

# Proposal No.01

## Lake Zone

### Tanzania

Subject	Children's Houses
Design	Allan Gervase
Geography	Lake Zone
Classes	2
Students	max. 80



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## DESIGN STATEMENT

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### INTRODUCTION



#### Project Description

Project involves undertaking the design of a Children's House that will provide a Montessori learning environment and an infrastructure cater to 80 students with a design concept befitting five (5) distinctive regions in Tanzania. Region of choice for this entry was Lake Zone of Tanzania, covering six regions which are Mwanza, Geita, Kagera, Shinyanga, Simiyu and Mara. It is oriented on the north side of Tanzania. It has different surface inclinations covering; Mountainous rocky, hilly, gentle sloped and relatively flat surfaces.

After understanding the region of choice, the task of creating a child-like environment that will allow children to crawl, walk, climb, and run to anything commenced. Creating an environment that will allow them to explore and imagine, create and destroy, and create again. With that in mind, the environment is required to be well-designed, safe and responsive being of great importance to accelerate the upbringing of these children.

#### Project Objectives

Create playful and engaging blueprints: designing child-like infrastructure to facilitate self-learning and exploration.

Permanent Construction: primary objective is sustainably constructing a children house that will deliver all essential facilities as quickly as possible. This statement will outline briefly Phase 1 construction and strategy to replicate the design subsequently to different parts of the lake zone.

Replication: longer-term goal to create a replicable package through participation and designs that can be easily adopted and replicated within the Lake zone. Thus benefiting from the economies of scale and addressing the populous need for high density, sustainable and permanent schools.

#### Project Principles

Inspiring: to create child-friendly learning environment, that inspire learning, play, and creativity without neglecting local skills, culture and knowledge within the learning process.

Efficient: construction technology was bound to use local materials, styles and skills found within the local context. Buildings were made to be modular and easy to replicate. This will allow the building to be cheaper and easy to maintain.

Passive Design: to provide spaces with natural light and ventilation during the day, when computing power is required it is to be sustainably sourced. This is good for the environment and cheaper to maintain.

Holistic: project was planned with a bigger picture in mind. Thus aspects such as local needs, resources and infrastructure were considered. Ensuring the project will result into empowerment, equating and sustainable development.

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## DESIGN STATEMENT

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### DESIGN CONCEPT

#### “Interactive learning for growth”

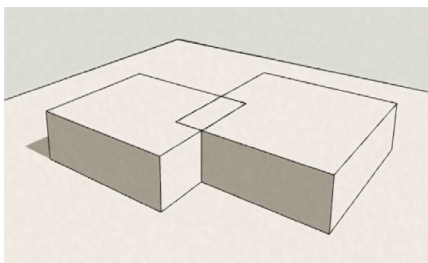
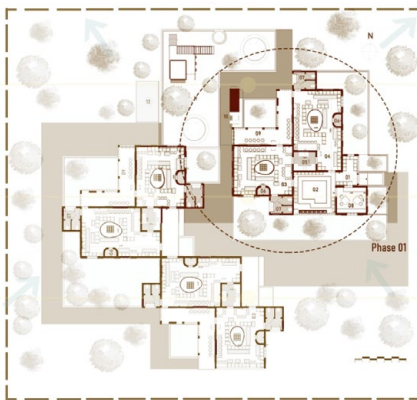
The driving force of the design process was to craft a creative and interactive space for the children. This was only possible with the translation of the 28 Montessori patterns into the described design principles selected to govern the process.

### DESIGN APPROACH

#### Developing the master plan

The master plan proposed was influenced by the nature of the site in unison with the guiding patterns that are quite important to be considered from the master plan stage to detailed design stage. These include:

1. Afternoon Activities to the West
2. All entry points to the East
3. Minimum exposure to prevailing winds
4. High exposure to western sun from mid-afternoon.
5. Create high traffic communal areas of interaction.



#### Form development

Floorage of Children's House was inspired by two interconnected masses that form Children's learning studio. Rectangular motif is the architectural language that responds to the challenges of the project with a modular and homogeneous space. Rectangular-square shapes were used to create easy, fast and economical units that can be built with ingenious materials.

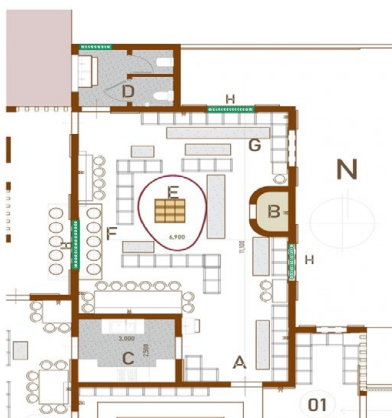
Children's House is centred on an Interactive approach that emulates the site's existing natural features in creating Learning spaces. These learning spaces connect with one another creating a home like independence environment that takes in natural light, ventilation and at the same time possess a layout and arrangement that connects with nature and the outdoors.

#### Elements of each Learning Space

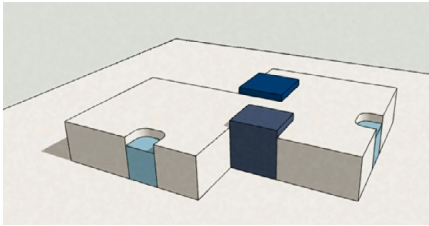
Each space comprises of 3 areas of solar orientation, with a variety of light conditions aligned with use. These distinct spaces have been created to accommodate different modes of working based on the benefits of respective lighting conditions.

Future courtyards were strategically planted to control these natural lighting conditions.

1. Outdoor space: a transitional break out space for all kinds of activities dedicated to individual spaces.
2. Active indoor space: for busy group activities oriented north.
3. Private study space: situated south



## DESIGN STATEMENT



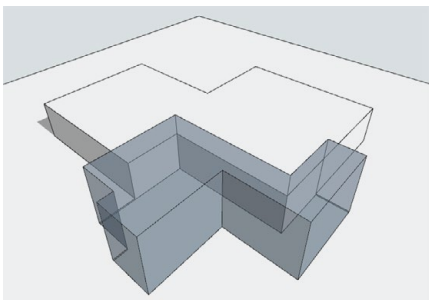
Two learning spaces accommodating 40 students and 3 teachers. These interactive spaces allow for natural free flow of children while being protected. These Learning spaces are open to the transition space that links to the garden allowing students to grow flowers, vegetables and fruits.



To emphasize interactive environment among students, each learning space shares washroom facilities and the kitchen space with accessibility from both spaces.

The children's toilets are located closely or attached to the learning spaces while providing degree of privacy and independence. Children using toilets enjoys fresh air and interesting view of garden due to low exterior wall and half toilet doors. The appliances within the toilets including WC, water pumps and taps are child sized for easy accessibility and use. The use of half doors and placing of louvered windows at adult's eye level between toilets and adjacent learning space creates privacy and adult supervision satisfactory.

On the other hand, Children's kitchen is attached to one of the learning spaces while being accessible and shared by other children from adjacent leaning space. Small dining tables and chairs are provided adjacent to the kitchen for children to use while having breakfast and lunch. The interior of the kitchen is supplied with standard kitchen appliances but made accessible through portable stairs for children.

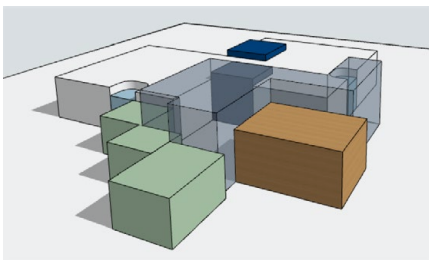


### The Greeting Space

This space is stationed at the centre which forms the heart of the House. Greeting space provides a point of orientation and is able to accommodate a range of activities e.g. group learning, playing even public events.

Greeting space acts as path through storage and a common space for individual or small groups acting as a social hub for different age groups. This space is connected to an open Teacher's room to balance between supervision and confidentiality. This space acts as a channel creating spatial setup of the Children's House.

Circulation spaces are created along this channel and all spaces are connected to this spine including Two Learning spaces, Teacher's room, Sick bay, Teacher's washroom and workshop. The central backbone of this space has wide stairs used for multiple purposes as per spontaneously emerging events with wood finish materials.



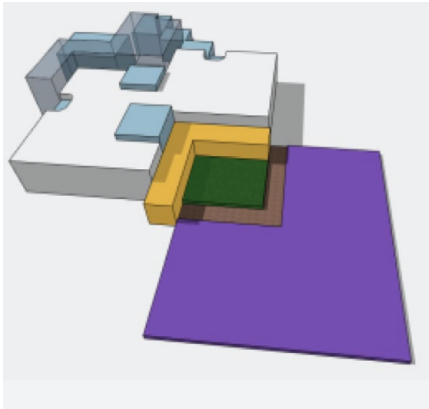
### Laneways

These are covered ways extended from the classroom spaces that act as a transitional space between the outdoors and indoors, defining spaces towards the west of the building. Along these laneways are learning spaces intimate courtyards, sheltered outdoor spaces for activity learning. Laneway system has added the benefit of allowing cool breeze to move through the buildings.

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## DESIGN STATEMENT

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### Gross Motor Activities

Western part of the building was dedicated to outdoor activities and lively experiences that will greatly contribute to Practical life learning; at this place is where the learning ends and nature begins.

These spaces are intended to integrate the landscape and provide space for children to appreciate their natural surroundings.

The children will be provided with a small animal hut, an aquaponics raised garden and a playground.

Animals hut will keep pets such as chickens, rabbits, and ducks. The animals will be part of the learning experience. They will help to teach children responsibility, passion, empathy and understanding; with this they will learn the value and importance of other living things. As children most kids can never really grasp the value of life, natural growth and lifecycle, with pets this can be easily learned through daily observation.

Plants are the best teachers for practical life and they also have the best effects on moods and air quality. Aquaponics is an ecosystem where plants and fishes coexist, which is a great way to teach kids farming since it's manageable and sustainable. Gross motor activities help kids to learn how to coordinate and control their body movements. By recycling old tires and reclaimed wood a jungle gym was created with monkey bars, stairs, and swings made from worn tires.

## PROJECT DETAILS

### NATURE AT THE CENTRE

In keeping with the ethos and traditions of the Montessori education method, enormous significance was placed on the environment and in keeping with the design philosophy sustainability sits at the heart of the project. The following choices were made throughout the design process:

### CHOICE OF MATERIALS

With regard to the lake zone context stone, clay/mud and timber are seen to be readily available natural building materials in the area with stone topping the scores. With that in mind, exterior envelopes of the Children's house is covered with stone walls due to its natural ability to provide a sense of warmth and security to the house.

Within the interior of the Children's house, clay bricks define the partition limits of the project through the clay hybrid construction method with its smooth finish touch.

Around the learning spaces a system of sliding doors made out of local wood defines the interior-exterior limits, creating a flexible space. Among all these components, are to in children's dimension wooden furniture, shelves and learning materials that fully accommodate individual kids desire.

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### NATURAL NOT SYNTHETIC

Most spaces were designed with natural lighting and soft finishes in mind, so as to create a sense of safety and belongingness. Apart from some learning aids/ charts the walls were kept as plain as possible, instead providing as much learning instruments made naturally from wood. The furniture that dresses the rooms from shelves, desks to chairs are also to be made from locally sourced talent and wood.

### NO FOCAL POINT

Unlike traditional classrooms the designed learning spaces has no focal point instead the entire classroom acts as an engaging learning space, where children can work individually or collaboratively on projects.

### ACCESSIBLE LEARNING MATERIALS

Designed space environment emphasises on providing great opportunities for kids to build skills, by ensuring all craft and learning materials are accessible at all times. For practical life skills the hand washing sink and preparation tables are to be made at appropriate height to ensure accessibility.

### FLOORS

To many environments they are regarded as a base, but to the learning spaces they perform a variety of tasks than the ordinary. They can be used as desks for kids to arrange, play, read and understand several learning tools.

### Project Programme

The proposed facility will serve 80 children plus 6 teachers each year with an Adult/Child ratio of 1:14. The developed schedule of accommodation for the pre-schoolers from the age of 3 to 6 years incorporates the 28 Montessori architectural patterns as observed below:

No.	Accommodation	No. of spaces	Area m2	No. of Students in space	Relevant Montessori Patterns
01.	Greeting space	1	61	80	1,2,3,4,5,22
02.	Learning spaces (Classrooms)	2	191	40	1,2,3,6,7,8,9,10,11,12,13,14,15,16,17,18,20,24,25,28
03.	Children's washrooms	2	12	-	1,2,3,9,19
04.	Children's Kitchen	1	8.8	-	1,2,3,9,17,18,21
05.	Transition space	1	29	-	1,2,3,20
06.	Children's Garden	1	3	-	1,25,26
07.	Gross Motor Development space	1		80	1,2,3,23,24
08.	Materials Workshop	1	24.6	6	1,2,3,27
09.	Sick room	1	7	2	1,2,3
10.	Teacher's room	1	14.8	6	1,2,3,5
11.	Teacher's toilets	2	9.5	-	1,2,3
	<b>Total</b>		<b>358</b>		

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COST CALCULATION

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**PROPOSED CONSTRUCTION OF MONTESSORI CHILDREN'S  
HOUSE TO BE BUILT ON PLOT 'X' IN LAKE ZONE**

COST BREAKDOWN BASED ON ELEMENTS

No.	SUMMARY	AMOUNT (TSHS)
01.	ELEMENT NO.1 - SUBSTRUCTURE	15,373,000.00
02.	ELEMENT NO.2 - WALL	16,500,000.00
03.	ELEMENT NO.3 - DOORS	4,000,000.00
04.	ELEMENT NO.4 - WINDOWS	9,500,000.00
05.	ELEMENT NO.5 - ROOFING	13,500,000.00
06.	ELEMENT NO.6 - FINISHING	8,159,000.00
07.	ELEMENT NO.7 - PAINTING AND FINISHING	1,000,000.00
08.	ELEMENT NO.8 - FITTINGS AND FIXTURES	10,000,000.00
09.	ELEMENT NO.9 - PLUMBING INSTALLATIONS	9,800,000.00
10.	ELEMENT NO.10 - ELECTRICAL INSTALLATIONS	5,000,000.00
	<b>TOTAL</b>	<b>92,832,000.00</b>

Total Construction Cost = **92,832,000/=TSh**

Add: 6% Professional fees **5,570,000/= (Design and Supervision)**

Total Estimated cost = **98,401,920/=Tsh (42,240 USD)**

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VISUALS OUTSIDE

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VISUALS INSIDE



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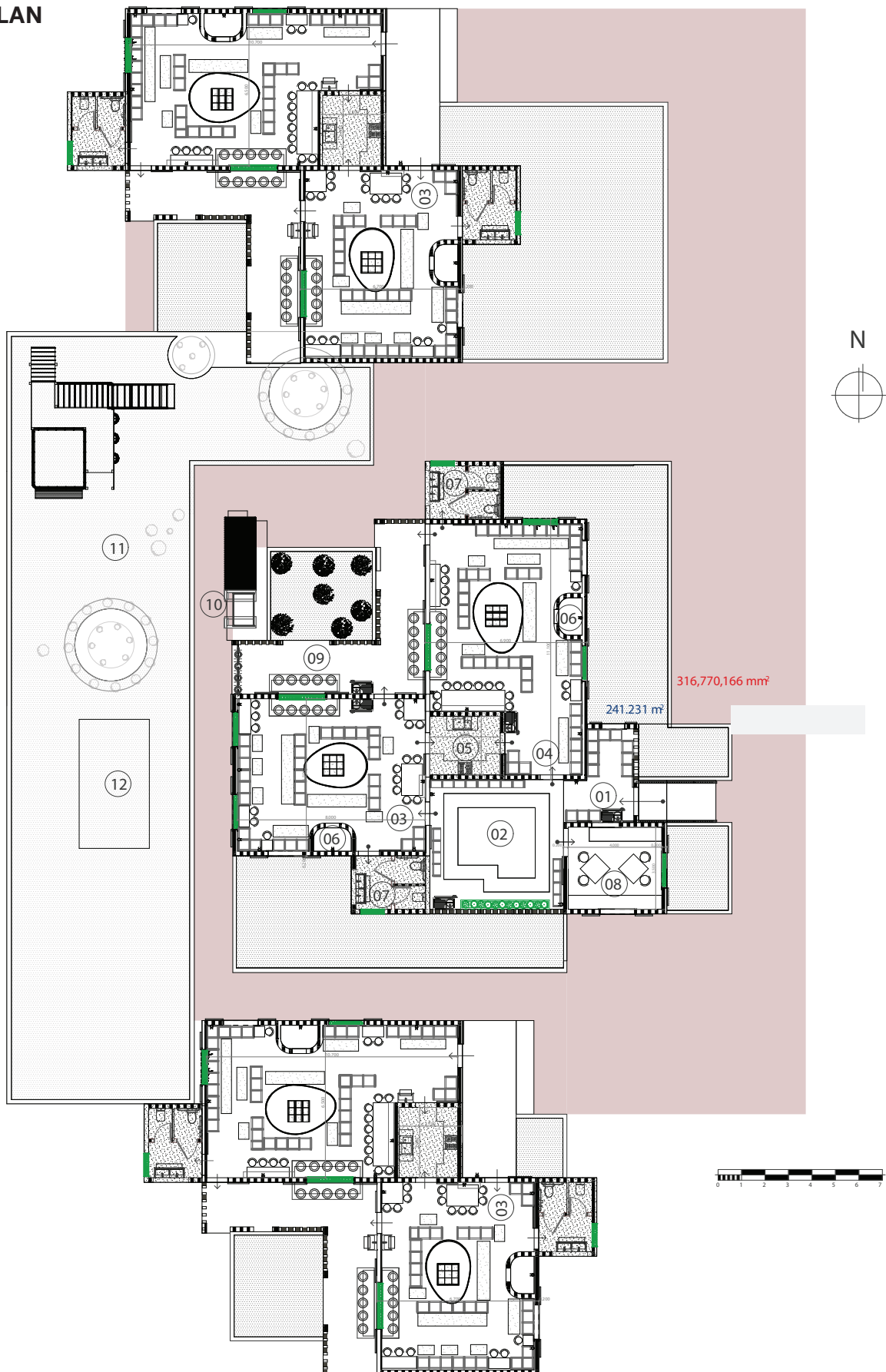
VISUALS TRANSITIONS

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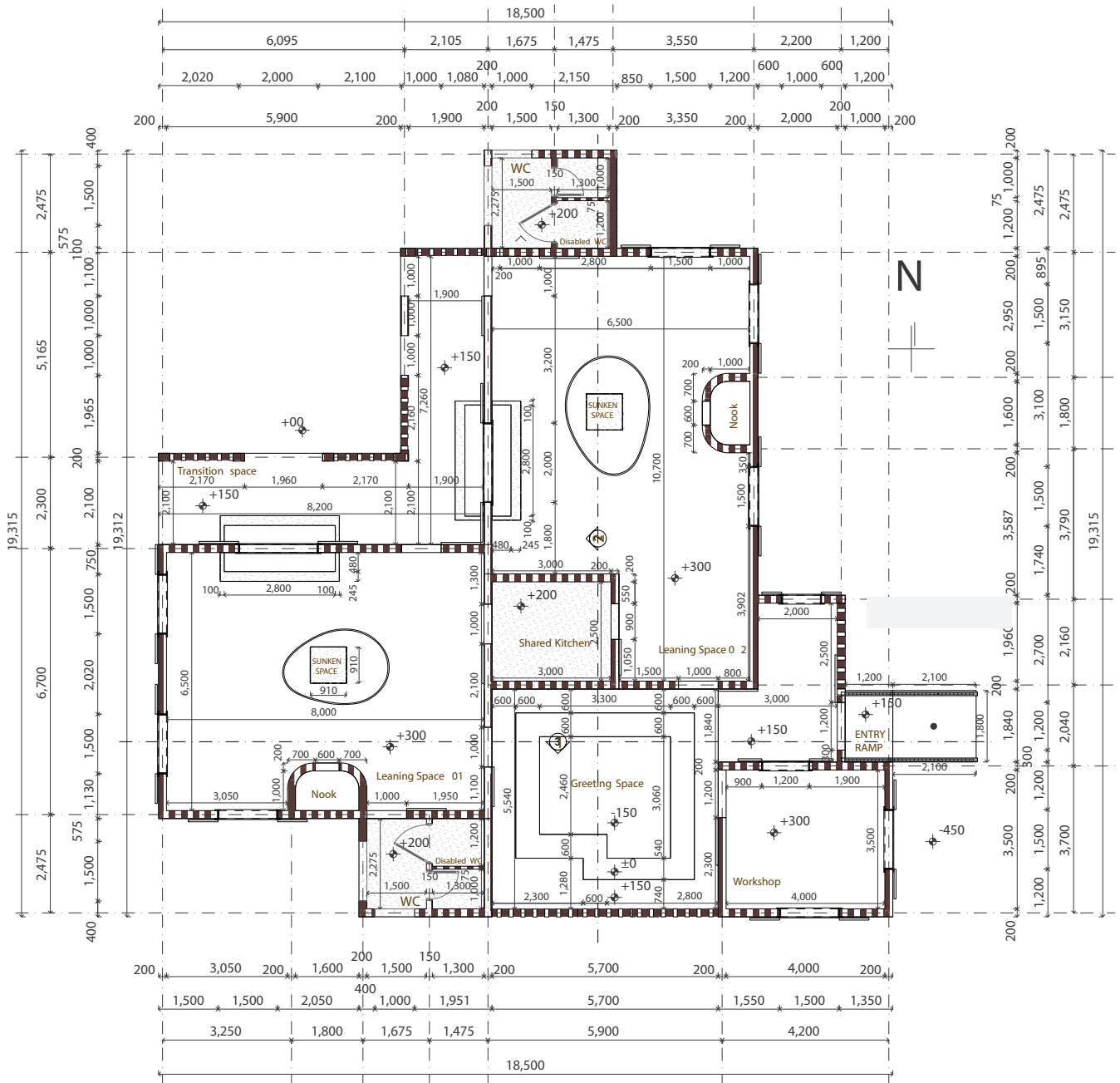
PLANS

SITE PLAN



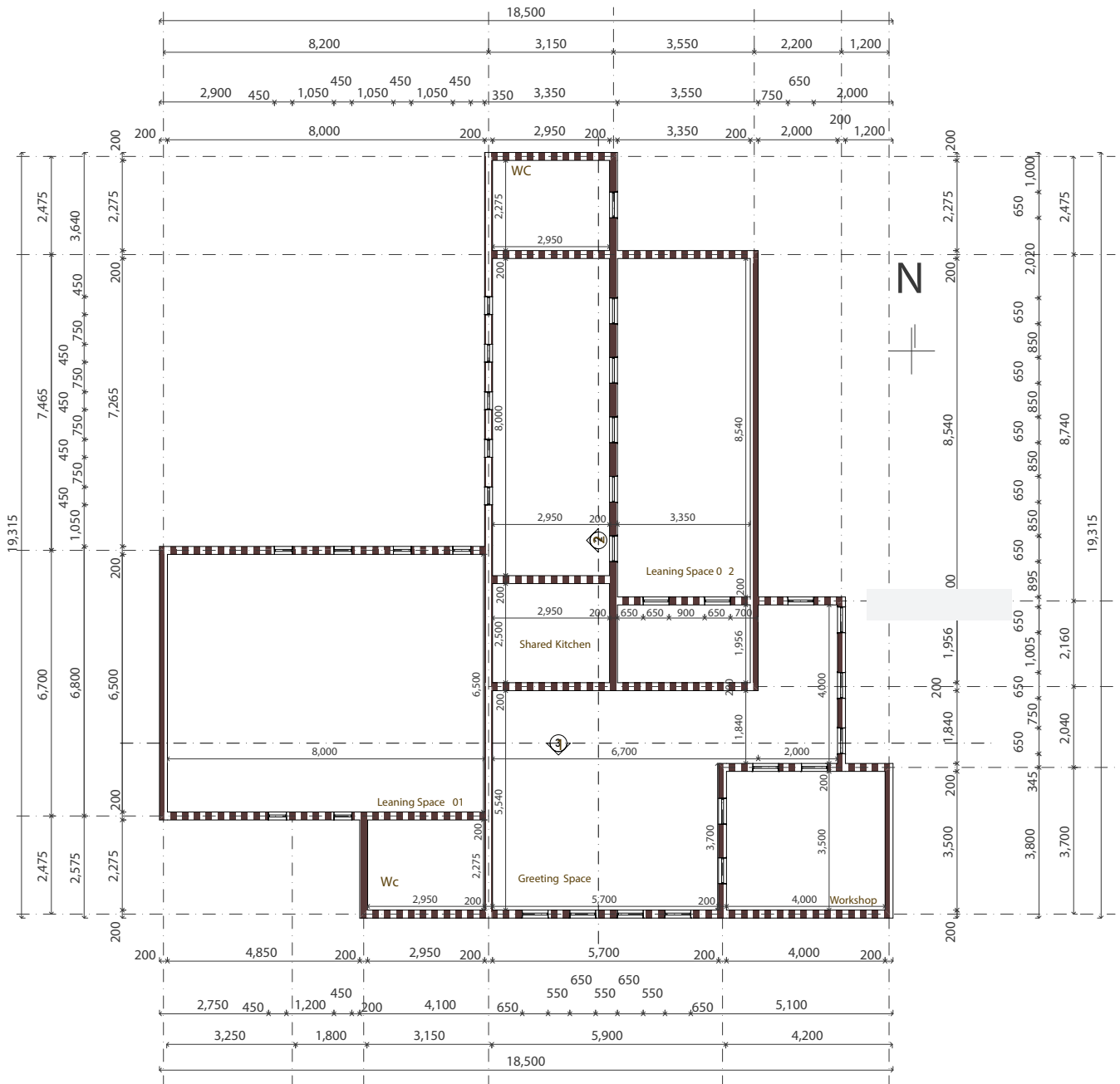
PLANS

GROUND FLOOR PLAN WITH DIMENSIONS



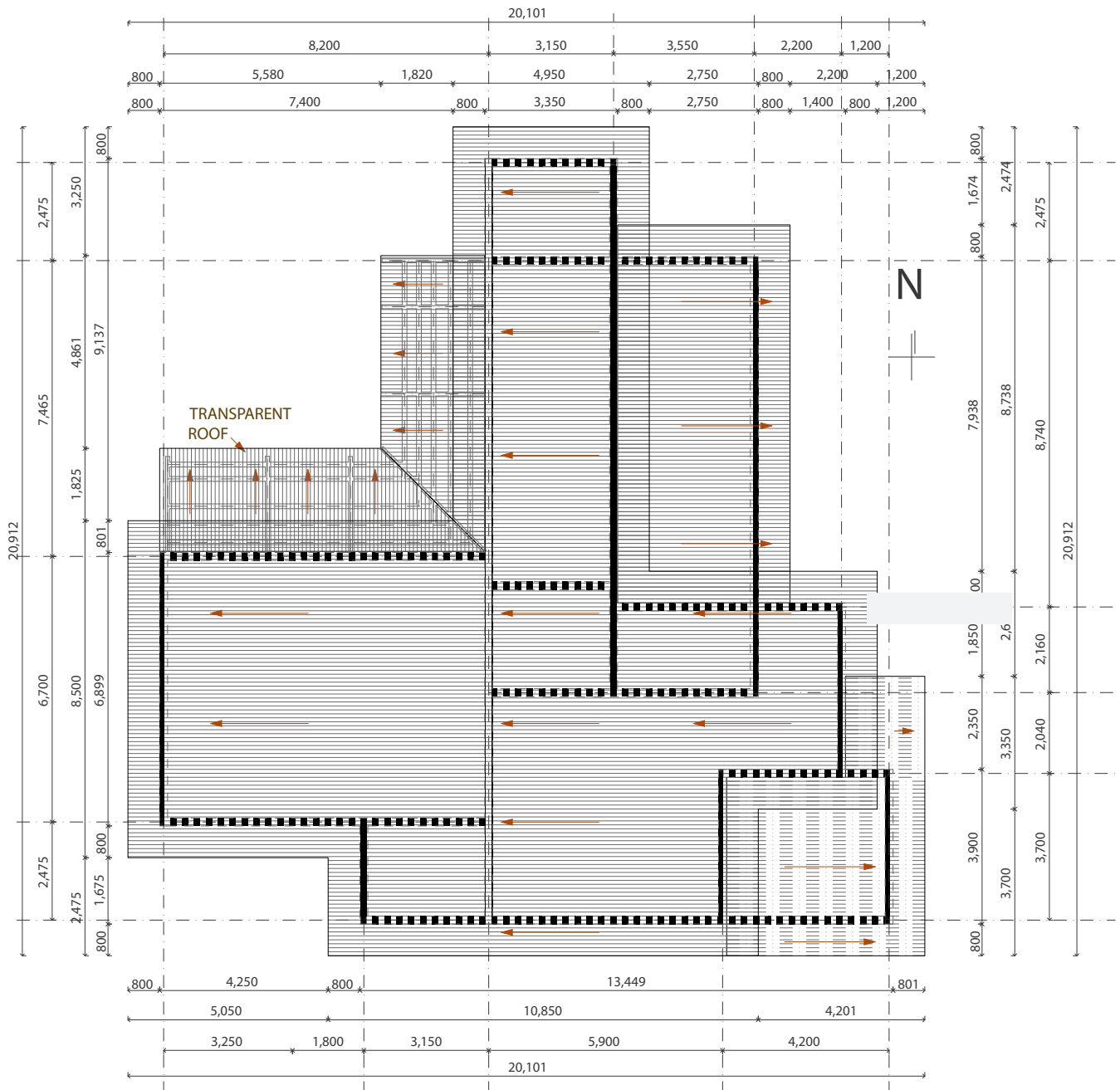
PLANS

ABOVE LINTEL PLAN



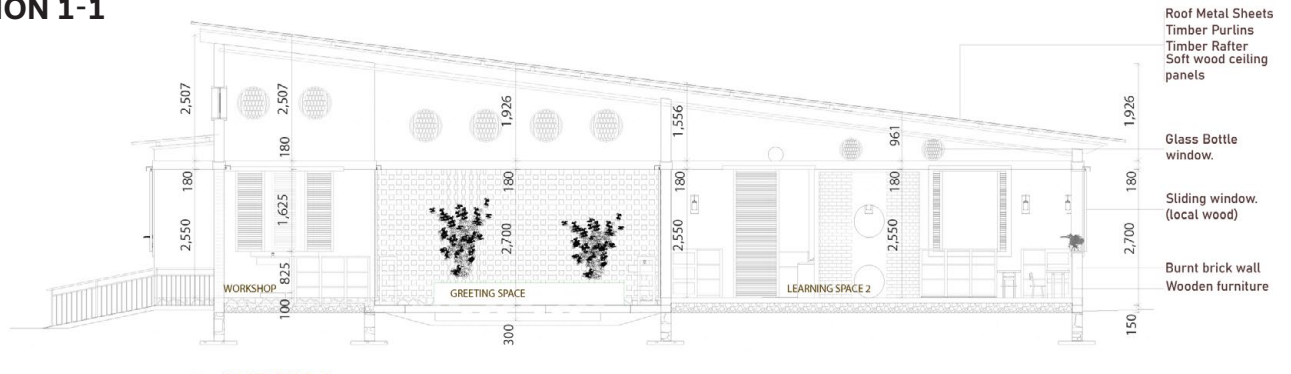
PLANS

ROOF PLAN

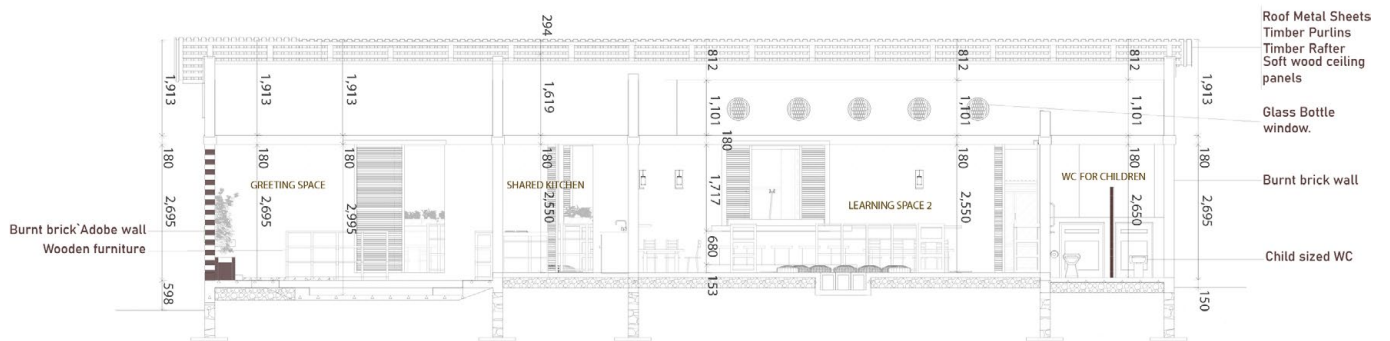


PLANS

SECTION 1-1



SECTION 2-2



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## ABOUT

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### BIOGRAPHY

Allan Gervase has transitioned through life using personal and professional experiences to learn, assist and evolve with regards to constructed milestones and objectives present. As an aspiring technologist, Allan has been accredited with a creative unit at Mellow Architects that translates visions/ideas into tangible and functional designs within the Design Department.

He knows there is no definite approach that works for everything, since designing for the living in an ever changing landscape with enormous challenges requires the ability to morph and walk with change. Through learning and mastering various construction and design techniques he has been able to create a method that works for each client's personal needs. He has experience in creating and supervising a wide range of projects from religious, governmental, and even commercial/residential buildings.

He holds a Bachelor Degree of Technology in Architecture from the Mbeya University of Science and Technology located Southern Highlands of Tanzania. He is also registered as a Graduate with the Architects and Quantity Surveyors Registration Board and continues to attend various Professional Development seminars and conferences that help to sharpen and refine his skills on various industry practices.

As a person Allan is intrigued with improving the current working environment, which led him to establish a CAD training programme to maximize project efficacy and efficiency rate. He is also very passionate about photography and nature due to their innate ability to always be timeless, and he tries to indulge as often as possible.



### CONTACT

ALLAN GERVASE  
Architectural Technologist

Isamilo, Building 22, Mwanza 33104, Tanzania  
(+255) 629667541

WhatsApp: (+255) 759675414  
E-Mail: allangervase01@gmail.com  
LinkedIn: Allan(Lanpic)Gervase  
Instagram: Lanpic\_touch