MMA Architects
Design Indaba 10×10 Housing Project
Cape Town, South Africa 2007–2009

In 2007, Design Indaba invited ten architects to design ten low cost houses on ten sites, for ten families in Freedom Park, Mitchell’s Plain. The initiative was part of the development of Freedom Park by Niall Mellon Developers. The brief for each architect was to design a house within the limits of the Government subsidy, which allows a 50,000 Rand (€4,570) allocation per household for a 40 m² house. The Residents’ Association and Design Indaba selected several families after a process of consultation to provide the architects with a better understanding of the families’ concerns and the social situation. MMA Architects were allocated to the Jonker family.

In response to the 10×10 Housing Project brief, MMA Architects sought for solutions to address the challenges faced by the country’s housing sector, while exploring the possibility of sustainable and appropriate designs. Given the fact that the plot sizes (112 m²) were predetermined, the design team considered it necessary to maximize the usable area by minimizing the building footprint as much as possible. A double story unit was therefore proposed as the most efficient option. Living areas are situated on the ground floor and sleeping areas upstairs. The house was positioned to allow for expansion towards the back garden and yet still allow adequate space, including a play area for the children within the safety of a private garden.

The result of the design process was the "sandbag house" made of timber frame construction, which is based on EcoBeans Technologies. The sandbags were clustered over externally and timber boarding was used internally, with translucent polycarbonate sheets used to maximize natural light penetration. Timber window and doors frames were a custom-made frame system developed by EcoBuild Technologies. The timber beams have metal inlays to provide tensile strength, thus improving the structural integrity of the system. Sandbags were used as infill for the walls of the building. They are excellent thermal mass qualities for passive thermal control, tapping into indigenous building techniques that made traditional buildings thermally sound and comfortable to live in. The main considerations for this solution were to reduce the cost of building materials, reduce the building time, and consider the involvement of the community in the building process.

In a nutshell, MMA Architects was able to produce a 54 m², 10×10 house for a cost of Rand 65,000 to Rand 70,000. Although this cost exceeded the Rand 50,000 budget, Design Indaba accepts that there is a factor of economics of scale when compared with the production of 1,000 subsidy houses. The 10×10 houses were completed in February 2009, and was exhibited as part of the 2009 Design Indaba EXPO.

Credits and Data
Project title: Design Indaba 10×10 Housing Project
Client: Design Indaba, Niall Mellon Developers
Location: Freedom Park, Mitchell’s Plain, Cape Town, South Africa
Inception: 2007
Completion: 2009
Architects: MMA Architects
Andrew Treusch (left) was born in 1956 in Schladming, Austria. He studied architecture at the Vienna University of Technology (TU Vienna), the University of Michigan and Moscow Institute of Architecture. In 2005, he established Treusch Architecture. From 1995 to 2003, he was an assistant professor at the TU Vienna. Nadja Sailer was born in 1960 in Luzern, Switzerland. She studied architecture at the TU Vienna and the École Nationale Supérieure d'Architecture de Paris La Villette. She has been a partner at Treusch Architecture since 2001. From 2001 to 2003, she taught at TU Vienna. Recent projects include the extension of the Ars Electronica Center (university building). Portraits courtesy of the architects.

Chuck Holberman was born in 1939 in Massachusetts, USA. He studied liberal arts at Brown University from 1974 to 1976. He gained a Bachelor of Science in architecture at the University of Connecticut in 1979 and a Master of Science in mechanical engineering from Columbia University in 1981. He founded Holberman Associates in 1990. In 2008, alongside Ilse Hopp, Principal of the School of Architecture, he formed the Adaptive Building Initiative. The project develops adaptable, flexible, and resilient environments that are designed to be adaptable and adaptable to the changing needs of the community. The project includes the adaptive reuse of the former United States Post Office Building in New York City. The project is currently under construction and scheduled to be completed in 2020. Portraits courtesy of the architects.

Architektur & Landschaft was established by Stefan Götz (right) and Susanne Gabriel (left) and is based in Munich, Germany. Götz studied at the University of Karlsruhe, Austria from 1987 to 2009 and at the Swiss Federal Institute of Technology, Switzerland. From 1974 to 1991, Gabriel majored in art history and philosophy at the University of Vienna, Austria from 1989 to 1990 and landscape architecture at the Technical University of Berlin, Germany. From 1991 to 2005, they have worked as architects at the University of Karlsruhe, Austria. They have been the current issue of the Tectonics magazine and a courtyard design for a residential building in Munich (2007). Portraits courtesy of the architects.