

# Proposal No.05

## Northern Zone

### Tanzania

Subject	Children's Houses
Design	Allen Rwaich Minja
Geography	Northern Zone
Classes	2
Students	max. 80



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## DESIGN STATEMENT

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### **INTERGRATION OF MONTESSORI PATTERNS INTO THE DESIGN**

#### **1. Hierarchy of Interconnected spaces ... adopted to children's activities**

The spaces are organized in an interconnected hierarchy allowing interactions with the outside and nature while still allowing flexible movement from one room to the next. The project allows access to the learning spaces from different directions. The rooms are interlock with each other like a puzzle hence unlocking a child's curiosity to explore the space.

#### **2. Different heights for floors and ceilings ... even within a single storey**

The spaces are articulated by raised and lowered floor levels. The levels not only act as sitting areas and workspaces for the children but also act as a transition from one space to another. The ceiling height are higher on some areas to create airy open learning spaces and lowered to create intimate and secluded spaces.

In order to cater for children with mobility disabilities, ramps are introduced. These enable the children can access the greeting area and most of the learning spaces.

#### **3. Use of Indigenous materials ... with an appreciation of tactile qualities**

The walls is to be constructed from exposed burnt bricks; a material that is readily available in the Northern zone of Tanzania. The integrity of the material in their natural form is respected hence the children can experience the bare tactile texture of the bricks against the smooth fair faced concrete columns and beams. This is all tied together with smooth bamboo doors and upholstery made from 'kitenge' (a traditional African fabric)

#### **4. Orientation of the entrance ... towards the morning sun**

As a project act as a prototype to be used on different sites, the building has been configured in such a way that allows the main entrance to be facing the East hence the children are received by the morning sun as they approach the building.

#### **5. Connecting function of the greeting space ... to avoid corridors**

The greeting space connects the learning spaces to each other and to the outside environment. The greeting spaces also features sits and a space for children to leave their shoes. The learning spaces are interlock with each other like a puzzle hence eliminating the need of corridors.

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## DESIGN STATEMENT

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### **6. Avoidance of doors ... but with respect for privacy**

The Tanzanian regulations requires classroom to have at least two doors. In order to cater for this; doors have only been introduced in the front and back of the learning spaces while still avoiding doors in the interiors of the different learning spaces. The rear doors are all sliding doors that can be hidden in the walls when opened.

### **7. Articulation of space and form ... to create islands of concentration**

From the large learning spaces to the small niches, the spaces are articulated to offer different level of privacy hence creating islands of concentration. The form is manipulated to into creating niches that overlook the gardens, a small courtyard that connects the learning spaces where children can use for private learning and outdoor learning, and the outdoor sitting nuke that can be used individual concertation or group learning and the large learning space where children can interact.

### **8. Use of the floor ... as a primary workplace**

The different levels of the floor allow the floor to be used as an area for studying, sitting, playing and interaction. The proposed floor finish is cement screed with is not only durable but also easy to clean. Woven mats are also used as flexible items that add warmth to the floor.

### **9. Accessibility for different children ... of different ages**

The design features shelves, sinks and furniture that can be accessed by children of different ages. Ladders are added so as to make it easier for children access higher levels. The different floor levels.

### **10. Consideration of the acoustical environment ... and the difference between sound and noise**

As the Montessori education invites interaction with nature, large opening have been allocated near the gardens so as to allow children to hear the sounds of singing birds and other animals. There has also been great care in selecting material that absorb sound and hence prevent noise from travelling from one space to another. Example, the bricks used on the walls are good absorbers of sound due to their rough texture, the bamboo doors offer good sound insulation hence a good material to absorb noise. Lastly, padded and upholstered furniture have been used, these have remarkable sound absorbing qualities.

### **11. Use of walls and building fabric ... for storage space**

### **12. Open storage ... and display of learning materials**

The learning spaces feature built in shelves that form part of the walls. The shelves are used as storage areas for the children's items. All shelves are open show casing all the items inside making it easy for a child to easily determine what item he/she needs.

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## DESIGN STATEMENT

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### **13. Observation ... without intrusion**

The interconnected arrangement of the various spaces in the design allows for visual connectivity from one room to another while still allowing for seclusion and privacy. This way the teacher can observe and monitor the children while still allowing them to direct their attention and focus on particular learning items without intrusion.

### **14. Offer of seclusion ... and respect of concentrated activity**

Starting from the learning spaces are partitioned into small nooks using flexible furniture to the niches created at the back of the class, the learning spaces are designed so as to allow the children to withdraw themselves from a big group into smaller groups or individual learning.

### **15. Creation of window seats ... the psychological connection with the outside world**

From inside the learning spaces, window seats are created at a level where children can sit and observe what is happening in the outside environment.

### **16. Importance of daylight ... and its direction**

### **17. Activity based lighting ... beyond general illumination**

Daylight is of utmost importance to the design hence large windows are provided. The staggered arrangement of the bricks maximizes the amount of light that enters into the building.

### **18. Meaningful access to water ... for children**

### **19. Independent self-care ... understanding of toilets and hygiene practices as part of education**

Rainwater collected through the roof gutters is to be used to water the gardens or directed into the toilet flushing systems. Water wells are also introduced into the design so as to teach children on the importance of water and the value of preserving water.

As washrooms are part of the learning in Montessori education, proper care has been taken in designing these. The washrooms are located inside not only for easy accessibility by the children from the learning spaces but also to promote responsibility to the children to cleaning and maintaining them.

### **20. Transitional spaces between inside and outside ... including shade**

The classroom extends to the wide shaded greeting space that offers direct interaction with nature. This acts as an extension of the main learning space and here the children can interact with others.

### **21. Inclusion of a children's kitchen ... and eating tables**

The learning spaces feature a kitchen space where the children can learn how to cook and prepare their meals.

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DESIGN STATEMENT

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**22. Everyday gathering spaces ... inside and outside**

The large and extensive outdoor gathering space can be utilized as a space for different gatherings that are to take place in school. Sits are provided on the exterior structure of the building that allows the people to sit of this area.

**23. Integration of spaces for gross motor development ... outside and inside**

An area for gross motor development is provided, where the children can utilize these for physical exercises and sports

**24. Walking on the line space ... in the children's house**

The walking in a line pattern is incorporated in the floor finish of the learning spaces. An elliptical line is to be introduced in the floor screed during construction.

**25. School and grounds as a habitat ... for animals and plants**

**26. Earth stewardship ... a horizontal pattern**

Taking full advantage of the afternoon sun, gardens are to be introduced on the western side of the classrooms. Here the children can engage in planting of vegetables and taking care of different animals. These gardens can be accessed through the transitional space on the rear side of the school.

**27. Flexibility ... in furniture layouts**

The design features modular shelves that can be stalked on top of each other hence allowing for many different arrangements are desired. The furniture is also flexible and can be re-arranged into different layouts are required. This leads to a flexible and fluid spatial layout.

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## COST CALCULATION

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### SCHEDULE OF ACCOMMODATION

The following are the Gross floor areas of the project:

NO	DESCRIPTION	GFA
01	Learning space	126
02	Washroom	12
03	Seclusive space	18
04	Kitchen	9.9
05	Transitional space	59.5
06	Entrance	24
	<b>TOTAL</b>	<b>249.4</b>

### PRELIMINARY COST ESTIMATIONS

NO	DESCRIPTION	COST (USD)
01	Preliminary works	1,800
02	Foundations	9,500
03	Frames (Building structure)	1,800
04	Walling	4,500
05	Roofing	5,500
06	Doors	3,200
07	Windows	3,500
08	Finishing (Floor, wall and ceiling)	7,000
09	Hard and soft landscape	1,200
10	Electrical and plumbing installations	1,500
11	Contingency	1,000
	<b>TOTAL ESTIMATED COSTS OF THE PROJECT</b>	<b>40,500</b>

The cost above cost estimation excludes furniture and fit outs, stand-by generator, solar PV, VAT, statutory fees and design fees.

VISUALS OUTSIDE / INSIDE



VISUALS INSIDE





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VISUALS TRANSITIONAL

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VISUALS INSIDE



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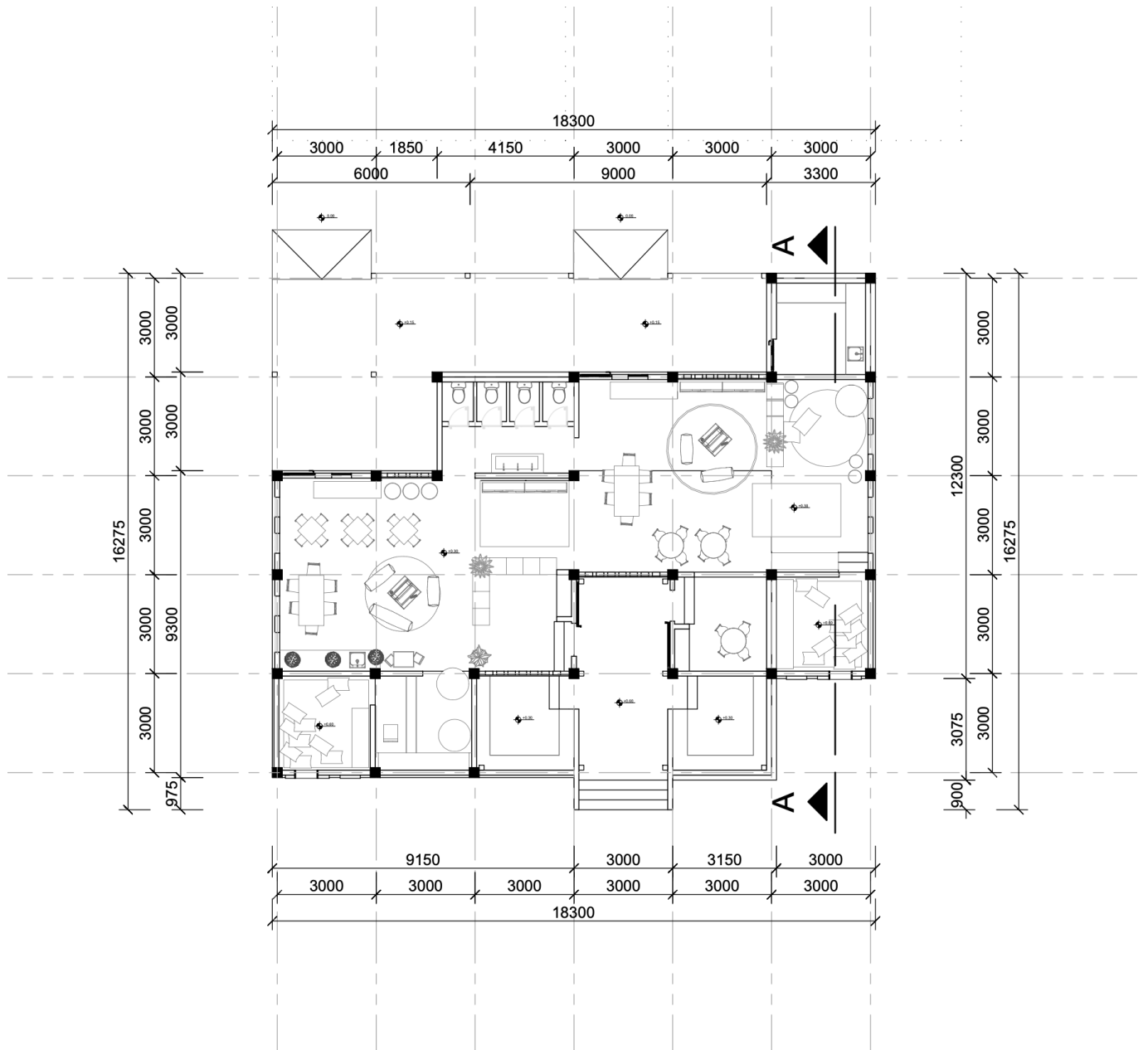
VISUALS TRANSITIONAL

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PLANS

DETAIL PLAN

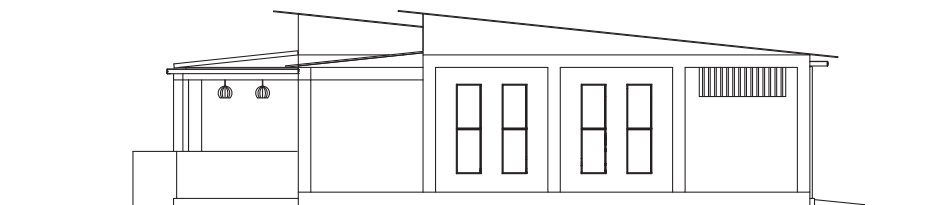
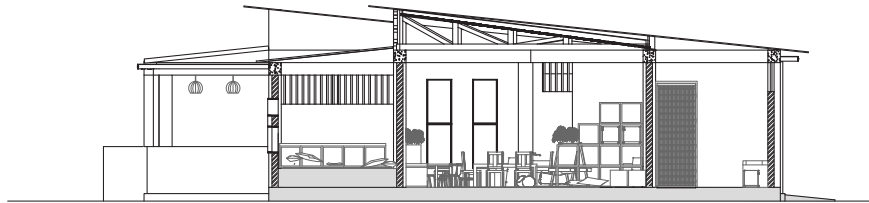
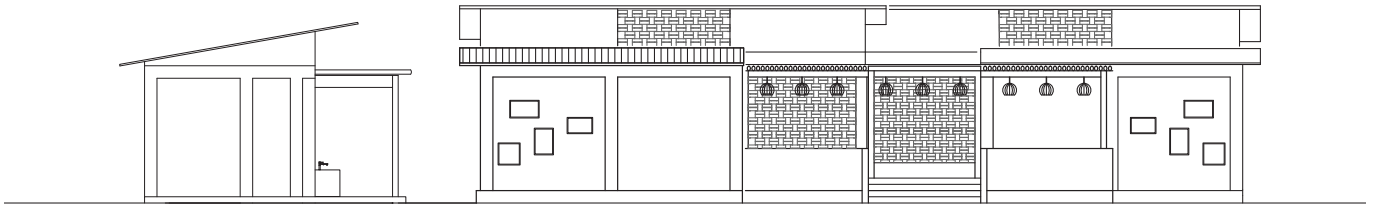


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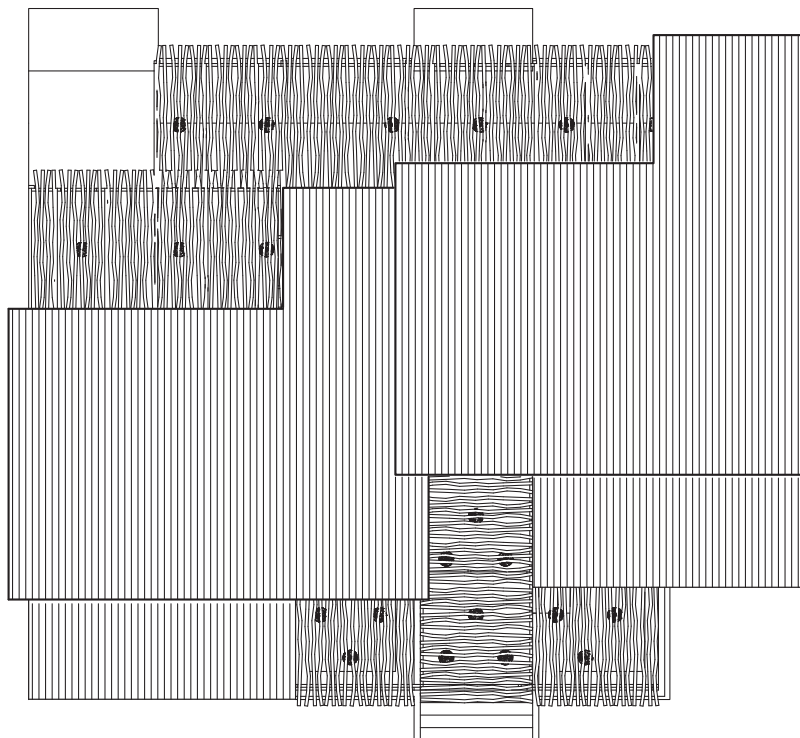
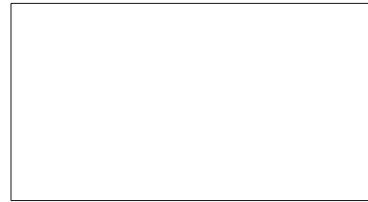
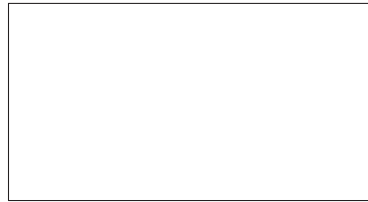
SECTION



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PLANS

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## ABOUT

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### **BIOGRAPHY**

My name is Allen Rwaich Minja. Holding a master's degree in architecture and Conservation I have practical experience with several design and construction projects across Tanzania.

With the dedication to serve my community, I have volunteered in several public projects such as building a health center in the Northern part of Tanzania.

As a graduate architect, I am currently working at "IPA Architects" in Dar es Salaam. Hand in hand with my work as an experienced practitioner, I am also an assistant lecturer at the University of Dar es salaam.



### **CONTACT**

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