



SA's Freedom Statue comes alive with Autodesk Revit

The architects who created the winning submission in South Africa's Statue of Freedom competition, Sue Clark and Jens Jüterbock of [Equilibrium Studio Architects](#), realised their ideas for the iconic project using [Autodesk Revit](#) software.

Competition entrants – 107 in all – were briefed to create a structure symbolising the spirit of freedom and the work and life of Nelson Mandela and his comrades and – in particular – their unwavering commitment to a free South Africa.

The site for the statue is the point where Port Elizabeth's South Harbour meets Kings Beach and designers were briefed to create a statue that would act as a visitor attraction and contribute directly to the redevelopment of the city's port and central business district.

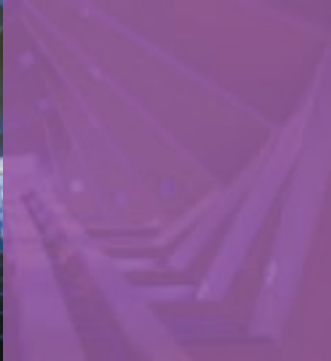
Clark and Jüterbock, opted for a simple, yet elegant, sculpted spiral tower that would be visible from a distance from land, air and sea.

"The primary aim of our structure, apart from aesthetic appeal, is to provide a sensory experience for the visitor, evoking emotions and sensations that complement historical milestones," says Clark who conceptualised the idea.

The tower will be constructed from hollow 4m x 4m tubes that vary in length from 15m to 35m in length. They will be stacked in a rectangular arrangement with the larger units at the base, tapering upwards for 17 levels to a height of 65m, while simultaneously rotating around a vertical axis.

Not only will the spiral create a sense of movement, but the exterior will also embody the country's journey to freedom. The rough heavy concrete base will represent the oppressive years of apartheid. As the structure ascends, the external concrete finish will smooth and eventually change to steel, symbolising transition that has occurred in the country.

Each tube will provide an exhibition area in which local artists' work will depict a milestone in the country's journey to freedom. The dark, lower tubes will represent years of oppression. With light representing freedom, ascending levels will be infused with more and more light, culminating in the freedom platform – a symbol of the country's first democratic election.



The judging panel, led by Justice Albie Sachs, agreed that the tower has the potential to be a remarkable monument, and will be admired and enjoyed for decades and centuries to come.

“It has a unique structure that is simultaneously simple and striking when viewed from afar, and yet interesting and full of surprises within.”

Jüterbock had been an Autodesk Revit user for about 18 months when he used it to create the conceptual images required for the competition submission. The team was under extreme pressure. It started the project in January 2005 and had to make its first submission just three months later.

“It wasn’t a conventional structure, more like a sculpture, so there were initially some setbacks. I, unfortunately, attributed the incorrect properties to the tubes. They should have been walls, not structural elements. So I had to re-do a lot of work.”

Once he overcame his initial frustrations, Jüterbock says the software was worth its weight in gold, especially when it came to creating elevations.

“360 degrees around the structure, no two elevations are similar. It’s not like a square or rectangular structure where you can copy and mirror an elevation to create a new one. So the ease with which we could create elevations, as well as sections, was an enormous benefit.”

Jüterbock says the complex steel structure was quite a challenge.

“However, once the method, which was quite simple in the end, was discovered, we were on a roll.”

He says the shadows, introduced in Autodesk Revit 7, helped to enhance the presentations.

Jüterbock is realising extensive time savings in the creation of working drawings, which are being generated from data contained in the project model.

Equilibrium is supported by the Gauteng Autodesk reseller, Cadplan. The company is committed to providing quality training and is one of two authorised Autodesk system centres in Africa. Its training facility offers individual and group tuition on a range of Autodesk products, with delegates working in small groups to maximise skills development.

