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THE ADVENTURE

# TANZANIA

DESIGN-BUILD-TRAVEL

SAFARI

31 OCT 2015 - 30 JAN 2016



LOCAL LIVING



KILIMANJARO REGION

3 MONTHS

FUNDRAISING

COMMUNITY  
EMPOWERMENT



1 RAMMED  
EARTH HOUSE

INTERNATIONAL VOLUNTEERS



Nka Foundation



Patricia Erimescu



# CONTENTS

## Introduction

### Design

Tanzania Rammed Earth Building Workshop  
Community Design  
Kasirwa Volunteer Quarter  
Sustainable Design

### Build

Hands-on Experience  
Project Schedule

### Travel

Arrival and Accommodation  
Local Excursions

### Prepare

Packing Essentials  
Visas, Health and Insurance  
Project Costs  
Fundraising

### Additional Informations

About the workshop leader  
About NKA Foundation  
Project Overview  
Tanzania





# INTRODUCTION

Tanzania Rammed Earth Building Workshop is a collaborative, research based design build workshop to construct a modern mud house inspired by the traditional Masai's hut.

Join us and work with our international team of participants to design and develop a prototype home in the village of Kasirwa, Tanzania. Learn sustainable design concepts and join the local community to create a home that exemplifies a modern approach to traditional earth construction.

The house will be used by international volunteers who come to the local school to volunteer their time and skills. The volunteer quarter will become the second building in Nka Foundation's nonprofit Arts Village in Tanzania.

Through the project we hope to encourage the sustainable development of Kasirwa. This three month workshop will be a challenging and rewarding design build endeavor. We look forward to collaborating with you on the successful project completion.

## RAMMED EARTH WORKSHOP

Creating a prototype earthen home for volunteers on the eastern slope of Mt. Kilimanjaro.

Join us in the design, development and construction of a prototype earth home in Kasirwa, Tanzania. The experience is an opportunity to immerse in the local culture, explore sustainable design initiatives and learn through hands on analysis, field trips and construction of the project with the local community.

The home will be used as the second building to initiate Nka Foundation's new Artist Village project site in Tanzania. It will serve as a home for local and international artists to use while performing their artist residency with Nka Foundation. Nka has had success in Ghana serving human capital development through use of the arts. The foundation now has the opportunity to continue their mission in Tanzania.

The home will also be used by volunteers who come to the local school to volunteer their time and skills. These volunteers come to Namfua Secondary School to build a classroom, playground for the school or teach summer kids camp or an after school project when school is in session.

We will begin the workshop through sitespecific tours of the local architecture and talking to the residents to gain awareness and knowledge of the local building traditions. The design process will then begin to evaluate and refine the design of the Kasirwa Rammed Earth House by Patricia Erimescu.





We will be studying the potential and viability of earth building as a construction technique to serve the sustainable development of the local region. The culture has a long history of building with the earth and we will learn from their knowledge while also presenting ways that earth building can be used for future and modern homes.

As a local and widely available resource, earth and mud construction can serve as a natural building technology for future homes without the high cost and negative impacts of imported concrete and other foreign construction methods.

As a group we will study rammed earth building techniques as a means to build the Kasirwa Earth House. The construction of the project will depend on the successful gathering of local interest and help.

Through the planning process we will seek community input to ensure an appropriate design is developed. In the construction phase we will work with local people to create an exchange of knowledge and construction ideas. During the design build workshop you will have time to visit the nearby sites, national parks and other attractions of Tanzania. We hope that you will use your time to explore and have fun in the region while connecting to the local people and environment.



Participants can also choose to use their free time collaborating with the local school and other community members and artists on ways to give back to Kasirwa Village.

The workshop offers an engaging and enriching experience to the participants to work with a local community and be involved in a project from the design to construction phases. The international makeup of the project team and the local people will allow for cross-cultural communication and understanding.

1 View from the project site, Kasirwa, Tanzania

2 Our local assistant Mr. Jonathon

3,4 Namfua Secondary School where volunteers come to donate their time and skills

5 Local people and producers in Kasirwa, Tanzania

6 Views of the village and project site, Kasirwa Tanzania





Above: Community members and workshop participants from MAMOTH + Nka Foundation's recent workshop working at the mud house in Ghana

Below: Community members and workshop participants from MAMOTH + Nka Foundation's recent workshop

## COMMUNITY DESIGN

Working, sharing and learning with the local community throughout the design build workshop.

Through the project we will seek ways to engage the local community in our discussions and construction of the project. Our workshop will be an open invitation to the local villagers to become involved in the sharing experience.

To begin we will speak to people about their needs, ideas and daily life revolving around the house. We hope to identify areas of difficulty in their lives and search for ways that our design work can improve their living resources. This collaboration will allow us to develop a housing prototype that fits into the lifestyle of the area.

We will present our own ideas, experiences and designs with the community and receive suggestions and input as we prepare for the construction.

During the construction phase of the project, we will be working alongside craftsmen, builders and interested people from the village. We will learn of their construction methods and techniques while also sharing our own ideas with them and encouraging sustainable design concepts and practices.

Our workshop is a cultural immersion and learning event. The educational opportunity is to both learn from the local people and share our own knowledge. By being directly involved with the people, we can situate our project within its context to serve as a functional and meaningful prototype in the community.





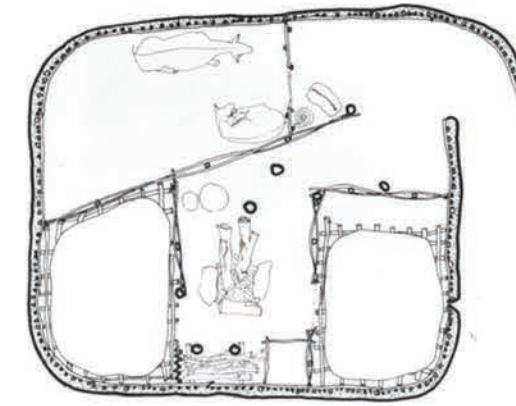


1 View of the Kasirwa Volunteer Quarter from the exterior

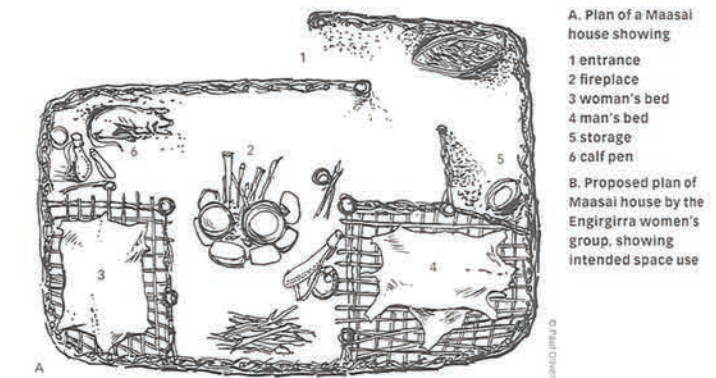
2 Plan of the Kasirwa Volunteer Quarter

3 View of the “primitive” Masai hut

4 Typologies of vernacular Masai hut



4



## INSPIRED BY THE TRADITIONAL MASAI HUT

The Maasai people of Tanzania are traditionally nomadic, so their house construction was for temporary purposes, using wood and sticks plastered with mud and cow dung. Traditional houses are unsuitable for long habitation - forever needing to be repaired and having no light, ventilation or water collection.

Working with Nka Foundation, we will develop new house designs, based on the traditional design which is important for local cultural and functional needs, but improving it through the use of appropriate technology.

The Volunteers Quarter is a modern reinterpretation of the primitive mud hut of the ethnic Masai Mara, a semi-nomadic group.

The Volunteer Quarter is divided neatly into two parts: the large room containing the bedrooms and the area of kitchen, bathroom and another small bedroom.

The central courtyard incorporates an entryway and foyer that is private, open to the sky and the space can be used also as a place for meetings and events.

The large doors have an immediate connection to the exterior by opening their windows and door onto the interior courtyard and allowing the interior living areas to spill out into the landscape.

The exterior walls create a private space protected by weather conditions while the interior creates an open space with a natural sense of privacy within the quiet and bright courtyard.







©MAMOTH



©MAMOTH



© Two +Three Workshop

Nka Foundation's previous workshops in collaboration with MAMOTH and Two +Three Workshop

- 1 Theoric lessons on earth construction to get comprehension of the material ©MAMOTH
- 2 Design session with students ©MAMOTH
- 3 Working table and tools in Abetenim, Ghana, Two +Three Workshop

4. Design propped by Patricia Erimescu. The After analyzing the local architecture and understanding of the material the participants proposed technical solutions and redesigned the Volunteers Quarter House in an ultracontextual approach.

## PARTICIPATIVE DESIGN AND BUILD

The Tanzania Earth Building Workshop offers an educational experience through an immersive, collaborative design build project. The workshop challenges the participants to interact creatively and physically for crossfertilization of ideas and skills. The design process follows the logic of the learning workshop.

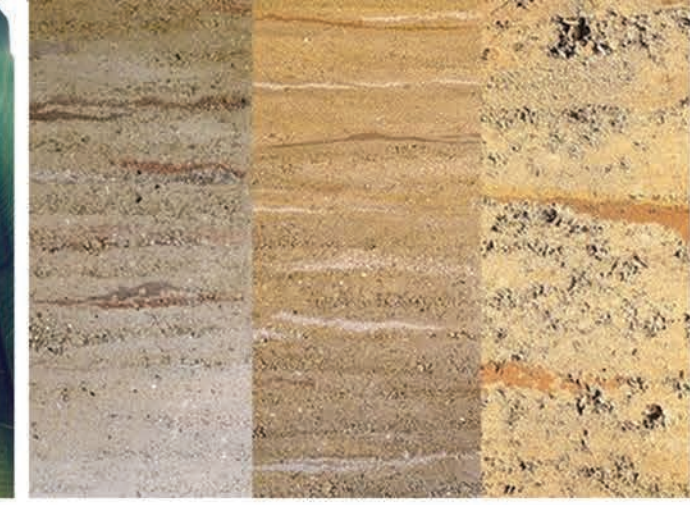
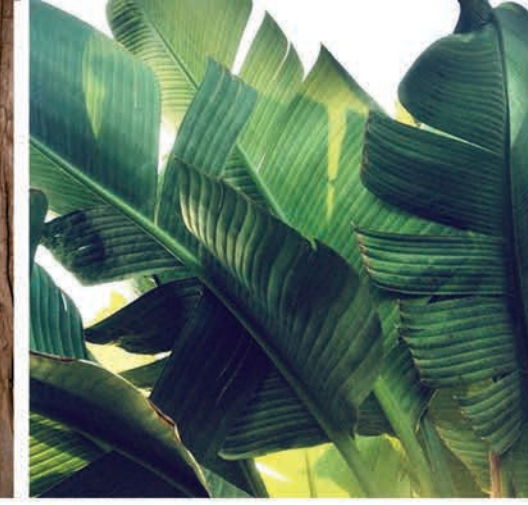
This phased teaching allows considerable time saving during the building design sessions since the participants are already able to imagine effective construction details and know the limits and characteristics of the materials used.

With the idea of producing a replicable building and adaptable to the needs of the inhabitants, the bioclimatic solutions are simple, the high inertia of the walls allows to store the coolness and humidity of tropical nights, the large internal volume and ventilated roof keep a low indoor temperature while a rainwater recovery system is set at the junction of two roofs.

The shape of the Sankofa House, largely inspired by Ashanti built heritage with its successions of sloping roofs in the landscape that draws a "skyline" so special, generates an appreciable thermal comfort compared to cement brickwork with flat roofs.







## SUSTAINABLE DESIGN

The sustainable design principles of Kasirwa Earth House will integrate the building to its environment and local culture.

The Maasai people of Tanzania are traditionally nomadic, so their house construction was for temporary purposes, using wood and sticks plastered with mud and cow dung.

Traditional houses are unsuitable for long habitation - forever needing to be repaired and having no light, ventilation or water collection.

Working with Nka Foundation, we will develop new house designs, based on the traditional design which is important for local cultural and functional needs, but improving it through the use of appropriate technology

The mud house we will build in Kasirwa hopes to become a model example of sustainable design in the region. Through our research, studies and collaboration with the community we aim to create a prototype home that offers a means of creating affordable sustainable design. We will use the project to encourage the thoughtful growth and sustainable development in the area.

As a built example of ideas, the Volunteer Quarter of Kasirwa will become a house for volunteers, created by volunteers and will serve as an educational tool to show possibilities for other homes.





# HANDS ON LEARNING

Explore building traditions in rural Tanzania, work among the local people of Kasirwa, and gain new skills through hands on learning.

This initial design will serve as a starting point for the building workshop. Many elements will be modified and improved based on group discussions and community involvement. Together we will search for ways to increase the construction efficiency and cultural relevancy to create a new prototype for the local community. The design is constructed almost entirely out of rammed earth.

The Tanzania Rammed Earth Workshop offers an educational experience through an immersive, collaborative design build project. The workshop challenges the participants to interact creatively and physically for crossfertilization of ideas and skills.

When you join the workshop we will work together with the local community and craftsmen to discover new ideas and understand the logic and ingenuity in the local vernacular architecture. We will then seek ways to incorporate our studies into our own design processes. The collaboration with local builders and artisans will allow us to develop a prototype earth home housing unit that can be replicated in the region as a model of sustainable design.



During the day we will go on site visits, develop the project design, experiment with construction techniques and build prototypes to better understand the materials and behavior. Then, we will start the construction of the project and learn the construction process from foundation to roof.

Most evenings will be used for reviewing workshop progress along with informal discussions and presentations by the workshop leaders and international participants. Design, site-specific issues, and construction strategy are all debated in an effort to create useful structures that are environmentally sustainable and meet local needs.

By alternating work and dialogue, the participants will experience how a design problem, budget and site-specific dynamics such as materials, indigenous technologies and community can provoke resourceful thinking and hybridization.

The project will come to closure with a Community Day, a public celebration of the completed project by way of open house exhibition of the built unit and associated works, public performances, and foods. At the end, you leave with real skills and experience that employers and clients value and that can refresh your own design thinking.

In 2014, M.A.M.O.T.H. won the "Mud Hut Competition 2014," reinventing the African mud hut together" and in collaboration with Nka Foundation they built in Abetenim Village, in Ghana an earth house for locals.

Above: images from the construction site in Ghana. ©MAMOTH







Above: Tadao Ando, Casa Wabi Foundation, Puerto Escondido, Oaxaca, Mexico.

Below: Habitat Cabo Delgado, constructed in Mozambique by Ziegert | Roswag | Seiler Architekten Ingenieure and the Aga Khan Foundation



© Pasi Aalto



© Pasi Aalto

Above: Barnetraakk / TYIN Tegnesteue + Rintala Eggertsson Architects, Bangladesh

## GLOCAL

### Design for local developments in global contexts

Glocal is a portmanteau word, a linguistic blend between the words referenced in the title of the post – think of “starchitect” for example (star + architect). It is about being global and local at the same time, obtaining the pros of both territories, acting faster and more accurate and solving the problems that break out unexpectedly. You can be here and you can also be there, without moving an inch from your place.

This “think globally and act locally” campaign, corrodes the inner core of architecture as notion, transforming the contemporary vanguard into a new kind of “modernism”.

The effects of a global movement of capital (and to a certain extent people) on contemporary architecture provides the framework for this study.

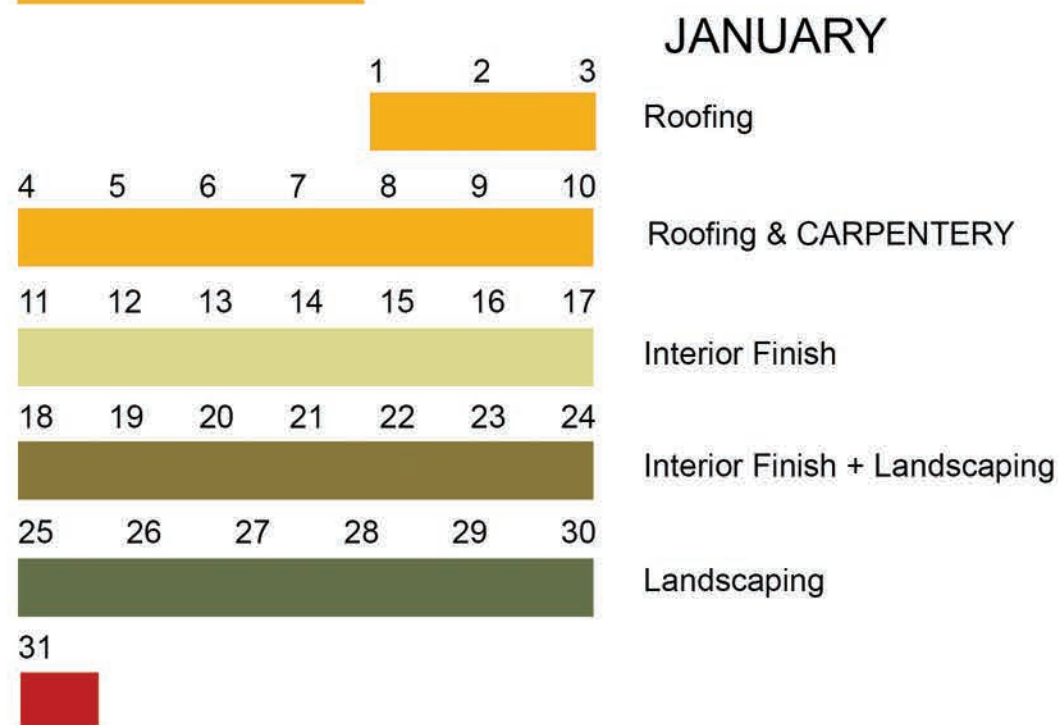
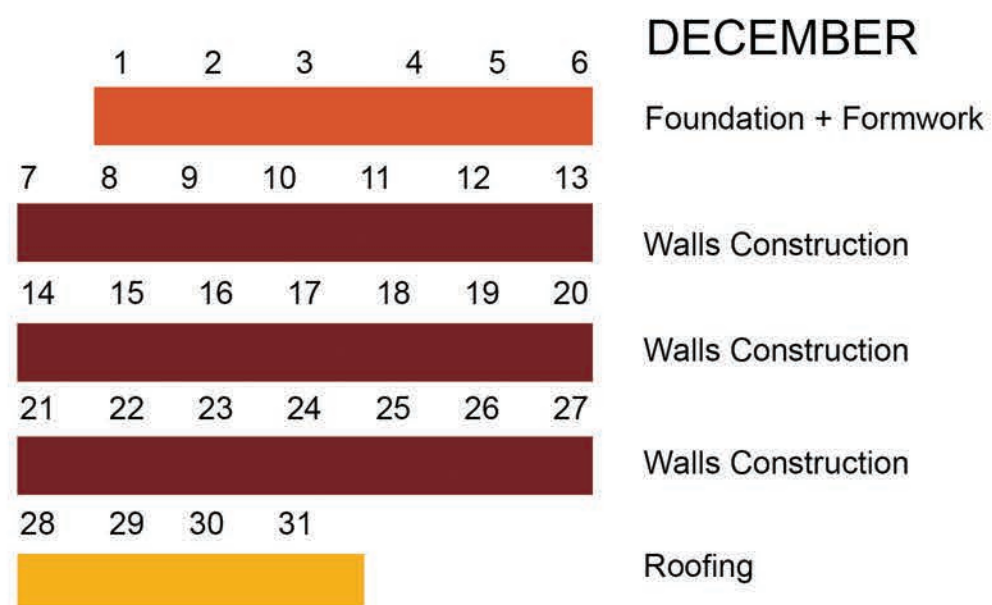
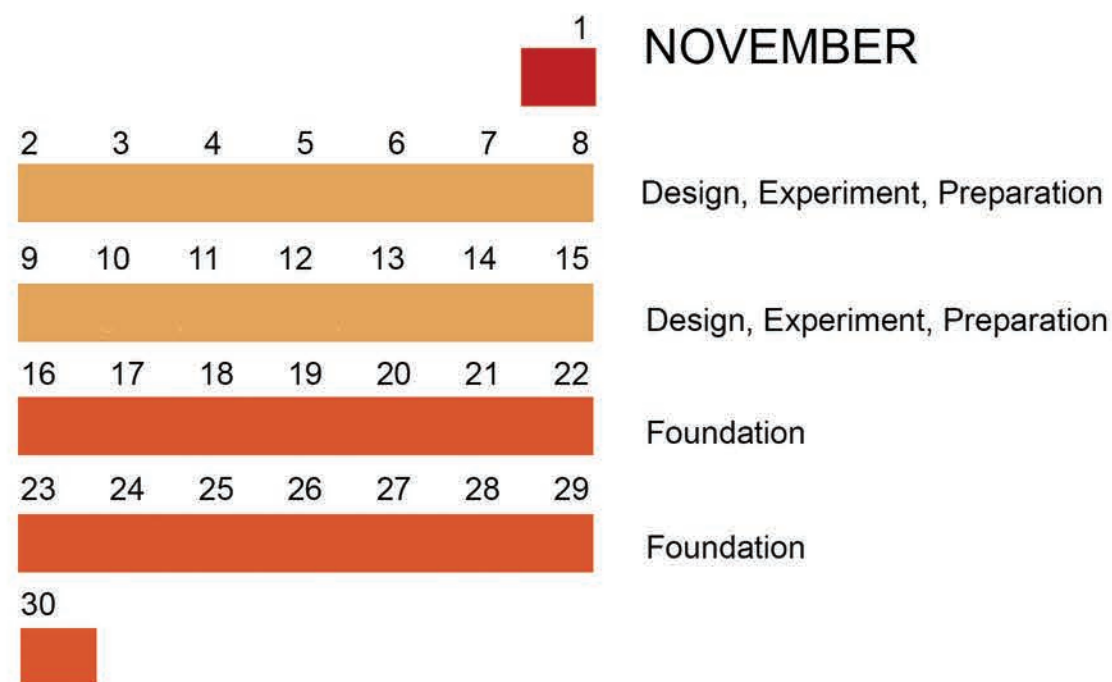
The home will incorporate passive cooling techniques to relieve the users from the heat. Natural daylighting will minimize the need for electric lights and improve the interior environment. The design will also incorporate primarily natural materials such as earth and wood which are breathable and non-toxic.

Through grey water recycling, composting toilets and roof water catchment the home can reduce water consumption to nearly zero. In an area where public services are unreliable, the availability of fresh drinking water is crucial.

A study of historical earth buildings in Africa presents buildings that are inherently sustainably designed using natural materials and passive energy techniques. These principles are applicable not only to traditional architecture but as guiding ideas for future buildings.

The project will also look at cultural sustainability by designing the project within the means and ability of the local people who will be the end users. An open invitation to the public to join in the construction of the project will become a cross cultural educational opportunity for everyone involved. We will look for unique ways to connect the project to its site environmentally as well as potentially through engaging the local children, artisans and community members.





## PROJECT SCHEDULE

Join us at any time and for any duration during the course of the workshop.

Our project schedule is based on the successful completion of a design build initiative. The goal is to give all participants a worthwhile and informative building experience regardless of their duration of stay or arrival date. We encourage participants to stay for as long as possible as this will allow for the greatest involvement in all phases of design.

In the first portion of the project we will work on finalizing the design and learning from community interaction. In the subsequent parts of the workshop we will construct the project from the foundation to the roof, improving initial design ideas throughout.

Key project points include:

1. Local Understanding  
Visit the surrounding areas to view local vernacular construction. Work with the community on their ideas and needs.
2. Materials and Resources  
Gather information on material availability and local resources and skilled builders. Perform material tests and prototype for rammed earth.
3. Design and Refine  
Review the existing Kasirwa Earth House design and make refinements and design.
4. Construction  
Build the Kasirwa Earth House with the project team, local workers and craftsmen.





## ARRIVAL & ACCOMMODATIONS

Planning for your arrival and accommodations during your workshop experience.



Kilimanjaro National Airport

The workshop begins by arriving to Kilimanjaro International Airport (JRO). Our local contact Felix Kisamo will help us coordinate transportation to the project site in Kasirwa 128km from the airport. Kasirwa is a rural village and offers adventurous and challenging living conditions.

Accommodation will be in a shared guest house and camping at the village depending on your arrival time and preferences.

Participants are encouraged to take part in the social events of the community to connect with the local lifestyle and customs of the village.

Come with any supplies and materials you believe would benefit our project in Kasirwa. Laptops and cameras are optional but can be used through the design phase along with pens and tracing paper. Architectural supplies will not be available nearby.

Meals are prepared by hiring a local cook or by using a cooperative kitchen where participants take turns in the planning, shopping and preparing the food. Please feel free to share your culture's cuisines with the group.

Consider bringing small inexpensive but meaningful gifts, thank you cards or photos of your city for community members. It is also customary to meet and greet the chief of the village and present them with a small cultural artifact from your home.

Kasirwa does not have electricity readily available. Small solar chargers offer an option to power digital cameras and phones. During our time off we can go to the larger towns to access internet.



## LOCAL EXCURSIONS

Immerse yourself in the culture  
and natural beauty of Northern Tanzania.

Tanzania offers the visitor a wide variety of quintessential African experiences. From Mt. Kilimanjaro to the Serengeti plains and herds of wild animals, many of Africa's iconic imagery is located in the region surrounding the project site. We will also make visits to the surrounding areas to view local building techniques and understand ways to incorporate the local culture in the Kasirwa Rammed Earth House.

Dependent on time and finances, some potential excursions include:

- Arusha National Park
- Mt. Kilimanjaro / Mt. Meru
- Ngorongoro Crater
- Serengeti National Park

1,2 Safari with Unison Safaris

3,4 A one day safari with the first group of participants in the workshop of Kasirwa Earth House by Orbe Studio @Arusha National Park





## VISAS, HEALTH & INSURANCE

Take the first steps in preparing your health, safety and entry for your time in Tanzania.

Before your arrival in Tanzania it is necessary to research the appropriate measures you must take to enter the country and protect your health and safety.

Take time to familiarize yourself with Tanzania's entry requirements in relation to your nationality. Every country's situation is unique and as a participant it is your responsibility to ensure that you are eligible for entry to Tanzania. Visas are required for most visitors from outside East Africa, which can be issued via the Embassy of Tanzania in your region.

Many nationalities are offered a visa upon arrival while others will need to apply in advance. Participants are encouraged to start planning early and are responsible for any costs associated with the visa process.

Our project is a cultural immersion event and therefore we recommend applying for a tourist visa.

A few embassy links:

Australia: <http://www.tanzaniaconsul.com>

Belgium: <http://www.tanzaniaembassy.be>

Canada: <http://www.tzrepottawa.ca>

Germany: <http://www.tanzania-gov.de>

Italy: <http://www.embassyoftanzaniarome.info>

UK & Ireland: <http://tanzania-online.gov.uk>

USA: <http://tanzaniaembassy-us.org>

Entry to Tanzania may also require vaccination records. The choice of vaccines for your trip depends on many individual factors, including your precise travel plans. Vaccines commonly recommended for travelers to Africa include those against Tetanus, Diphtheria, Polio, Typhoid, Hepatitis A, Hepatitis B, Yellow fever, Malaria, Rabies and Meningitis. Consult with a travel health advisor for information.

Participants are welcome to research and purchase traveler's medical insurance to cover any events that may happen that may require medical assistance. Consider your own situation and comfort levels and decide if insurance is right for you.

If you are bringing valuable belongings such as digital cameras and laptop computers, consider purchasing traveler's personal property insurance to cover any damages that may occur.

Keep in mind that our project site is a rural and remote location in a small village in Tanzania, where the convenience of development has not reached. Therefore please plan appropriately and prepare yourself for a challenging and rewarding experience.



Image taken in the Serengeti in Tanzania during the migration period



## PACKING ESSENTIALS

Ensure your enjoyment and the success of the project through planning and preparation.

The following is an initial list of items you may want to consider bringing with you for your stay. Some items such as generic toiletries may be easy to obtain in Tanzania while others may be better to bring with you. Please be aware that the project site is in a rural and remote area of Tanzania without consistent electricity. Remember to pack light!



© bensonbackpack.com

- Camera
- Camping equipment (Optional, if available)
- Construction tools, any old or used tools you want to donate, all are appreciated onsite
- Solar charger (Optional, for digital devices)
- Headlamp/Flashlight
- Laptop Computer (optional)
- Medicine, Malaria pills, Tylenol/Aspirin, etc.
- Mosquito net (May be purchased in Tanzania)

- Mosquito/bug repellent
- Paper, Tracing Paper, Pens, Pencils etc
- Rain jacket
- Sleeping Bag (Optional, if available)
- Small measuring/drafting equipment
- Solar Lamp (Optional)
- Sunglasses/Sun protection
- Thermarest/Sleeping mat (Optional)
- Toiletries, toilet paper, hygienic supplies
- Towel (May be purchased in Tanzania)
- Travel first aid kit
- Warm clothes
- Work clothes, shoes and gloves



## PROJECT COSTS

A breakdown of costs for project participation, food and accommodations.

The Tanzania Earth Architecture Workshop is funded through participation donations from the project participants. These costs cover all fees associated with joining the Tanzania Earth Architecture Workshop.

The participation fee is used for the purchasing of materials and supplies to complete the construction of the home and a small percentage to cover the workshop leaders. This fee is collected regardless of length of stay. Earth, wood, cement and other construction materials are all purchased using this fee.

Accommodations are by homestay with a local family in Kasirwa where we will immerse in the lifestyle of the village. The food and accommodation pricing is by week to meet your individual schedule.

Once you determine your length of stay you can estimate the overall cost of participation.

The project fees are as follows:

For International Participants:  
Participation: € 400  
Homestay & Food: € 80 / week

For Tanzania National Participants:  
Homestay & Food: € 80 / week

Participant is responsible for their travel expenses, vaccinations and any other personal miscellaneous costs.

## FUNDRAISING

Let's work together to make the workshop successful and accessible to everyone.

The Rammed Earth Workshop in Tanzania is an active construction project. The successful completion of the building requires the proper funding and budgeting measures to purchase supplies and materials and hire the skilled community builders throughout the project.

Most of these fees will be collected through the project participation donations from workshop participants. However with every additional contribution the project has the potential to increase its final impact. Additional funds will allow us to purchase and install water catchment systems, eco latrine systems and potentially include small solar lighting integration.

We also want the workshop to be accessible and affordable and we encourage all interested applicants to attend. We understand that the project fees may make attending the workshop difficult. Additional money that is raised through fundraising and contributions will be used to help reduce the project participation fees.

Please help us to promote our workshop with your interested contacts and ensure the successful completion of the project.



## ABOUT THE WORKSHOP LEADER



*Patricia Erimescu*  
ARCHITECTURE & DESIGN

Patricia Erimescu holds a master degree in Interior Architecture from UAUIM - University of Architecture and Urbanism Ion Mincu, Bucharest. She finished her bachelor at ETSAM - Universidad Politécnica de Madrid.

Her final thesis focused on emergency housing and strategies for the homeless, a diploma project finalized with a 1:1 scale prototype and she is currently developing the project for implementation. Patricia is the co-founder of the NGO T.H.A.T. Studio - Thinking the Humanitarian Architecture of Tomorrow, an organization with aim is to provide shelters for the ones in need and plan strategies for the reintegration of the homeless people.

She has been involved in building workshops and projects held in Romania, Spain, Morocco, India and Vietnam with focus on new ways of building with local materials such as earth, wood, bamboo and reed. Her work is about relating primitive architecture to contemporary design to create positive social change.

Patricia won several national and international competitions. The most recent is the first place at the Romanian national competition "Student of the year in architecture 2015".

"I strongly believe that no project is too small if it can change the way we think and live. The big change comes from the small scale."

## ABOUT NKA FOUNDATION



Nka Foundation

Nka Foundation initiates and promotes artistic, humanitarian and educational projects or activities that build cultural bridges between Africa and the rest of the world.

Nka is an Igbo (African) word for artistry, its literary translation is "...of art". It is also an Akan word that implies "may be" but in Akan, nká means "ancient". We reckon the arts are the most ancient of human activities.

Along these lines, Nka Foundation has a focus on human capital development through use of the arts, broadly defined to include visual arts, literary arts, performing arts, design, new media/film production, arts history, arts criticism, arts education, arts administration and curatorship, and emerging others.

While based in Ghana, Nka Foundation is committed to developing residency facilities in other countries; each center is to be independent but will similarly respond to local needs. The Tanzania Earth Building Workshop is the first project in their new Tanzania location.

The organization is led by Barthosa Nkurumeh, an arts educator and project director that spends his time in both the United States and throughout Africa.

Nka Foundation will support students who have a specific research topic they wish to develop to earn college credit. The topic must be preapproved by Nka in advance of starting the research or internship course.



**Project :**  
Design and construction of the Volunteer Quarter in Kasirwa Village, a prototype earth home.

**Goals :**  
Learn earth architecture and sustainable design building techniques while connecting to the local community and culture. Promote the region's sustainable development.

**When:**  
Come for any duration between October 31, 2015 and January 30, 2016

**NKA Foundati on:**  
Barthosa Nkurumeh, Nka Foundation Director  
Info@nkafoundation.org

**Workshop Leader :**  
Patricia Erimescu, Interior Architect, Bucharest, Romania  
erimescupatricia@yahoo.com

**Facebook Event:**  
Visit and promote our event page where we will post updates:  
<https://www.facebook.com/events/1442613409399828/1447370615590774/>

**Where :**  
Kasirwa Village, Rombo District, Tanzania  
Kilimanjaro International Airport (JRO)

**Who Can Join:**  
Everybody is welcome- students and recent graduates of architecture, design, advocates of sustainable practice, professionals and volunteers.

**Costs :**  
Participation: € 400  
Homestay & Food: € 80 / week

May be reduced through fundraising.

**Local Contact :**  
Felix Kisamo, Unison Safaris & Photography Manager  
Email: fkisamo@yahoo.co.uk.  
Phone: +255 (0) 784 506 080

## TANZANIA



1 Project Site, Rombo District, Kasirwa  
2 Kilimanjaro International Airport, Arusha  
3 Dar es Salaam





## JOIN US!

For workshop application email:  
[erimescupatricia@yahoo.com](mailto:erimescupatricia@yahoo.com)



Nka Foundation



Patricia Erimescu