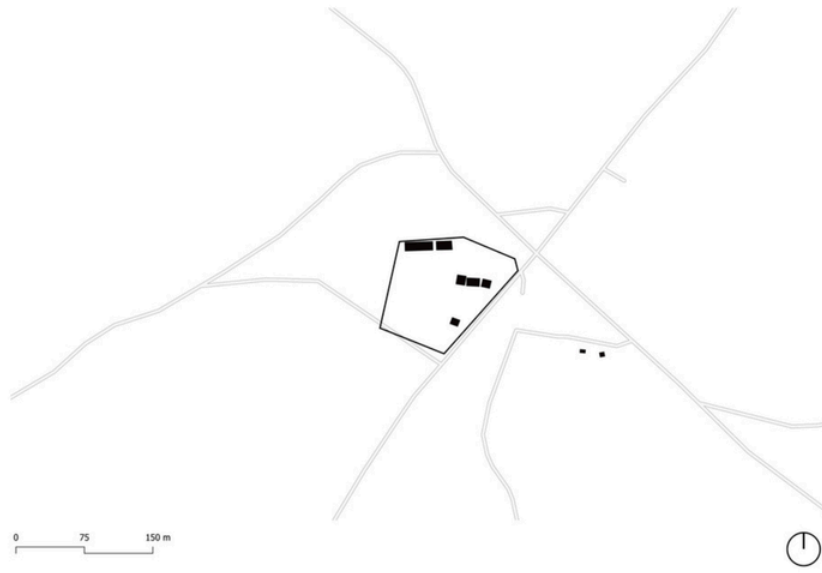


TERRANGA SCHOOL

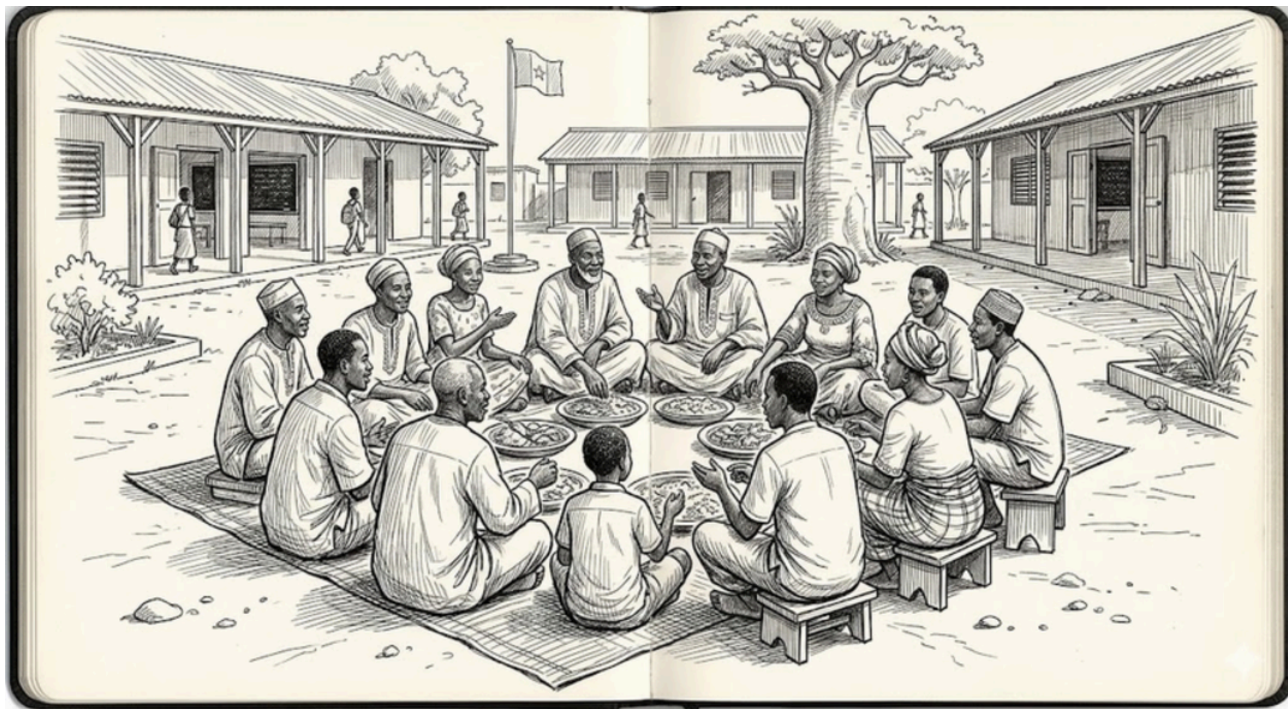


LOCALISATION

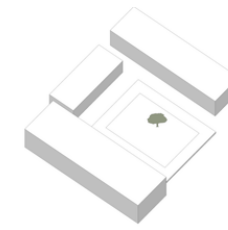


Djilakh, situated in western Senegal, experiences a semi-arid Sahelian climate characterized by a long, intense dry season and a brief wet season from July to October. Rising temperatures and unpredictable rainfall patterns pose significant environmental challenges, making bioclimatic architecture essential to ensure comfortable, naturally cooled spaces. In Djilakh, limited infrastructure forces children to walk long distances for education. This project introduces a low-cost, bioclimatic school built with local earth and Typha, ensuring affordable, accessible, and climate-resilient learning spaces.

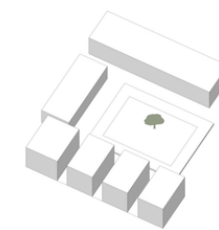
CONCEPT



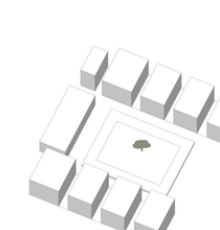
The courtyard concept embraces Teranga (Senegalese hospitality), bringing students together on circular benches around a central tree to share meals, discuss ideas, and experience communal, open-air learning.



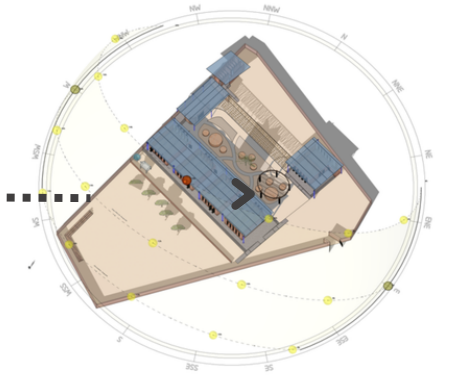
The initial composition forms a unified, continuous perimeter blocking harsh winds around a protected courtyard.



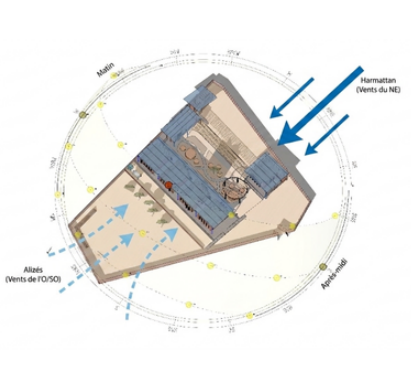
One boundary breaks into separate blocks, introducing early airflow while maintaining two solid, protective edges.



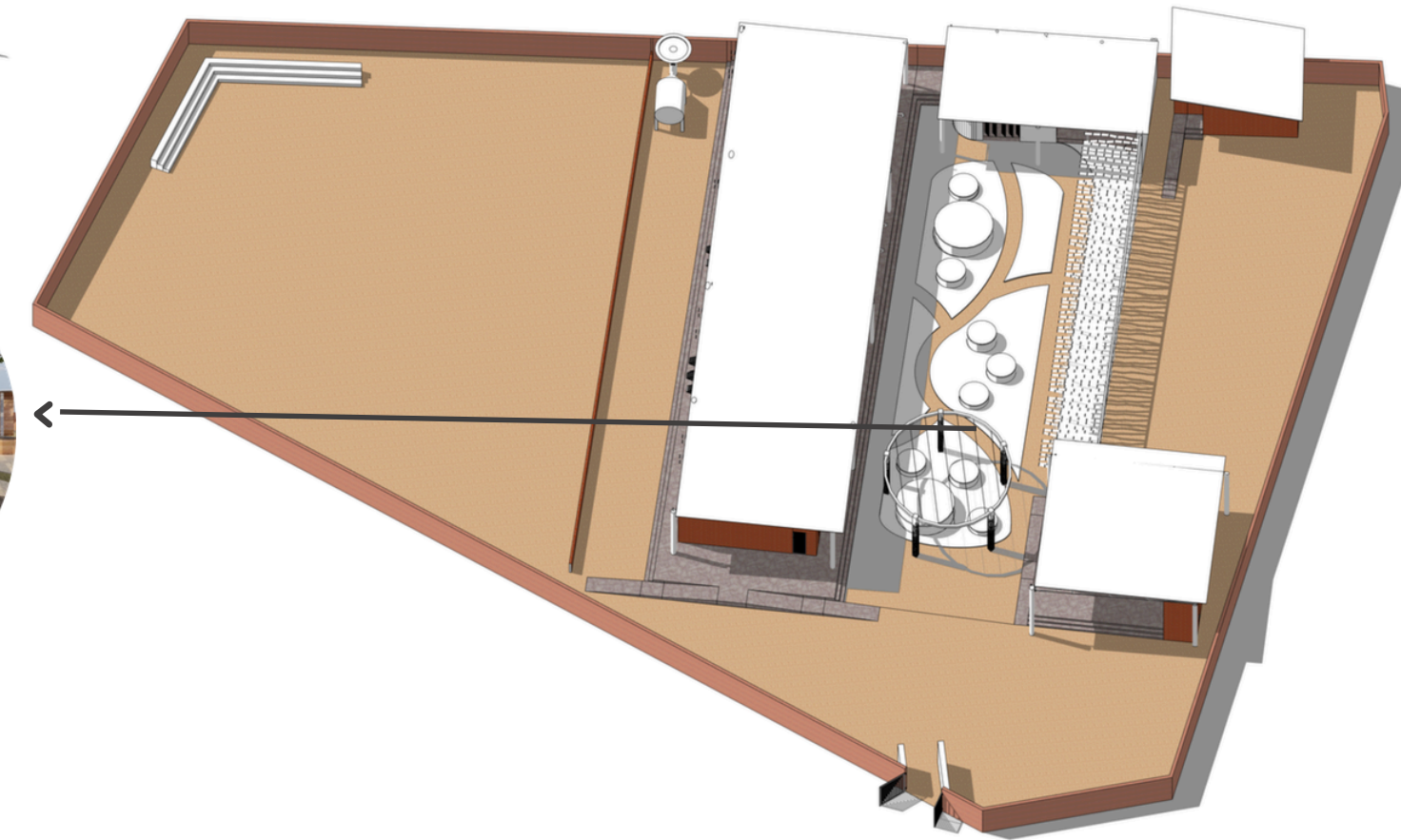
The layout decentralizes into isolated repeating modules, maximizing cross-ventilation from all directions across site.



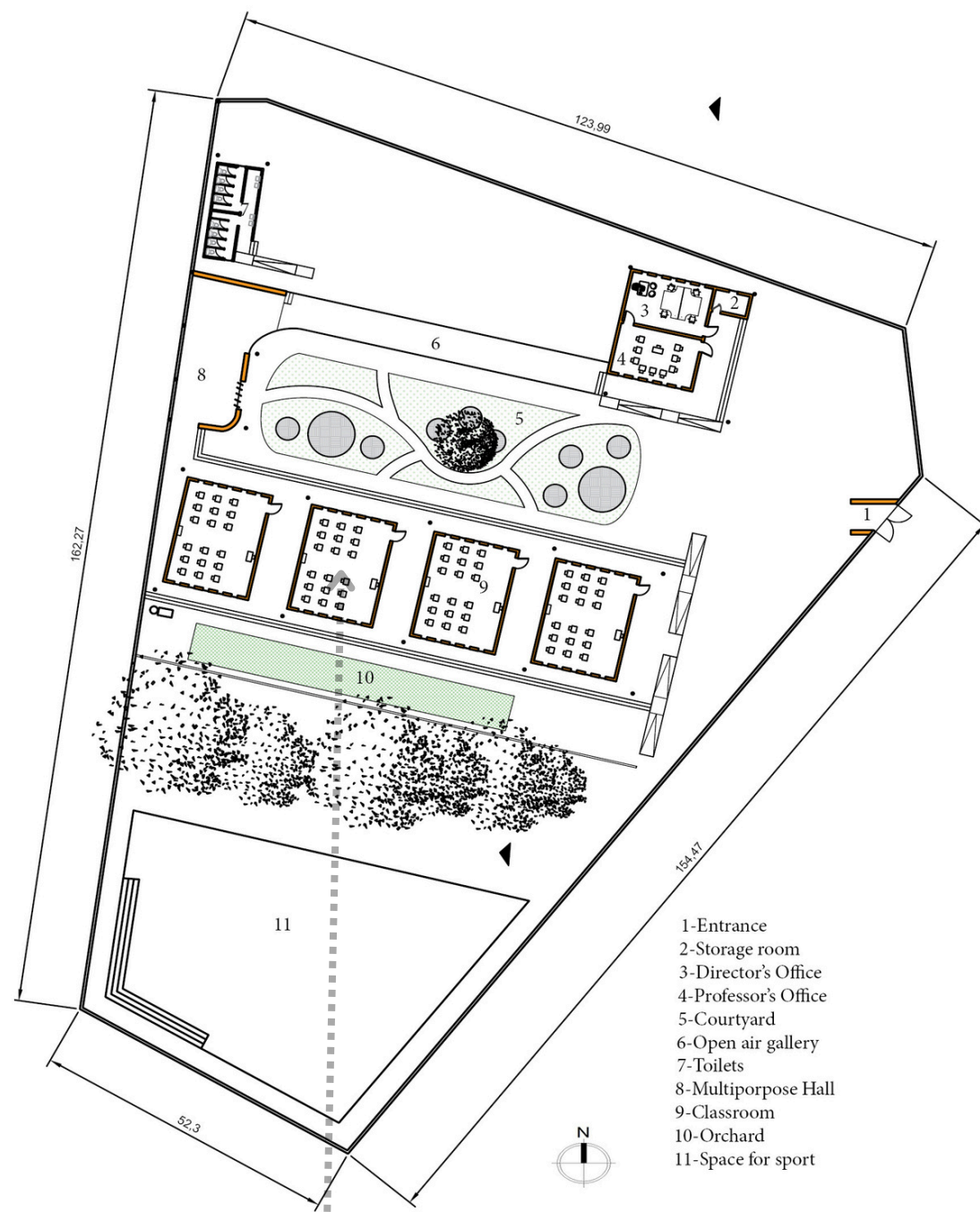
Classes facing the south for natural light



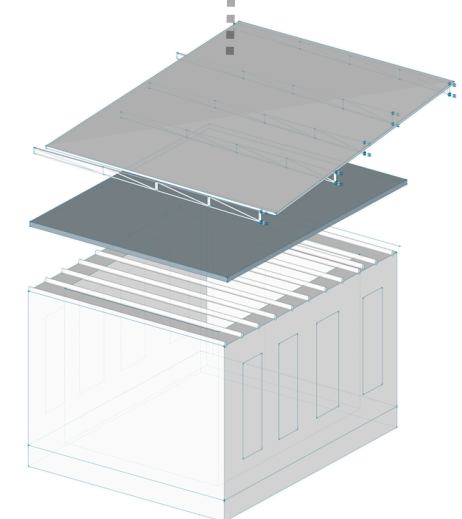
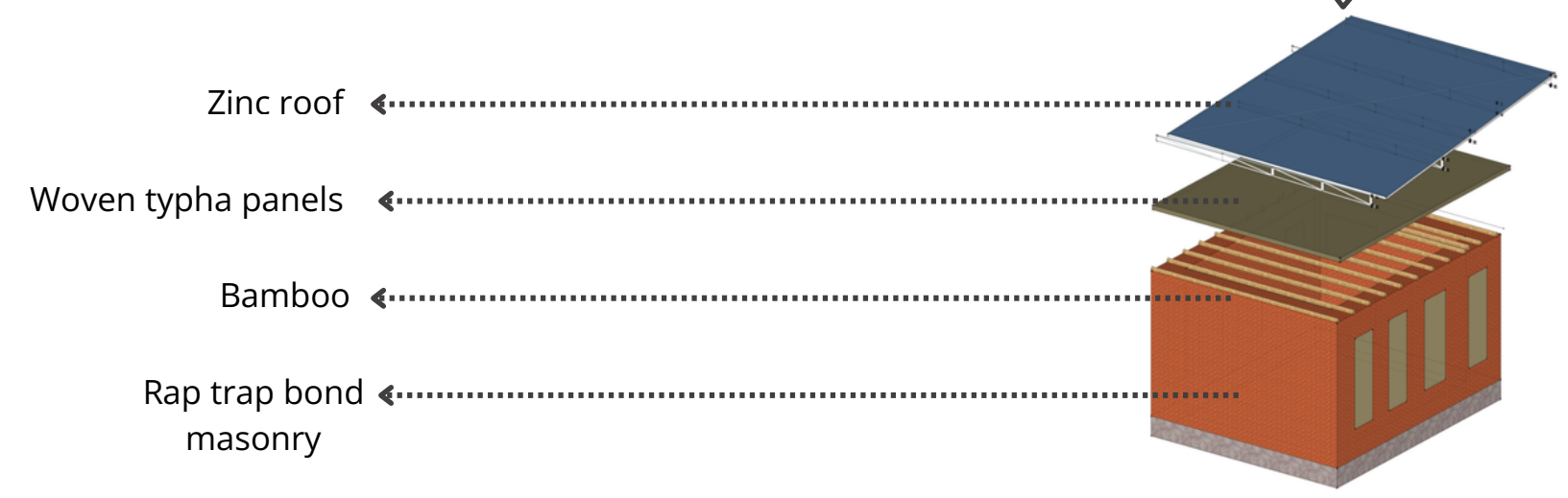
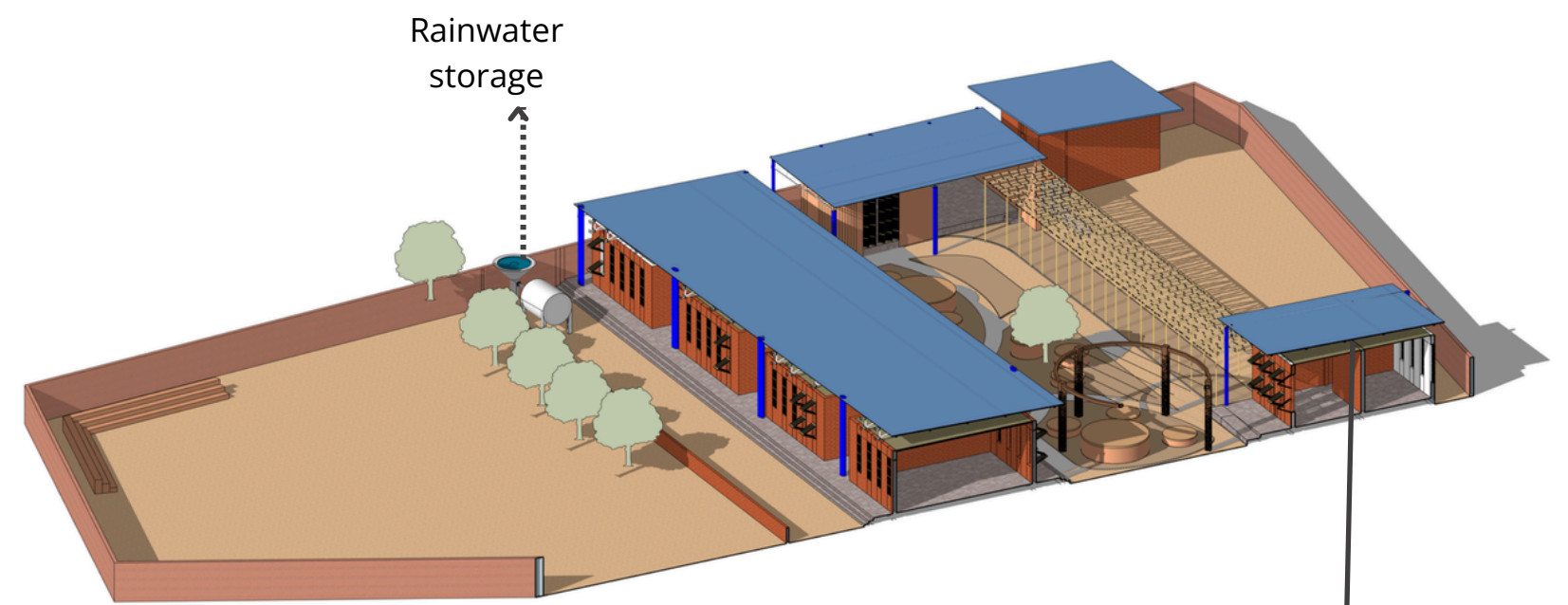
Circular sitting made of rammed earth



TERRANGA is an architectural project in Senegal that redefines the traditional educational environment by rooting itself in the concepts of earth, climate, and community.

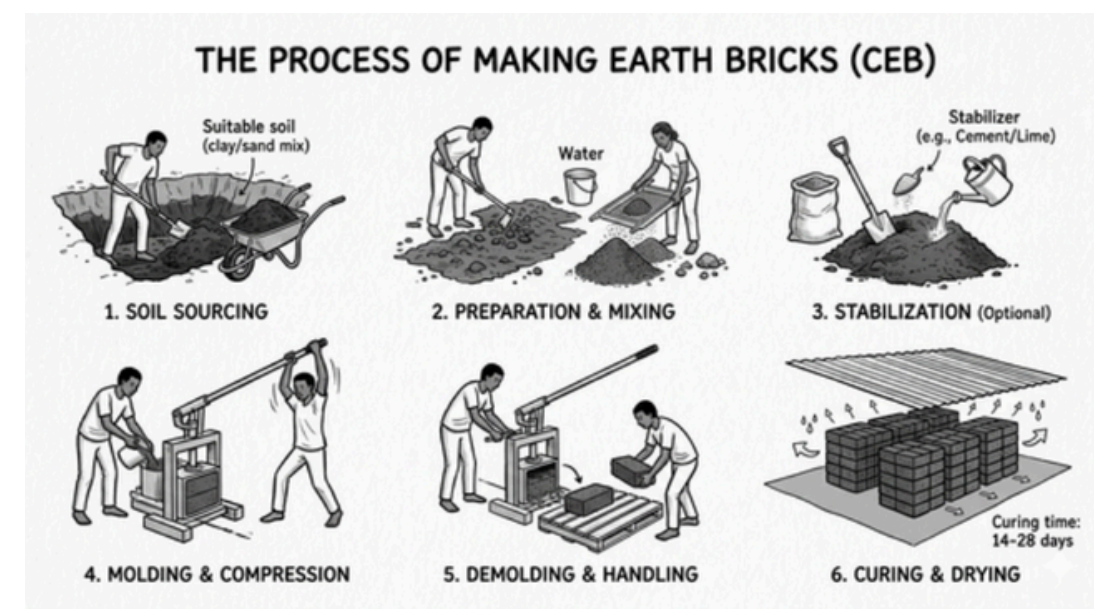


The roofing system consists of a lightweight zinc structure raised above the walls to create a ventilated air gap. Beneath this, a "daub and wattle" slab made of mud and straw acts as a critical thermal buffer, protecting the interior from solar radiation.



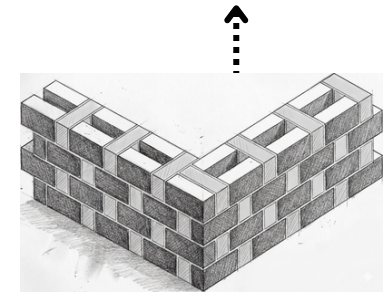
classroom module optimizes span efficiency for low-cost roof trusses. The uniform square grid enables rapid, lightweight construction and seamless linear or courtyard expansion by reusing shared, load-bearing partition walls over time.

Linear modular repetition with intermediate shaded spaces.

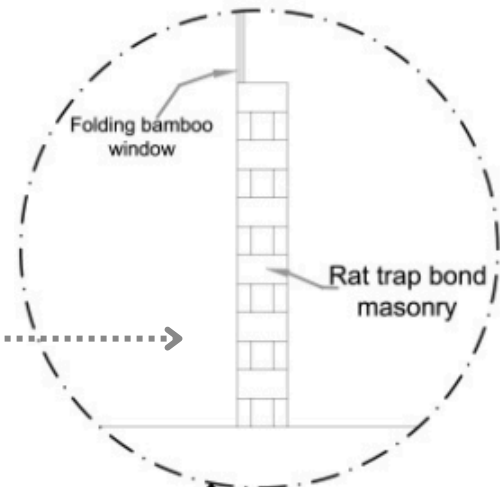


SECTION

-Cavities reduces heat and sound propagation.
-Because the walls are hollow, the total mass of the masonry is reduced by 20% to 30%, reducing also the weight of the building.

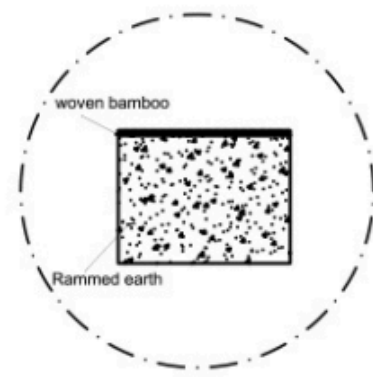


Rat trap bond masonry



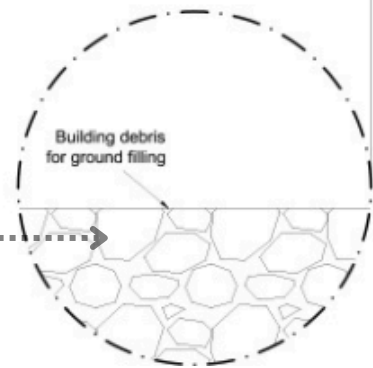
Rainwater tank

Long narrow windows to accelerate air flow/Folding bamboo windows to protect from the sun



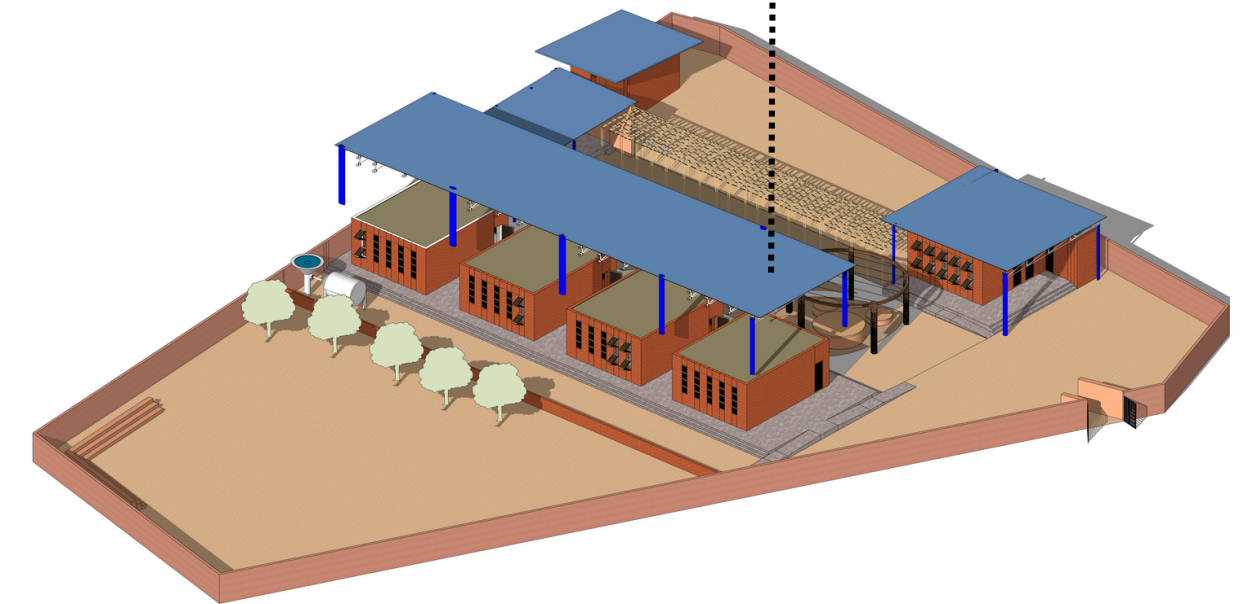
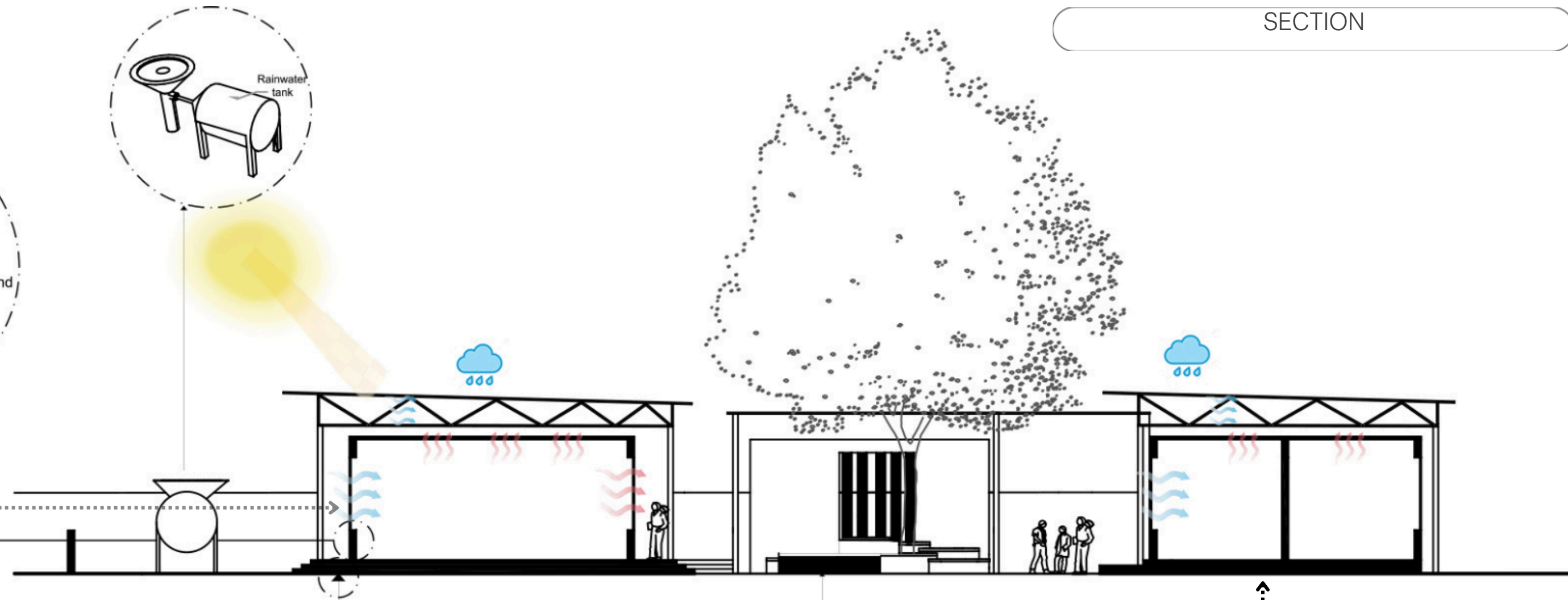
woven bamboo

Rammed earth



Building debris for ground filling

Recycled masonry and concrete debris make fantastic bulk fill material. Because the materials are inert and rocky. This method replaces about 70% to 80% of the concrete typically used in a foundation with compacted rocks or crushed building debris.



AXONOMETRIC VIEW





Multipurpose Hall



Orchard/School Garden