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***For Hollmén Reuter Sandman Architects, sensitivity towards users, materials, and site-specific interventions are the means of architecture. The focus is on both environmental and aesthetic sustainability. Environmental sustainability is achieved by using local, recycled, and renewable materials as much as possible and designing site-specifically according to the local climate. Aesthetic sustainability is born from functionality, culture, how the building fits into the environment, and how the plan follows the local spatial hierarchy. Their projects have been honoured with both national and international awards and have been***

*published and exhibited widely.*

*Architects Saija Hollmén, Jenni Reuter, and Helena Sandman began their collaboration in 1995 with the Women's Centre project in Senegal. Their last joint project is the Lyra Hostels in the Southern Highlands of Tanzania. In 2007, they founded Ukumbi, the Finnish chapter of Architecture Sans Frontieres, to provide architectural services to communities in need. The work of Ukumbi continues.*

# HOMES FOR GIRLS

*Saija Hollmén, Jenni Reuter and Helena Sandman*



*The hostels are designed as atrium buildings, to create a safe space for the girls.*

*Photo: Lyra in Africa*

## Abstract

The non-governmental organisation Ukumbi (Architecture sans Frontières / Finland), founded by architects Saija Hollmén, Jenni Reuter, and Helena Sandman, collaborates with local non-governmental organisations to improve living conditions. Together with the NGO Lyra in Africa, they improve educational opportunities for girls in rural Tanzania through safe, eco-friendly

hostels for secondary school girls who face challenges related to long travel distances and unsafe living conditions. Since 2018 they have built several hostels across the Southern Highlands of Tanzania, using sustainable building methods such as interlocking stabilised soil blocks (ISSB). This article explores the work of Ukumbi, the impact of its hostel projects on girls' education, and the sustainable design strategies they have employed to enhance gender equality and education in rural Tanzania.

**Keywords:** *Ukumbi, sustainable architecture, girls' education, Lyra in Africa, interlocking stabilised soil blocks (ISSB), hostels, Tanzania, gender equality, low-carbon design, eco-friendly construction*



**Secondary school girls in the countryside in Tanzania is in urgent need of hostels close to the schools.**

**Photo: Helena Sandman**

## **Introduction**

**Access to education is a critical factor in the development of societies, and for girls in rural areas, it is especially important for ensuring gender equality, empowerment, and future economic independence. However, in countries like Tanzania, girls face numerous challenges when it comes to attending school, especially in remote rural regions. The lack of nearby schools forces many girls either to walk long distances, often up to 30 kilometres, or to rent a room in a village nearby, which can expose them to dangers such as harassment and early pregnancies. Such risks contribute to higher dropout rates.**

**In response to these challenges Lyra in Africa, has initiated a series of projects aimed at constructing safe and sustainable hostels for girls. Hollmén Reuter Sandman Architects, as a team within the Finnish chapter of Architecture Sans Frontieres – Ukumbi NGO – has designed a model of a hostel building that meets the girls’ needs. The hostel provides the girls with a secure environment where they can focus on their studies, leading to improved academic performance and a higher likelihood of completing their education. This article explores the architecture, sustainability, and social impact of the hostels in Tanzania, examining how architecture can act as a tool for empowerment and community development.**



***Currently, the sixth hostel of the Ukumbi model is being constructed in the Southern Highlands of Tanzania.  
Photo: Saija Hollmén***

## **Body of the Article**

### **A Collaborative Mission**

**Ukumbi, established by the architectural trio Saija Hollmén, Jenni Reuter, and Helena Sandman, is rooted in the belief that architecture can be used as a force for social good. Since the beginning, Ukumbi has collaborated with local NGOs in various countries, including Tanzania, to design architecture that addresses pressing social issues. In the case of their partnership with Lyra in Africa, the goal has been to tackle the high dropout rates among secondary school girls by providing them with safe, environmentally sustainable hostels where they can live and study.**

**Lyra in Africa, an organisation focused on empowering rural communities in Tanzania, provides the necessary funding for hostel construction, while Ukumbi offers architectural expertise. Since 2018, this collaboration has resulted in the completion of five hostels in the Southern Highlands of Tanzania, in locations such as Nyang'oro, Ilambilole, Ifwagi, Mseke, and Maduma. Each hostel follows a similar design template that has been adjusted based on local needs, building site, and a number of girls ensuring consistency in safety, functionality, and environmental performance.**



*The design was developed in collaboration with a group of school girls and teachers.*

*Photo: Jenni Reuter*

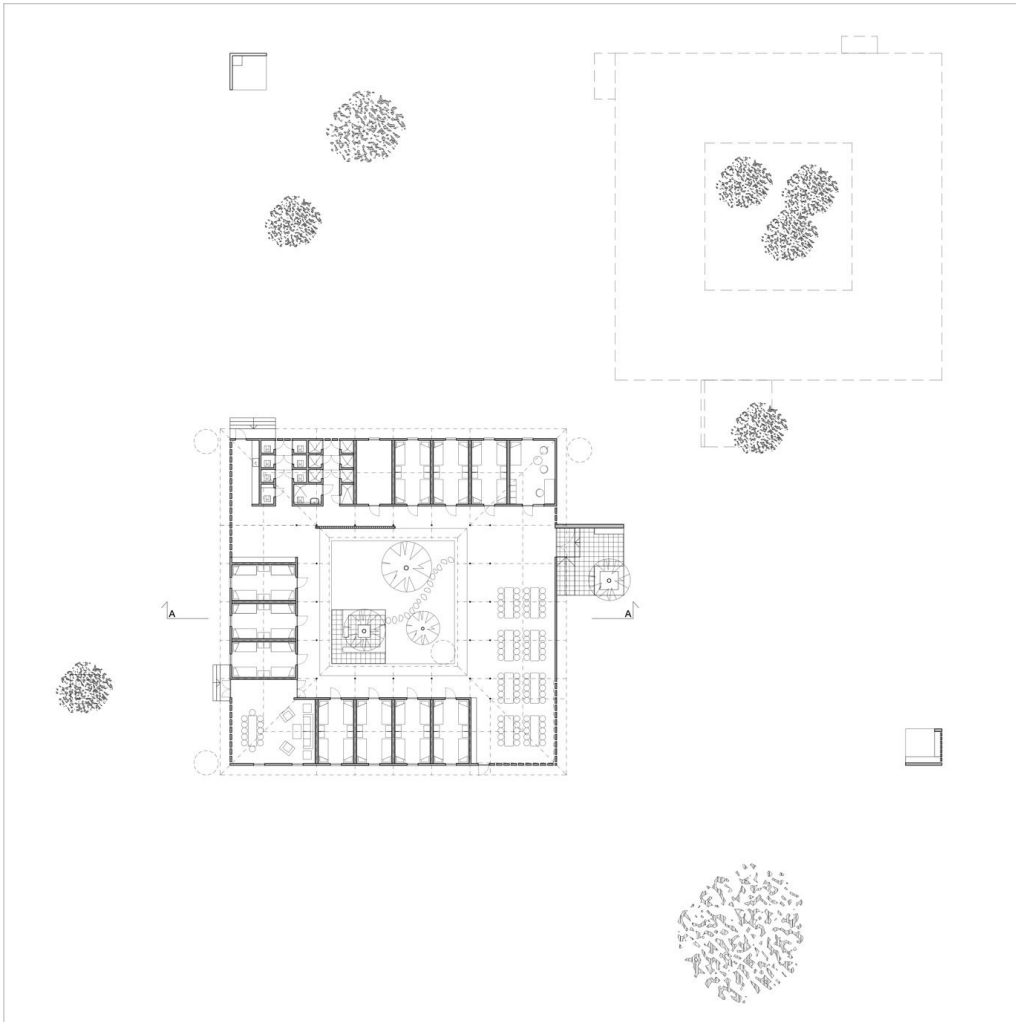
## **Safe Hostels**

**For many girls in rural Tanzania, attending school presents significant challenges. Due to the scarcity of schools in these regions, some students must travel vast distances daily. This journey is not only exhausting but also dangerous, with girls often facing the risk of harassment or other forms of violence. Additionally, living alone in rented accommodations near schools can expose them to exploitative situations, leading to early pregnancies and the subsequent termination of their education.**

**The Tanzanian government's policy, which expels pregnant girls from school, exacerbates the problem, contributing to low secondary school completion rates. As of 2018, only 6% of girls in rural Tanzania were enrolled in higher secondary education, with just 1% completing it. Research by Lyra in Africa has shown a clear correlation between levels of education and the likelihood of**



**early pregnancy: 52% of adolescent girls with no education are pregnant or have given birth, compared to just 10% of those with a secondary education.**



***8 girls share rooms but there are common spaces to hang out and do homework in the hostels. Plan drawing by Hollmen Reuter Sandman Architects***

## **Sustainable Architecture**

**A key feature of Ukumbi's hostel designs is their use of Interlocking Stabilised Soil Blocks (ISSB). These eco-friendly bricks are made primarily from local soil, with a small amount of**

cement (5-10%) added to stabilise the mixture. The bricks are compressed manually in a block press and air-cured, making them a low-cost, low-carbon alternative to traditional fired bricks or a concrete construction, which are environmentally damaging. ISSB construction reduces both the carbon footprint and the financial costs of building the hostels. The method also aligns with Ukumbi's focus on local engagement, as the manual labour involved allows communities to participate directly in the construction process. Local villagers contribute materials for the foundation and provide labour, fostering a sense of ownership over the hostels and encouraging long-term maintenance and care.



*The girls live in the hostels during the week taking care of their laundry.  
Photo: Helena Sandman*

## Culturally Appropriate

Ukumbi's architectural designs are characterised by their sensitivity to local culture and environmental conditions. Before

developing each hostel design, the architects conducted workshops with the each girl who would be using the facilities. Their input was crucial in shaping the design of the hostels, ensuring that the buildings felt like home while meeting the students' needs for safety and study space. The hostels follow a courtyard-style layout, which is common in Tanzanian domestic architecture. This design creates a protected inner space where the girls can engage in social activities, study, and relax. Each hostel houses 96 girls, with shared bedrooms for groups of eight. The hostels also feature communal areas for studying, a kitchen, bathrooms, and spaces for laundry. The buildings are designed to be energy-efficient and environmentally friendly. Solar panels provide lighting and rainwater harvesting systems help mitigate water scarcity, an important consideration given the region's limited access to clean water.

## **Impact**

The construction of safe hostels has had a significant positive impact on the academic performance of the girls living in them. A study conducted by Lyra in Africa over four years showed that girls who lived in hostels consistently outperformed their peers on national exams. The additional time they had to study, along with the safe and supportive living environment, contributed to higher academic achievements. Beyond education, the hostels have played a crucial role in empowering young women by reducing the risk of early pregnancy and providing them with the opportunity to pursue further education. Since the start of Lyra's hostel

**construction program in 2012, over 2,500 girls have lived in these facilities without a single reported pregnancy. This starkly contrasts with the situation in schools without hostels, where 118 girls dropped out due to pregnancy between 2012 and 2019.**

**The broader impact of Ukumbi's work can be seen in the growing sense of ownership and empowerment among the communities involved in the construction and maintenance of the hostels. By involving local villagers in the design and building process, Ukumbi has helped foster a culture of sustainability and self-sufficiency, ensuring that the hostels will continue to serve future generations.**



***The buildings are built in Interlocking Stabilized Soil Blocks that are easily produced by the village using local clay.  
Photo: James Kasela***

## Future

Despite the success of the hostel project, challenges remain. Rural Tanzania continues to face high levels of poverty, and the costs of maintaining the hostels can strain local communities. Furthermore, access to secondary education for girls remains limited, with only 26% of rural girls enrolled in lower secondary schools as of 2018. Ukumbi and Lyra in Africa are committed to expanding their work to reach more communities. Plans are underway to construct additional hostels, including one currently in progress in Msanga with the goal of ensuring that more girls have the opportunity to complete their education in a safe and supportive environment.



*The buildings are planned to be affordable and easy to construct.  
Photo: Helena Sandman*

## **Conclusion**

**Ukumbi's collaboration with Lyra in Africa exemplifies how thoughtful, sustainable architecture can address pressing social issues, such as access to education and gender equality. By designing eco-friendly hostels that provide girls in rural Tanzania with a safe space to live and study, the NGO's have not only improved educational outcomes but also contributed to the empowerment of young women and their communities. The use of local materials and labour, combined with a commitment to environmental sustainability, ensures that these hostels will continue to benefit future generations. This highlights the transformative potential of architecture when it is guided by empathy, cultural awareness, and a deep commitment to social justice.**