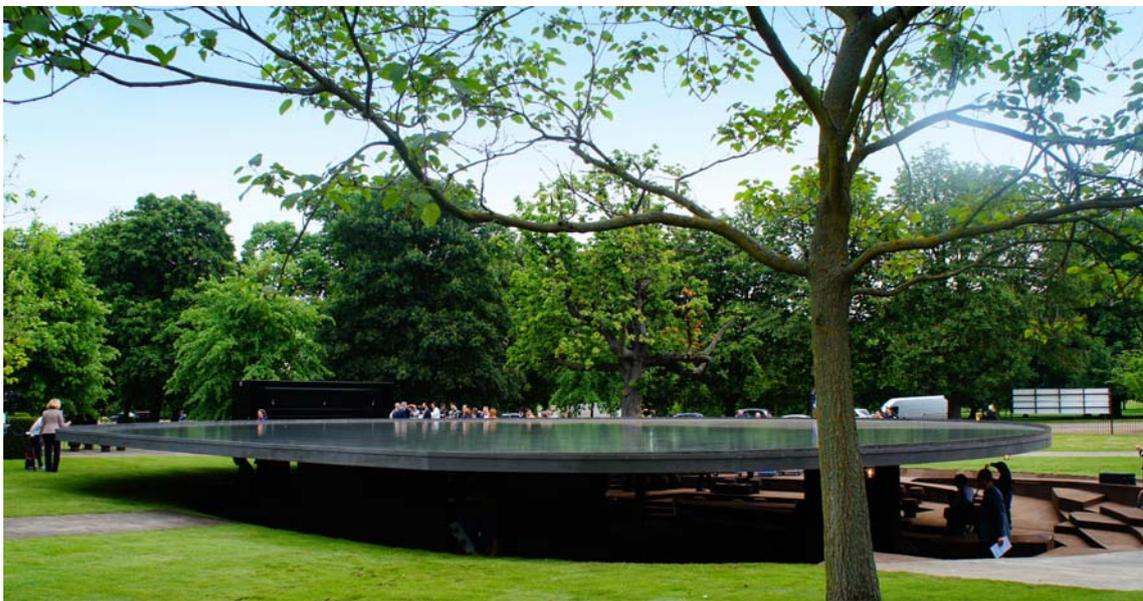


Serpentine Gallery Pavilion 2012

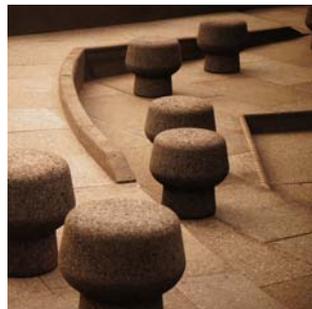


A subterranean encounter: the cork lined 2012 pavilion drew visitors beneath the park's surface



The 2012 Summer Pavilion for London's Serpentine Gallery was a collaborative creation designed by Herzog and de Meuron and Ai Weiwei, the design team behind the spectacular Beijing National Stadium built for the 2008 Olympic Games.

This particular pavilion took visitors on a subterranean encounter with pavilions past. The structure was lined with cork, an unusual building material but one that is sustainable and of a colour and texture reminiscent of the excavated earth. A floating platform roof 1.4m off the ground, held a shallow reflective pool of rain water, while the archaeological approach of the design was reflected in the twelve supporting columns, each one representing a past pavilion, with a thirteenth representing the 2012 structure.



SERPENTINE PEDIGREE

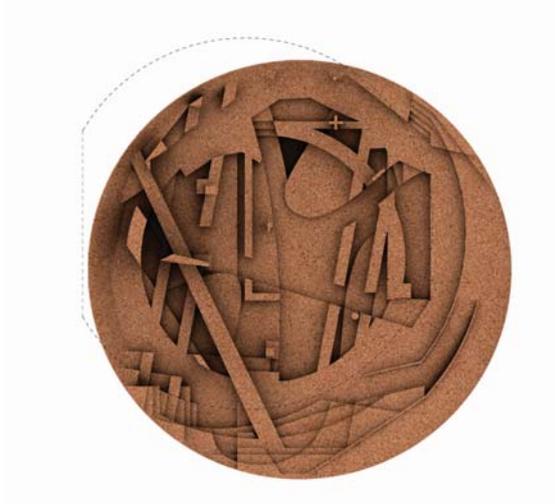
This was the fourth year we were invited to build the pavilion, each year providing us with the opportunity to work with completely different materials and to utilise very different in-house skills and manufacturing techniques.

The undulating cloud like structure of the 2009 SAANA design drew upon our experience in the manufacture and installation of composite panels and fixings while the 45 tonnes of pillar box red steelwork for Jean Nouvel's striking 2010 pavilion utilised very different in-house capabilities. In complete contrast, Peter Zumthor's 2011 'hortus conclusus' made use of our traditional carpentry and scenic skills in creating a contemplative room with a subtle finish.

Our large yet versatile production facilities, construction experience and dedicated teams of knowledgeable, skilled personnel enable us to embrace the variety that such innovative projects present.



A varied commission: diverse structures requiring diverse manufacturing and construction skill



SITE AND CONSTRUCTION MANAGEMENT

However varied the commission may be, the challenges of timeframe and location remain the same. For the 2012 pavilion, our remit expanded to include all on-site management and groundworks, as well as all construction and associated fabrication, with a crew of up to 12 spending a 52-day period on site.

Seventy-five wagons of soil were removed from the excavation with the 22m diameter hole reaching a maximum depth of 3.5m, one of the lowest points in that area of the park. The combined effect of this and four weeks of relentless hard rain meant that during some periods, two hours of pumping allowed us just half an hour of water-free work.

As the groundworks progressed, we installed sump pumps, dug a soak away 15m long, 10m wide and 3m deep and sunk 39 screw piles to a depth of 6m to aid the installation of the thirteen columns.

As in previous years, all work has to be carried out within a narrow margin around the footprint of the Pavilion. With a busy schedule and well versed in the necessary requirements of the location, our experienced crew applied their usual systematic organisational skills to receiving the multiple deliveries of large quantities of material to a site with restricted access, within a public park and with minimal storage.





The convergence of creativity and construction: Our background in events engineering and bespoke structures gives us a unique insight and approach

A HIDDEN HISTORY

The steel roof concealed much of the pavilion below, adding to the sense of discovery as visitors entered the hidden environment, the shallow pool captured by the roof providing a reflective surface that mirrored the sky above. This pool could be drained, allowing the roof to double as a dance floor or entertainment area.

The 75 tonne roof structure comprised sixteen pieces, the heaviest of which weighed 6 tonnes. Along with the thirteen supporting columns, the roof sections were manufactured in our workshops over a seven week period, taking 1000 man-hours to weld. Each piece was of a sandwich construction: a 100mm by 100mm box skeleton frame with a 10mm steel plate base and an 8mm steel plate top layer.

On site, a 100 tonne crane was used to manoeuvre the sections into position before they were bolted together and the top joints welded to ensure water retention for the shallow pool. The steel surface was shot-blasted on site and a 2pak lacquer applied to enhance the reflective finish. A roof overflow and drainage system were also added.

The excavated void, along with the columns, were lined with timber before the layer of compressed cork, previously cut and sculpted in our workshops, was fitted, planed and finally sanded.

We undertook the electrical fit-out, fitting lights to the underside of the roof and adding power points. We laid the timber decking pathways to and around the pavilion, as well as providing power and water for the café unit located alongside.

The pavilion remained in situ throughout the summer of 2012.

