

The Kelpies

Location: Scotland

Artist: Andy Scott

Towering thirty meters above the Forth and Clyde canal in central Scotland, the Kelpies can claim to be among the world's most exciting pieces of public art. Scottish sculptor Andy Scott's massive pair of equine heads is inspired by the powerful heavy horses that worked the canal towpaths in times gone by.

Eight years on from Scott's initial sketches, the story is one of collaboration between the artist and some of the UK's finest engineers. They overcame with ingenuity the technical challenges of scaling up the original design tenfold, into two massive structures which combine painted carbon steel and hundreds of stainless steel cladding plates.

"I chose stainless steel both for its longevity and its visual effect," says Scott. The setting is 'big sky' country, with mountains in the distance and a special natural light. Stainless steel gave the effect I was looking for – a light, almost delicate quality against the natural backdrop.

Whilst remaining artwork, the sheer scale of this project meant it had to be approached in the same way as the building of a bridge.

"Andy's maquettes were digitally scanned to produce a 3D surface model. So whilst we built the Kelpies, the form is a perfect copy of Andy's

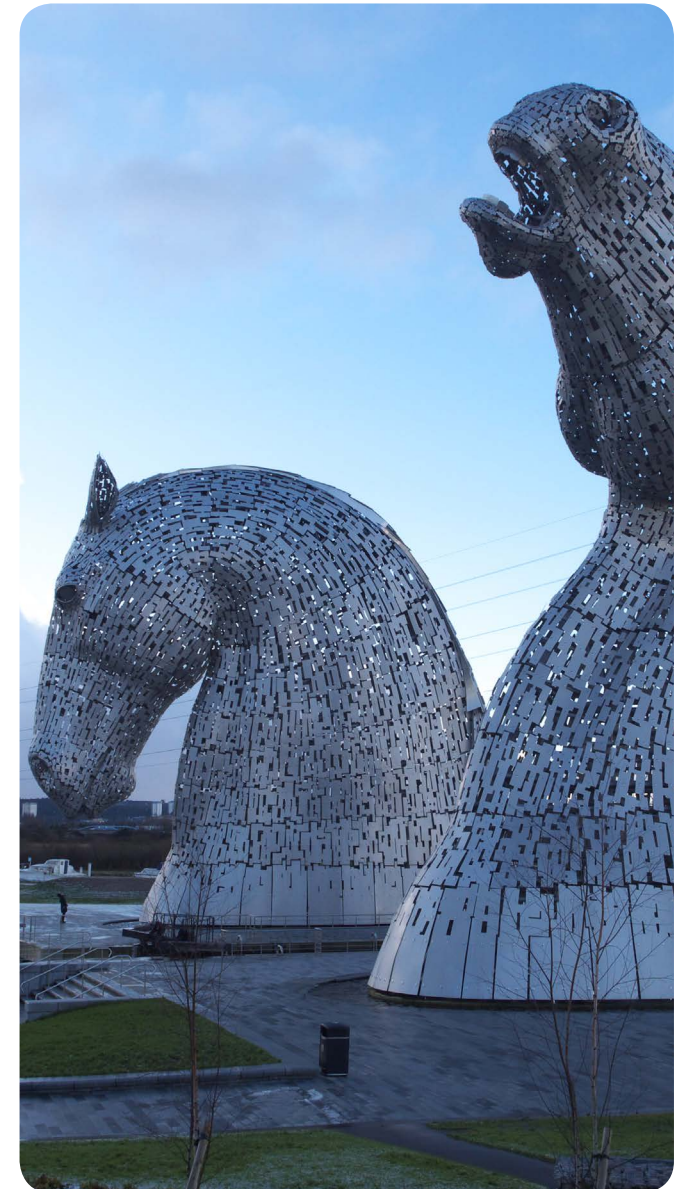
original work," explains Tim Burton of SH Structures, the project's principal contractor. To create an efficient and stiff primary structure, two triangular trusses interconnected by frames braced in-plane were constructed. A secondary frame followed the profile of the internal surface of the skin with brackets to take the stainless steel cladding that forms the outer layer of the two heads. The heads were covered with 150 tonnes of 6mm thick mill finish Type 316L (S31603) stainless steel plate, supplied and laser cut by Outokumpu. The finishing touch has been the installation of specially designed lighting, which dramatically transforms the Kelpies at night.

The Kelpies, which started out as an artist's vision has, through a collaborative process, the use of traditional fabrication skills and the application of excellent structural engineering, been transformed into a stunning piece of public art.

Source: nickelinstitute.org

Details

Environment:	rural
Grade:	316L (S31603)
Material thickness:	6 mm
Manufacturing company and material supplier:	outokumpu.com
More information:	outokumpu.com



Pictures courtesy of Ben Williams

To see more stainless steel in architecture, [click here](#)