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RPBW with TAMassociati

Children's Surgical Hospital by Emergency A Sustainable Paediatric Center in Rammed Earth Entebbe, Uganda

The Children's Surgical Hospital in Entebbe, Uganda, is the second paediatric center opened by Emergency in Africa, following the heart surgery center in Khartoum, Sudan. The 9,700 sq. m complex, designed by Renzo Piano Building Workshop with TAMassociati, is located on the shores of Lake Victoria. The hospital provides free healthcare for children up to age 18 and it has three operating rooms, 72 beds and a series of other services, such as radiology and a laboratory

equipped with a blood bank. The center was built using the rammed earth technique, which involves pressing earth into wooden molds that are removed once the wall has hardened. This technique is common in the local building tradition and it provides excellent thermal insulation, keeping the interior temperature and humidity levels constant. Environmental sustainability was fundamental to this project, with a roof covered in 2,500 photovoltaic panels to

provide part of the energy used by the building.

Mapei's involvement was to improve the performance of the rammed earth. After much research and experimental testing carried out with the technical staff of Emergency, an innovative system was developed using special latest-generation bonding agents that add flexibility and durability to the rammed earth system. The resultant mix contained clay that was dug up when excavating the foundations, a selection of aggregates, structural fibers and Mapesoil 100, a special powdered additive that improves the mechanical performance of the soil and reduces water sensitivity. In addition, after the walls hardened, Mapecrete Creme Protection - a water repellent top coat - was applied.

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