The Lali Gurans Orphanage and Library in Kathmandu was selected for its clean value. The building will vastly improve the orphanage facility, providing warmth. Operable windows allow inhabitants to control temperature and air quality. Larger spaces have cross-ventilation, and the main stairwell provides stack ventilation. Although the orphanage is well-shaded from direct sunlight by its brise-soleil and planting, its glazing allows for plentiful indirect light reducing electrical use.


Fifteen 175W solar panels provide the building’s entire electricity usage. Two 5m and 6m diameter solid-dome anaerobic digesters provide gas for heating, cooking and lighting. They are common to the area and will run on kitchen, agricultural, and community waste. Dranking water is collected from the ground and rainwater, passes through a UV filtration system, and will be stored in large tanks. Organic food will be produced by the two rooftop gardens, 80 fixed drip-irrigation planters, and more than 300 vertical hanging planters, fed with tea-syrup and greywater. Fruit trees in the garden will complement vegetables and herbs grown in planters lining the exoskeleton, social spaces, exterior circulation, and roof garden. Together they will provide enough capacity to fulfill the orphanage’s needs.

Further authors

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Project data

- Context: Architecture, building and civil engineering
- Client: Seeds of Change
- Background: Private commission
- Planned start: August 2013

Summary and appraisal by the jury

The Lalli Gurans orphanage and library in Kathmandu address the needs of an under-served rural population. In a context lacking basic infrastructure, the new facility utilizes low-technology renewable energy and material resource, thus significantly reducing operating costs. Using local construction techniques and materials, the design invests in indigenous workmanship. Vertical gardens and permaculture provide thermal insulation as well as food for cooking. Aiming to overcome the image of “the orphanage” as institution, the project addresses the needs of the nearby communities by offering a library accessible to the public and a semicircular stable refuge area during earthquakes.

The jury appreciated the simplicity and robustness of the structure, a reinforced fly-ash concrete frame establishing a three-dimensional matrix for manifold functions, including a range of public amenities. Specific spatial qualities are introduced within the structure, offering children the opportunity to discover, not unlike “Alice in Wonderland”, spaces full of surprise and mystery – roof top terraces, hanging gardens, majestic halls and hidden chambers. The building ultimately manages to combine a social framework with a physical one in a seemingly seamless way.

Sustainability concept

The site for the Lalli Gurans Orphanage and Library in Guggathadi near Kathmandu was selected for its clean value. The building will vastly improve the orphanage facility, providing warmth. Operable windows allow inhabitants to control temperature and air quality. Larger spaces have cross-ventilation, and the main stairwell provides stack ventilation. Although the orphanage is well-shaded from direct sunlight by its brise-soleil and planting, its glazing allows for plentiful indirect light reducing electrical use.

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