



Photo: © Sabine Gretner

### Heating with the sun, cooling with the construction

Orange Farm is a township in the southwest of Johannesburg. The social situation is characterised by poverty, AIDS and unemployment. The appearance of the development is dominated largely by buildings or shacks made mostly of sheet metal, corrugated iron or parts of cars. In summer it can become unbearably hot in these shacks (up to 45°C), while during winter nights it can be noticeably cold (to 2°C).

We were commissioned by the Tebogo Home for Handicapped Children. The Austrian NGO SARCH set up this contact for us. The home for almost 50 children had become too small. In a group of 25 students we planned and built a dining building with a new kitchen, and a therapy building with sanitary facilities.

A generously dimensioned pergola, a garden hall, connects the buildings with each other. The buildings we erected in Tebogo have a pleasant indoor climate throughout the year – without the use of energy. In this way we were able to reduce the fluctuation in temperature to only 9°C.

Local workers, above all women, were integrated in the project. The building materials were acquired directly from the township: concrete blocks, earth, clay, straw, timber, grass mats – to strengthen the local economy and to make later repetition easier. One of the main aims was to make buildings that suited the needs of the children. They received a home that conveyed a sense of security and joy in living.

**LIVING TEBOGO | 2005**  
Home for handicapped children in Orangefarm, South Africa.

#### Building

Extension of a Home with a kitchen and a therapy building (145 m<sup>2</sup>) and a pergola (120 m<sup>2</sup>)

#### Material

Earth (therapy building) and locally produced bricks (kitchen building)

#### Design and realisation

25 students, University of Art and Design Linz + the local community

#### Design supervision

Prof. Roland Gnaiger, DI Lotte Schreiber, DI Richard Steger, Anna Heringer

#### Site supervision

Sigi Atteneder, DI Richard Steger

#### Consultants

Oskar Pankratz (building physics), Martin Rauch (earthworks), Erich Heiligenbrunner (paedagogics)

#### Partner

SARCH, Education Africa

#### Awards

International Energy Globe Award

Photos (selection)

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