

Serpentine Pavilion 2016: Bjarke Ingeles Group



THE UNZIPPED WALL: A 14m high structure of interlocking hollow bricks

The annual summer pavilion at the Serpentine Gallery is an established highlight of both the London art scene and the global architectural calendar. The commission provides a showcase for contemporary architecture and for the last 16 years has presented a series of uniquely varied and diverse structures.

Each pavilion is constructed on the lawn outside the gallery in London's Kensington Gardens and is used as a venue for a series of events throughout the summer months before being dismantled and relocated in the autumn.

We've built each pavilion since 2009 and in 2016 undertook the manufacture and installation of a further four Summer House structures in addition to the Bjarke Ingels Group (BIG) designed pavilion.



The Unzipped Wall

BIG's 2016 pavilion comprised a 14m high wall of interlocking hollow bricks that peeled open into a cavernous and cathedral-like space, appearing solid or 'barely-there' depending on your viewpoint. It is a deceptively complex structure that required particular precision in both manufacture and installation in order to achieve the design intent.

Collaboration is a key component of the Serpentine commission and the architect, together with structural engineers AECOM and AKTII, undertook several visits to our workshops as we worked on developing the bespoke fixings and tools required as well as test building different sections in preparation for assembly on site.



The Bricks

Around 1,860 semi-translucent pultrusion GRP boxes were used to create the 'unzipped' wall. Manufactured by Danish company Fiberline Composites, each unit was 500mm wide by 400mm high, yet varied in length or thickness in accordance to their precise load-bearing location in the wall. The longest units reached 1800mm, the shortest just 300mm; with a GRP thickness of 10mm, 6mm or 3mm.

In order for the wall to accurately 'zip up' with the facades meshing together seamlessly at the top, it was vital that the first layer of bricks was precisely orientated and stacked to within a 1mm tolerance of the footprint. Great care was taken by when preparing the ground and in laying the 350sqm concrete slab, also levelled to a similar tolerance of 1mm.

Our workshops pre-assembled the bricks into around 400 sections, enabling the wall to be built up two layers at a time. The sections were delivered to site in controlled batches and craned into position, eventually interlocking together at the top to create the single-thickness fin.

Fixings

Lengths of specially made aluminium extrusion cruciform and bespoke pig-nosed bolts link the box-like bricks together. Cut to fit the precise length of each box, the cruciform also allows for the staggering and overlapping of rows, enabling surprising curves and fluid profiles to emerge from the geometric units. As well as manufacturing the many thousands of bolts, we also made a series of bespoke tools, enabling us to work within the restricted internal dimensions of each brick.



Internal fit out

Our team undertook all internal work including the electrical fit out, floor and seating. The wood floor was ramped at either end and comprised 500mm widths of Douglas fir delivered to site in lengths of between 2 and 9 metres. The fully integrated box-like seating units, also in Douglas fir, were pre-made in our workshops and fitted along each side of the pavilion interior, following the internal profile and also echoing the hollow GRP bricks of the surrounding structure.



Groundworks

Our crew carry out all necessary groundworks for the installation of the pavilions. Once the summer is over, the same team dismantle the pavilion in preparation for its relocation and ensure the Serpentine site is returned to its previous grassed, parkland state.

