THE NKORANZA CHILDREN'S HOME, GHANA

DEC 2006 - JUN 2007

Project Type

- Article 25 appointed to assist with the design and construction of a new children's home
- Accommodation for 25-30 children and 4 carers
- Surrounding area to be used as farmland to generate income and help children learn the basic skills of farming and responsibility

Project Partner

- Let Kids Smile
- A Dutch organisation set up to run and sustain the Children's Home

Project Location

- Nkoranza, central Ghana
- A transitional region between the tropical, hot-humid south and the dry savannas of the north

Open Learning School

No. of children:	25-30
No. of carers:	4
Cost:	€26,000 (£20,000)
Area of site:	10 acres
Construction time:	4 1/2 months
Town population:	approx. 5000

Context

- Existing children's home in poor condition and in desperate need of repair
- Building too small to accommodate more children, and no possibility of expansion existed
- Let Kids Smile had one month to vacate building
- No existing building to rehouse the children could be found in the town

Shelter Type

- Stone wall construction with cement mortar
- Concrete and stone foundations
- Timber roof construction with fibre concrete roofing (FCR) tiles
- Palm tree columns to support timber veranda roof structure

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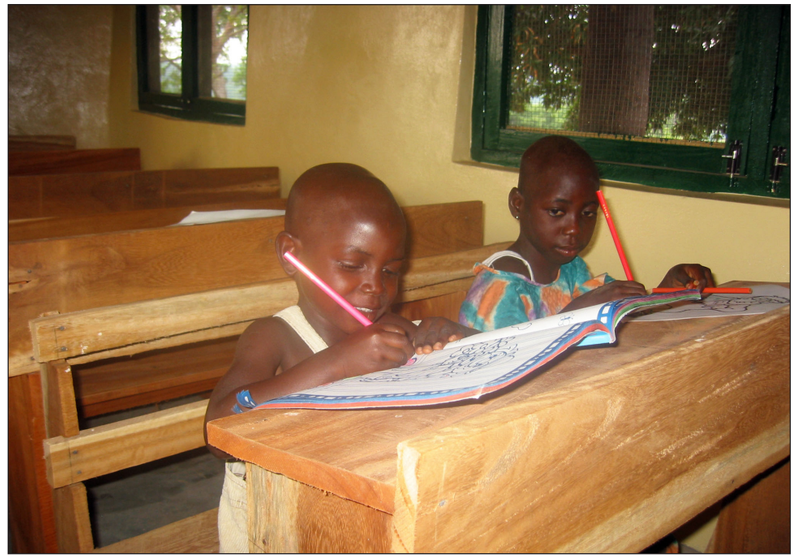

Community Involvement

- Use of local workmen and businesses throughout construction created jobs and stimulated local economy
- Local children educated in how to set out the walls using pegs and string
- Volunteers assisted in the site clearance and column positioning Article 25's project coordinator set up an Under-12s football team to play against other local teams
- 55 members of the community volunteered to help move stones, pump water, carry timber and weed the farmland

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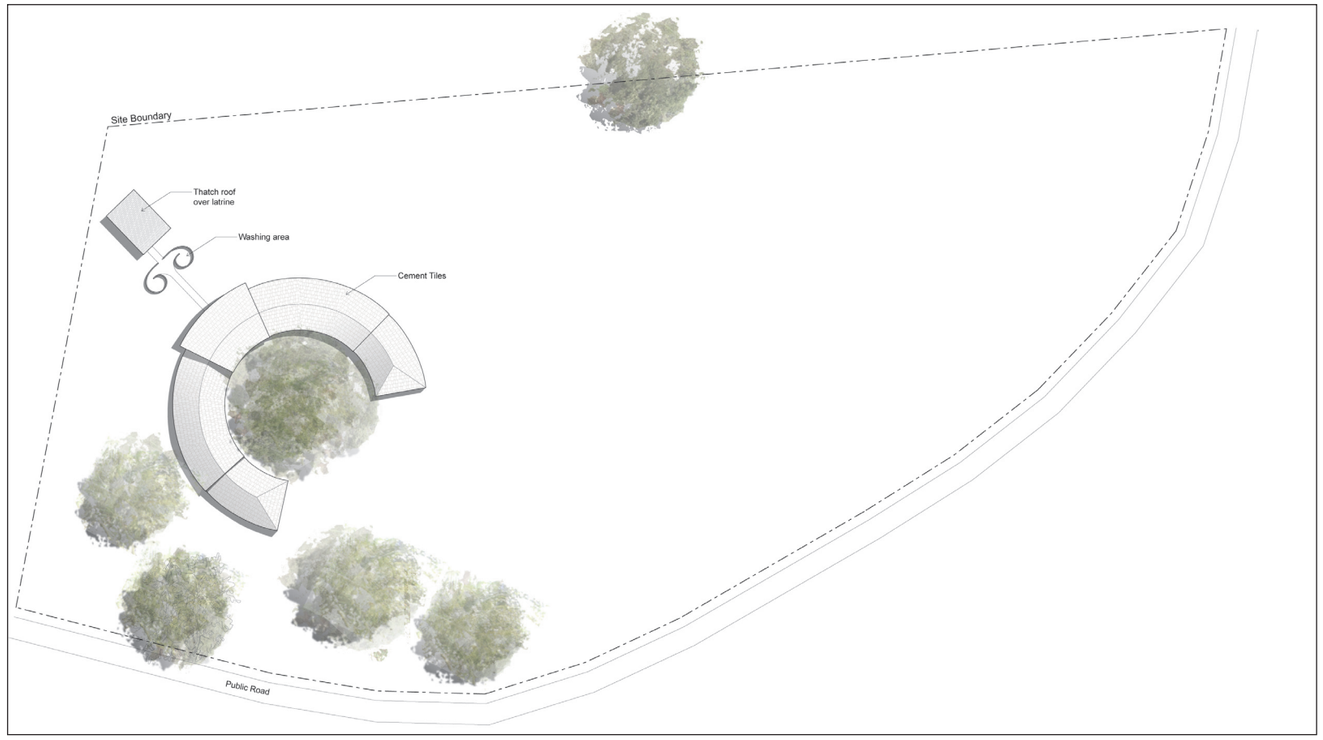


Production Information

The Children's Home design developed from research into the following:

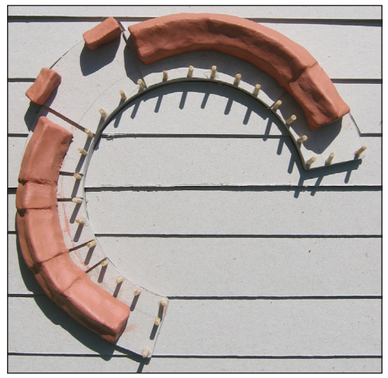
- Vernacular construction methods
- Historical, cultural and political context
- Available materials and skills
- Site context and basic geological survey
- Logistical challenges
- Most cost-effective construction technique
- Community capacity analysis

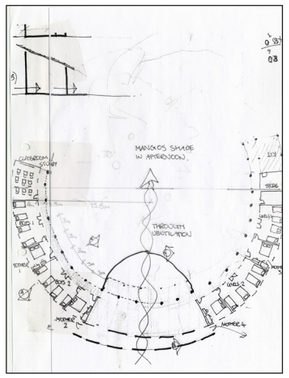
Drawing Package

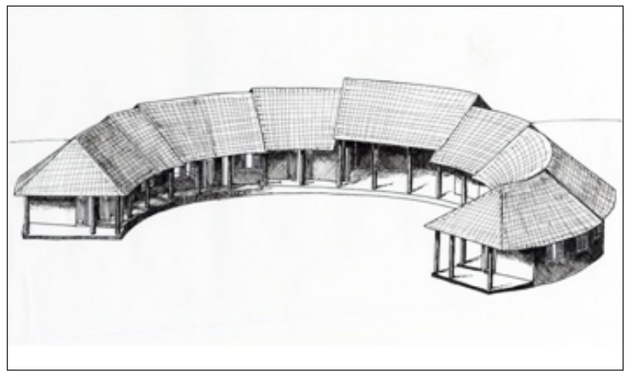
- Article 25 produced a package of drawings for the building
- Information consists of plans, sections, elevations, and details, along with two-dimensional and three-dimensional CAD models

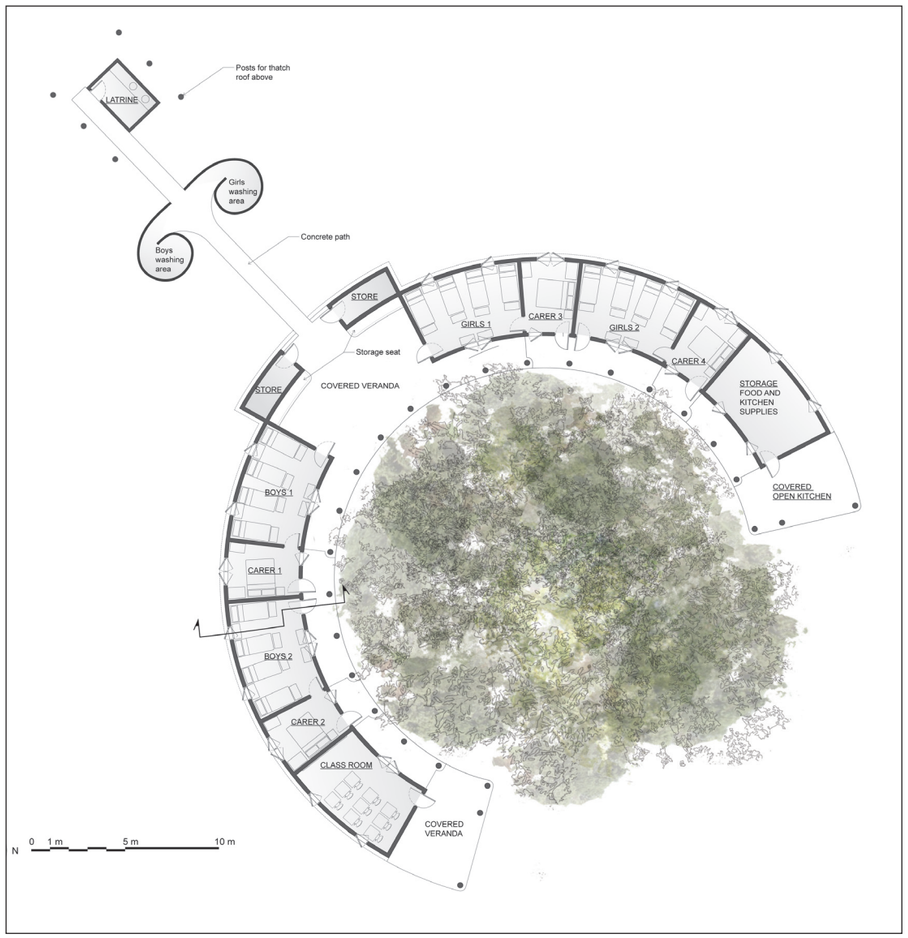
Detail Design

- Appropriate detailing ensures value for money
- Details refined for maximum buildability and cost effectiveness
- Designs communicated verbally as workers found it hard to read drawings









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Construction Management

- Use of local project coordinator resulted in cost effective construction and material procurement
- An Article 25 project architect was present during construction to monitor work on site
- On site supervision mitigates risk of costly construction errors
- Local workmen employed to construct the building

Construction Process

- Water pump installed on site
- Foundation trenches excavated by hand using pick axes and shovels
- Stones, sand and aggregate delivered by tractor
- Laterite stone plinth walls built off a shallow concrete liner in the trench
- Concrete mortar mixed by hand
- Plinth walls constructed up to internal floor level
- Where required plinth walls strengthened using buttresses
- Main wall construction begins
- Reinforced in situ concrete lintels poured
- Gable roof structure constructed
- Roof felting installed, followed by roof tiling
- Eaves sealed and mesh installed
- Veranda slab poured
- Latrine dug and lined with concrete block work
- Electrical fix completed
- Ceiling frame completed and ceiling fixed
- Shutters and doors fitted
- Plastering applied internally
- Pouring of concrete screed floors
- Walls painted internally

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