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# *Kihembe*



*A project of the Kesho Trust and SANA*



# **Kihembe Environmental Education Centre Site Report and Conceptual Design**

**Mkange, Tanzania**



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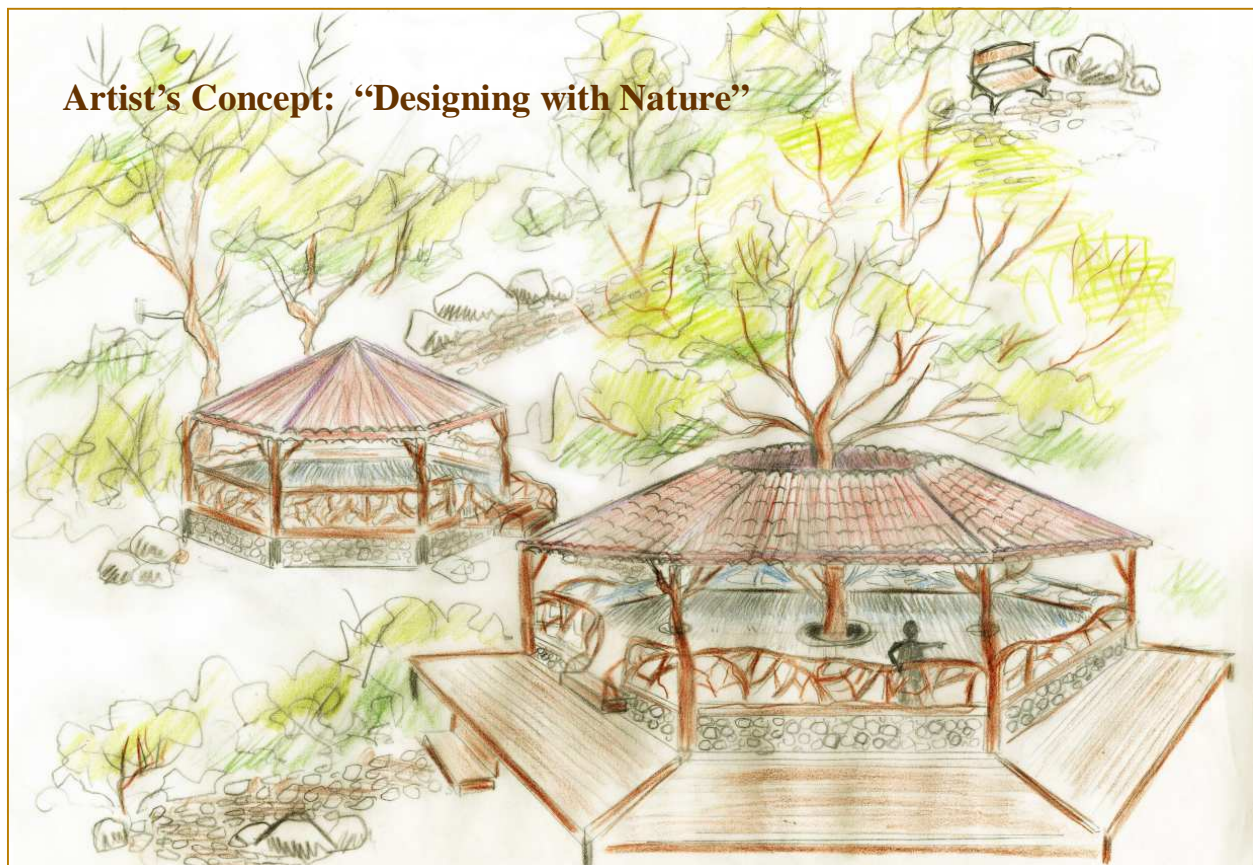
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## ***Acknowledgements***

I would like to thank my sponsors, *The Kesho Trust and Saving Africa's Nature*, for the opportunity to work as a volunteer Interpretive Planner on a very exciting project, namely the Kihembe Environmental Education Centre, adjacent to Saadani National Park in Bagamoyo District of Tanzania. Bruce Downie of the Kesho Trust was particularly supportive in creating the assignment and guiding its execution. During this assignment I met many dedicated and hard working individuals actively involved in conservation and education, especially Ally Abdallah and Costa Coucoulis of SANA. With their help and advice I was guided along and had a personal insight into what makes Tanzania and the Saadani area in particular such a special place.

To all of them I owe my sincere gratitude. I am also grateful for the wonderful hospitality of the management and staff of Saadani Safari Lodge - a fantastic place from which to appreciate the coastal environment.

Brent Liddle  
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## Part 1: Project Concept

*“Educating the youth of Tanzania to become better stewards of the land is an important mission and one that Saving Africa’s Nature and Kesho Trust believe in deeply.”*

Kesho Trust and Saving Africa’s Nature [SANA] are partnering in the development of an environmental education centre adjacent to Saadani National Park. The project is in partnership with Mkange Village and Saadani National Park with support and participation from other communities and organizations in the park area.

Mkange Village will host the centre on land dedicated to this purpose and which is located adjacent to the main road into Saadani Park, a few kilometres from the entry gate. Kesho Trust and SANA believe that without concerted efforts towards understanding the character, quality and fragility of our environment, the devastating compromising of environmental values will continue in the name of progress or profit that is rapidly eliminating natural environments over much of Tanzania. Saadani National Park provides an excellent opportunity for environmental education as it is the country’s only National Park bordering the Indian Ocean. This, combined with its close proximity to Dar es Salaam, make it an ideal location for such a facility.

The purpose of the environmental education centre is to build commitment to and understanding of the environment by Tanzanians through education, research and field experience.

### SAADANI, A SPECIAL PLACE!



The objectives are to:

- provide environmental education and experiential programs and support facilities for school children and local communities that will be delivered on site, in the adjacent national park and through extension programming;
- support a comprehensive communication network for engaging with youth and disseminating environmental messages and research results to a broad public
- provide support facilities for field research;
- host small meetings and conferences; and,
- welcome and inform visitors to Saadani National Park about the environment and programs of conservation both within and outside the park.

Our vision is of a small, efficient and environmentally sensitive centre that encourages the participation of school children from all over Tanzania and of all education levels, college and university field programs, local communities and visiting students and researchers.

The proposed facilities include: a reception / administration centre, interpretive facility, meeting rooms of different sizes, a resource centre / library, on-site accommodation in varying configurations [some small dorm facilities, some individual / couple facilities and some camping facilities], dining area, lounge and kitchen and servicing facilities.

The centre will reflect the environmental image that it represents. The entire operation will be as environmentally sensitive as possible including site maintenance, energy utilization and waste management. All visitors to the centre should recognize the efforts made and should commit to living up to such an environmental conservation ideal during their stay.

Another feature of the plan for the site is to incorporate into the centre a community radio station that can be run by local youth as a significant component of the outreach of the centre. Not only does this require the education and training of youth but it engages them positively in environmental advocacy and decision-making in their communities. Educating the youth of Tanzania to become better stewards of the land is an important mission and one that the Kesho Trust and SANA believe in deeply.

## Part 2: Location

### Site Description

This parcel of land lies only a few kilometres from the centre of the village of Mkange on the south side of the main road between Mandera and Saadani villages before reaching the boundary of Saadani Park and the park entry gate.

Its location provides ready access for school children and other members of the Mkange village. An added advantage is that vehicle access to the site is available by an old road to an abandoned village which veers off the main thoroughfare and into the property. Here a natural land contour provides an ideal site for gated secure access, a staging area, vehicle parking and reception/orientation. From this point visitors will follow a short trail to the centre's facilities.

The land is vegetated with acacia and other native deciduous trees and features three prominent rock outcrops which provide ideal building locations with spectacular views over Saadani National Park with the distant Indian Ocean appearing in the distance. These rock outcrops form the western boundary of the property with gently sloping terrain forming the eastern portion of the property downslope from the tops of the outcrops. The entire ground surface is a sandstone/quartzite mix of well drained soils providing good opportunities for access and site development.

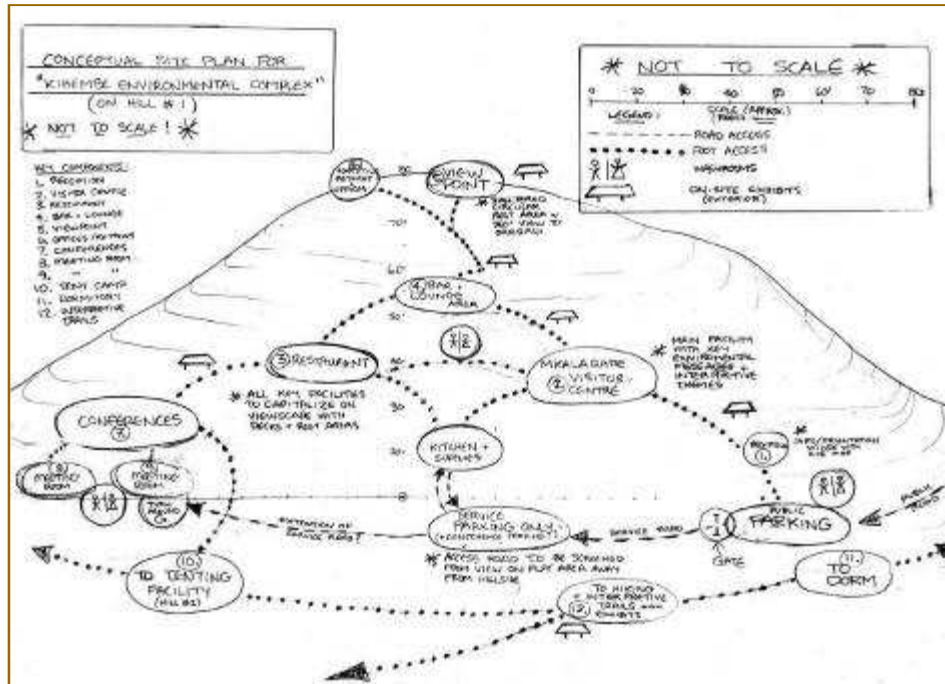
### *Land configuration*

The recommended configuration for the 100 acre parcel was determined by the most feasible site access with minimal disturbance to the landscape while offering the best views from various planned facilities.

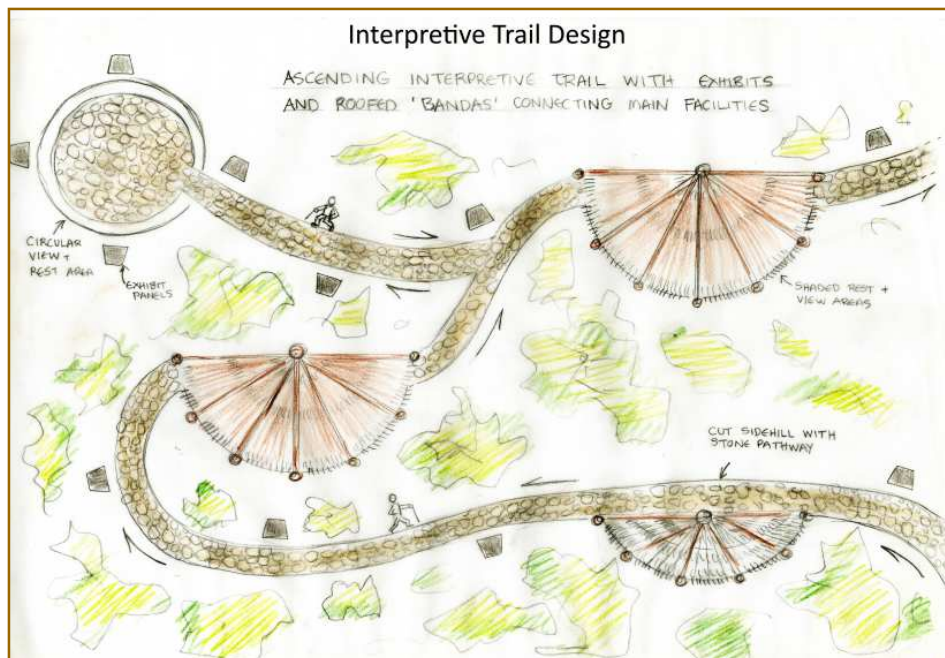
In the absence of a final land survey or reference pins the land perimeters shown on the accompanying photomap are only approximations. However including as much of the small valley between hill #2 and hill #3 would be desirable for interpretive trail development, with an extension as far as possible along the old road allowance, as the land is ideal for property access and site development .



The main visitor interpretation centre facility, the Mkalagare Interpretive Centre will be strategically located mid-slope on the first hill, providing service access and views all within easy walking distance of the parking area. Other support facilities which complement the interpretive centre are also within easy walking distance of each other, yet offer privacy and solitude.



An artist's concept is also shown of the interconnecting trails and bandas [roofed structures with open sides] with rest/shade areas and exterior exhibits that link the various facilities.

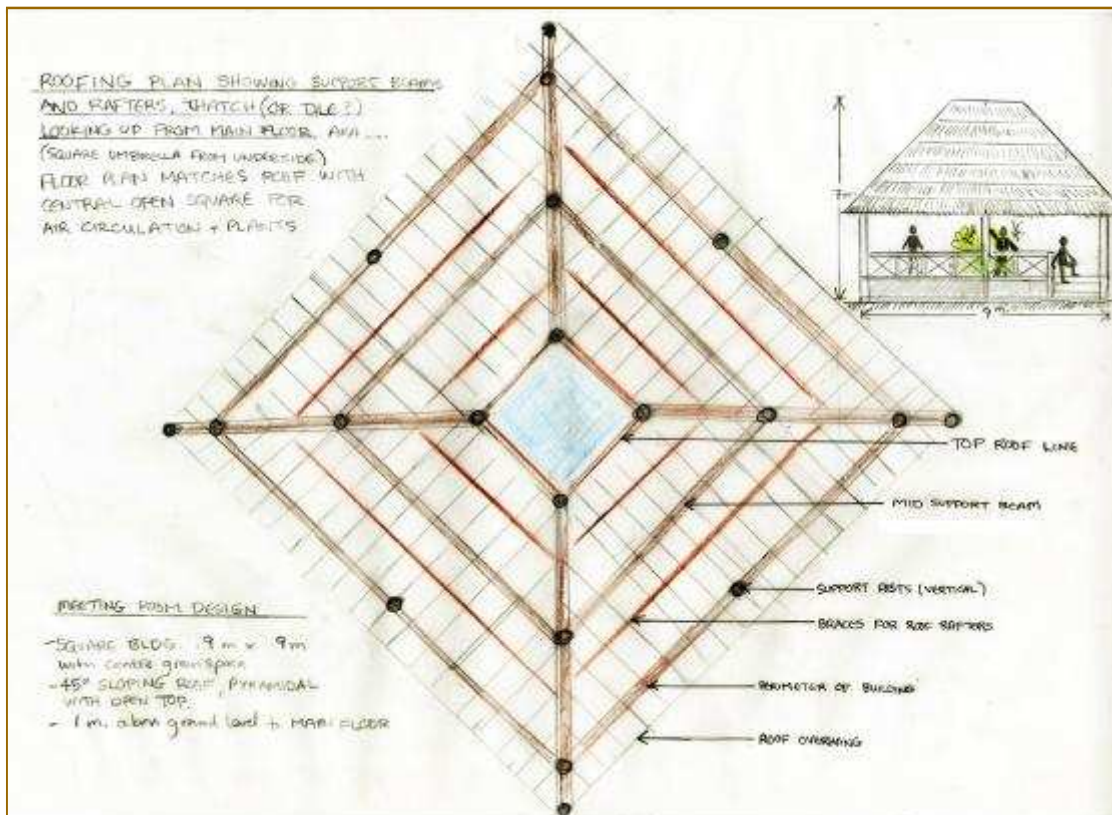




### Part 3: Design Considerations & Facility Appearance Guidelines

All facilities should reflect the strong environmental ethic of the site, using natural materials and local workmanship. Each building will be aesthetically pleasing, with ample open spaces and shade areas. It is recommended all buildings adhere to a set of facility appearance guidelines such as choices of building materials, using wood, stone or clay with traditional bandas connected by winding trails. In essence everything should complement the surrounding environment. Disturbance of vegetation and the land will be kept to an absolute minimum, taking particular care of integrating natural features into the design of the facility such as prominent trees or rock outcrops. All workmanship will be carefully monitored demonstrating how to build with nature versus trying to overpower the environment by cutting and clearing.

Artist's Concept of a facility using natural materials and designed in such a way as to complement the environment .





## Part 4: Educational Themes and Facilities

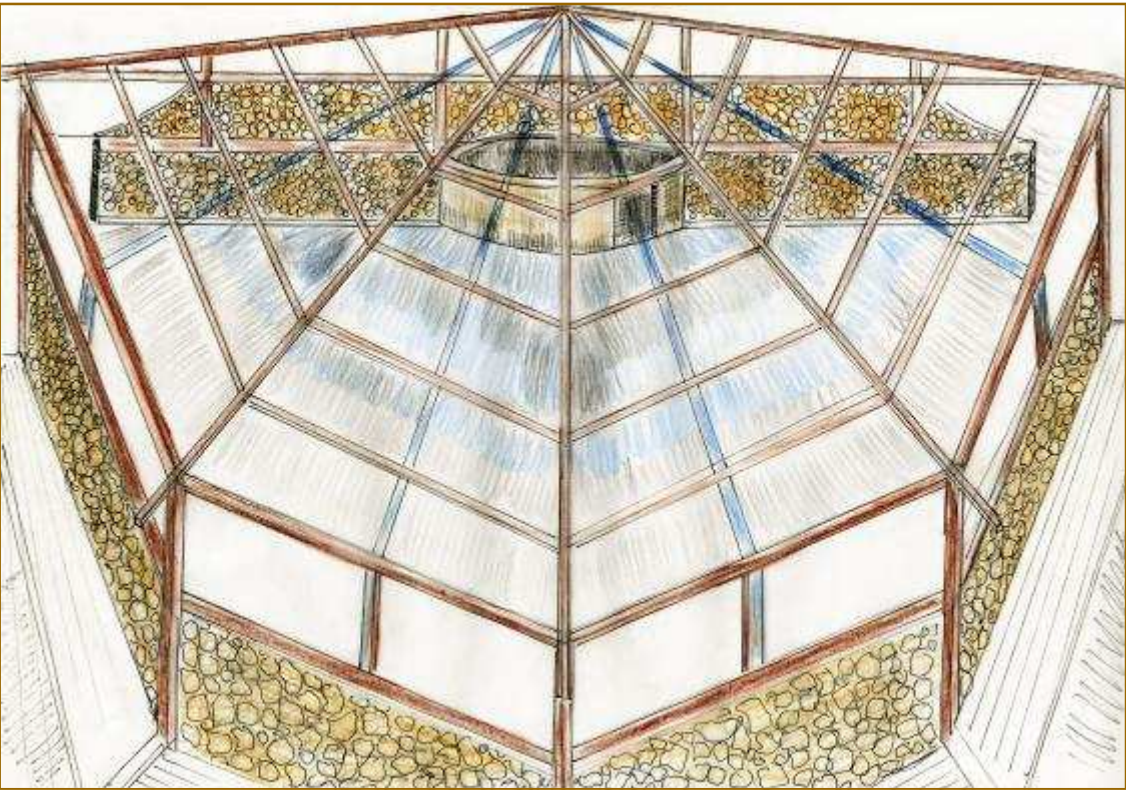
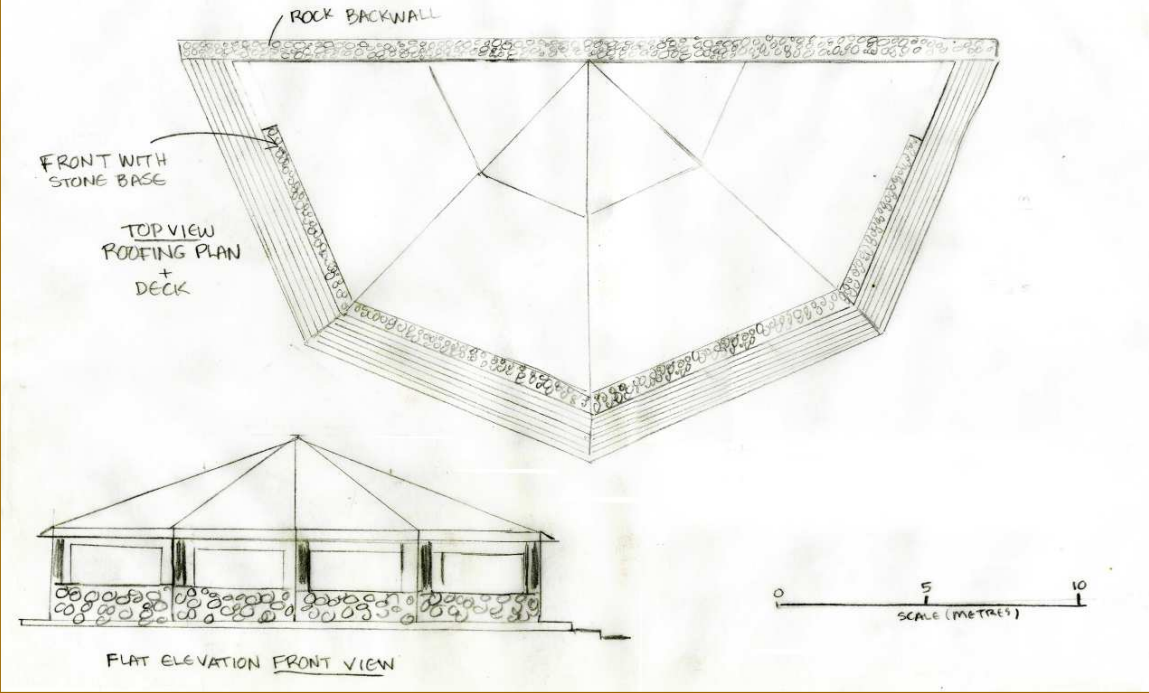
The central facility, the Mkalagare Interpretive Centre, will provide information/orientation and interpretation with exhibits and displays portraying the natural and human history of Saadani National Park and the surrounding area. It will serve as a focal point for all public programming both student focused field programs and general visitors to the area and the National Park.

The four main interpretive themes are:

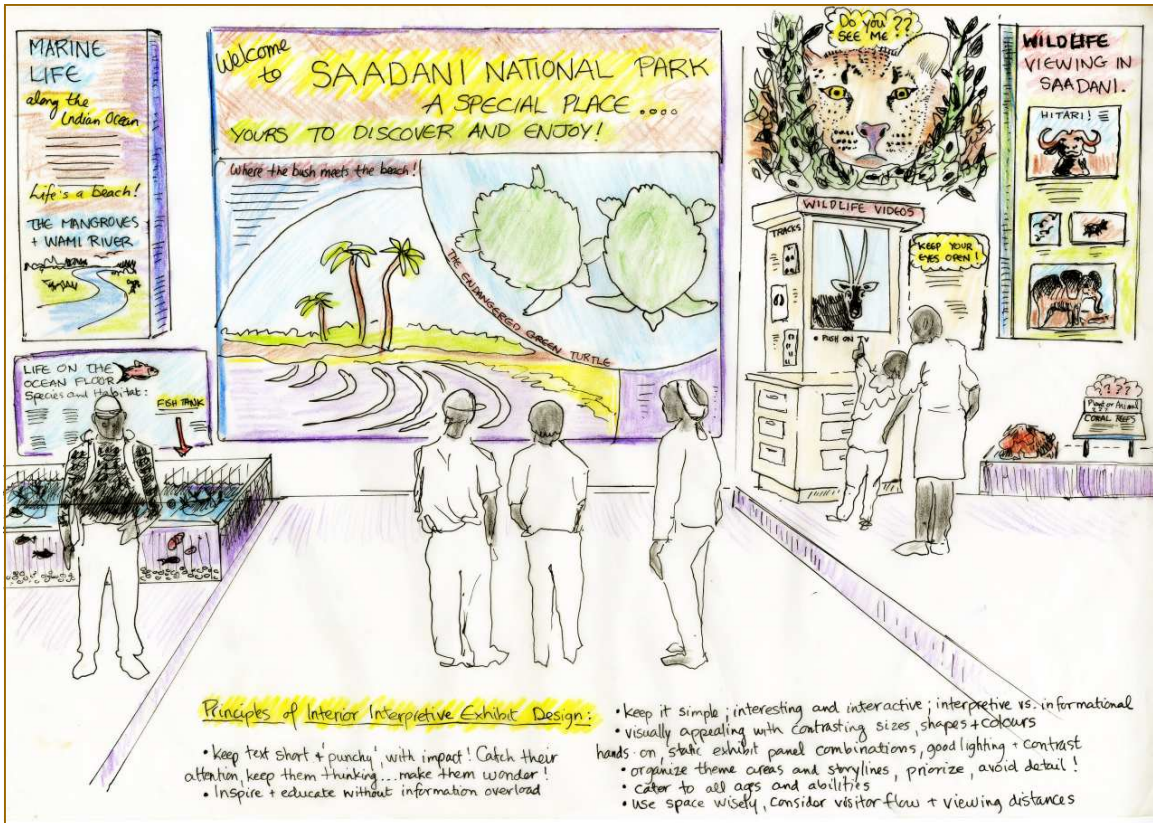
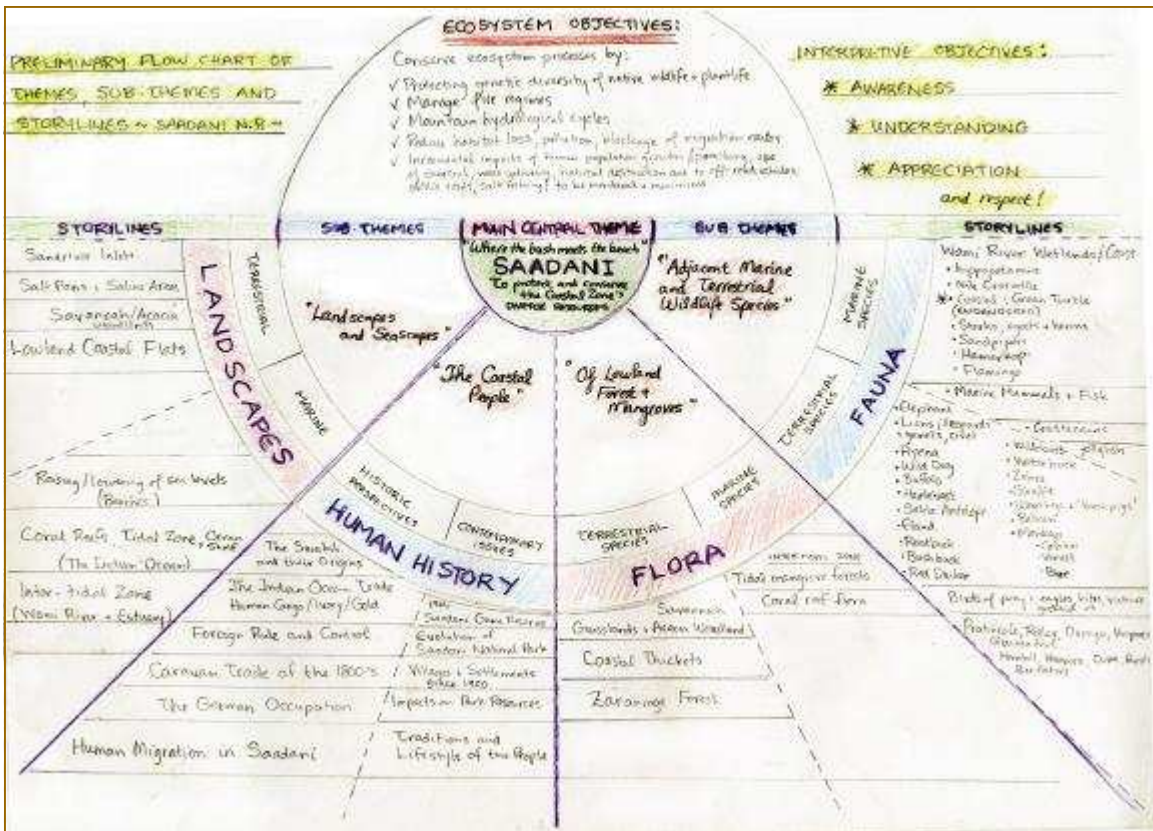
- *Landscapes and Seascapes*: an interpretive overview of the coastal forest and beach environments
- *The Coastal People*: a history of the Swahili people with historic and contemporary perspectives
- *Of Lowland Forest and Mangroves*: descriptions of the savannah, acacia woodlands, mangroves and other diverse habitats
- *Marine and Terrestrial Ecosystems*: interpretation of the biodiversity within the Wami River estuary and coastal environments

It is anticipated that such a facility will require approximately 82 m<sup>2</sup> of floor space. There will be a separately reception area where registration and camp information will be located [approx. 22 m<sup>2</sup>]. The following illustrations provide more details of the concept for the building itself and the storylines contained within the four themes. Such ideas are preliminary but illustrate the key concepts that will underlie the educational programming of the centre.

# Mkalagare Visitor Centre Concept







Artist's Concept of Interior Exhibits





As well as the exhibit area other spaces for programming activity will be required, especially for the use of school groups,. These spaces will be open areas much like the other facilities but will have some secure storage areas within them for supplies and equipment. Two such buildings are proposed with a floor space of approximately 70 m<sup>2</sup> each.

### Meeting Rooms / Conference Area

These meeting rooms are proposed as open air roofed shelters, or bandas rather than enclosed spaces. As with other work space facilities they would be separated from the main activity area discreetly tucked in the forest, connected by an attractive winding stone pathway. Meeting spaces of different sizes are proposed - one large room [approximately 112 m<sup>2</sup>] and two smaller areas of approximately 38 m<sup>2</sup> each.

### Resource Centre & Library

The main resource centre and library would be located in proximity to the conference and meeting room area. A fully or partially enclosed building for security purposes will be required. This space will include a resource area, some individual workstations and a common area totally approximately 43 m<sup>2</sup>.

### Community Radio

A simple radio broadcasting facility will be developed in an area slightly removed from the main facilities. It will be composed of a small office and a small soundproof studio [approximately 14 m<sup>2</sup> each] . Because of the nature of this facility and the equipment it will contain, the building will be required to be enclosed and secure. Separate broadcasting equipment will be located on a nearby tower and signals for broadcast will be sent remotely from the studio. Because an AirTel tower is located in Mkange and AirTel supports community radio, it is anticipated that the broadcast equipment will be positioned on the AirTel tower.

## Part 5: Accommodation and Service Facilities

### Accommodations

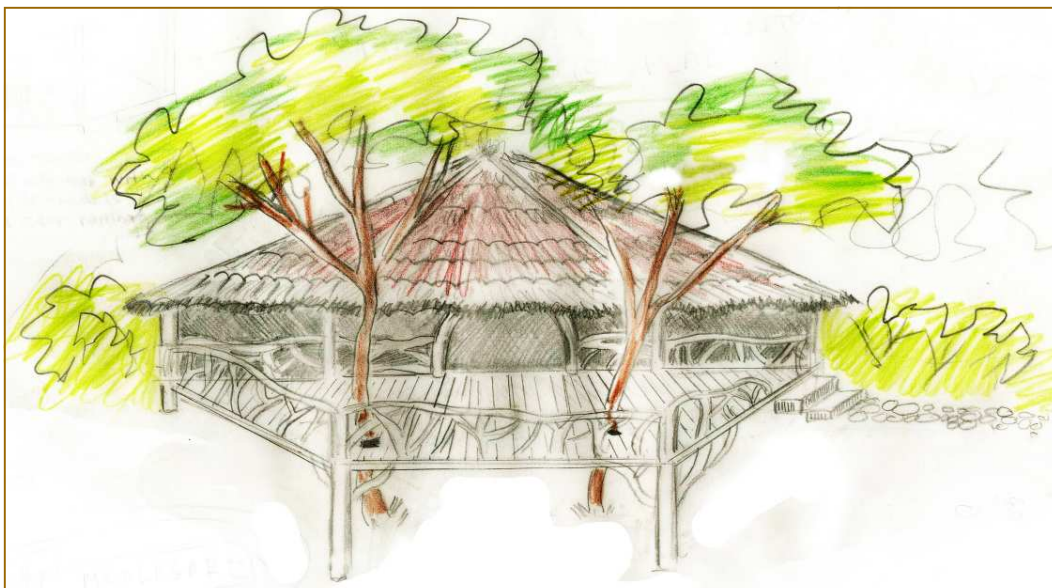
Three different types of accommodation are envisioned on the site. The primary target group for the centre is school children who will be travelling in larger groups. Dorm style accommodation with bunk beds will be developed for a capacity of 40 students in units with four beds per room with each unit being approximately 12 m<sup>2</sup> each resulting in a total dorm space of 120 m<sup>2</sup>. In addition five units of individual cabin style accommodations will be developed accommodating two people per room [approximate size 15 m<sup>2</sup> each]. The third form of accommodation will be tented accommodation on platforms. There is ample space to accommodate extra facilities thus expansion can respond to operational requirements.

### Ablution Facilities

Ablution blocks will be developed for the dorm, tenting and staff areas. En suite facilities will be constructed within the individual units. Due to numbers of users for the different ablution blocks, the size will vary from approximately 15 m<sup>2</sup> in the tenting and staff areas to approximately 20 m<sup>2</sup> in the dorm area. Two units will be provided in each of the tenting and dorm areas and one in the staff area.

### Dining area & Lounge

The dining area [approx. 75 m<sup>2</sup>] and lounge [approx. 50 m<sup>2</sup>] should be located close to the visitor centre where both visitors and academic staff can mingle in a social setting. The recommended location is on Hill #1, which offers the best views for dining and relaxing.



## Kitchen & Storage

Functional requirements of the kitchen require adequate work and storage space to serve a camp capacity of 60 visitors plus staff at the site at any one time [approximately 35 m<sup>2</sup>]. Secondary road access to the kitchen site will be required to allow the easy transport of goods and supplies. The storage area here is focused on immediate food and kitchen supply requirements as it is located in a priority area of the site for visitors and service facilities will be kept to a minimum.

## Office Space and Staff Quarters

Administration of the centre will require some staff to be resident at the facility although the vast majority of the staff will come to the site daily from Mkange. Those staff directly involved in programming and/or working for SANA or the Kesho Trust will have some basic accommodation [2 units comparable to individual units at approximately 15 m<sup>2</sup> each] and office space [approximately 30 m<sup>2</sup>] developed on site. The area dedicated for such use will be slightly removed from the central visitor area but easy access to these facilities is required as there will be regular interaction between these spaces on the site.

## Other Centre Services

Servicing the centre will require maintenance and storage facilities as well as systems supporting solar power and water storage. The area requirement and cost details of such systems are not yet available.



## Part 6: Summary of Space Requirements

To assist in cost estimating and to provide an overview of proposed site facilities, the following information has been drawn from the facility descriptions in the preceding pages of this report. The space requirements are general estimates only.

### Educational Facilities

Mkalagare Interpretive Centre	1	82 m <sup>2</sup>
reception area	1	22 m <sup>2</sup>
spaces for programming activity	2	70 m <sup>2</sup>
conference meeting rooms - large	1	112 m <sup>2</sup>
conference meeting rooms - small	2	38 m <sup>2</sup>
resource centre and library	1	43 m <sup>2</sup>
community radio—office and studio	1	28 m <sup>2</sup>

### Accommodation and Services

dorm unit	10	12 m <sup>2</sup>
individual cabin units	5	15 m <sup>2</sup>
tent platforms	8	
ablution blocks - dorm area	2	20 m <sup>2</sup>
ablution blocks - tenting area	1	20 m <sup>2</sup>
dining area / restaurant	1	75 m <sup>2</sup>
lounge area	1	50 m <sup>2</sup>
kitchen and storage	1	35 m <sup>2</sup>

### Staff Accommodation and Office

office space	1	30 m <sup>2</sup>
individual cabin units	2	15 m <sup>2</sup>
ablution blocks - staff area	1	20 m <sup>2</sup>

Solar power system

Water storage

## **Part 7: Capital Cost Estimates**

Capital cost estimates are being prepared on the basis of the conceptual designs described and included in this report. When they are available such information will be added to make this conceptual design document complete.