

PROPOSED FEMINIST REPUBLIK HEALING FARM

WINNING COMPETITION ENTRY



PROJECT TITLE
Proposed Feminist Republik Healing Farm

PROJECT LOCATION
Muselele, Kitui County, Kenya

CLIENT
Urgent Action Fund- Africa (UAF-A)

ARCHITECT
Precise Architects Ltd

PROJECT INTRODUCTION
UAF- Africa set out to establish a Healing Farm to serve as a rejuvenation centre for African Women Human Rights Defenders across the African continent. The centre would be a women-run space used by AWHRDs to connect with nature and with other AWHRDs from the continent.

Through a design competition, Precise Architects set out to design the healing farm while being **innovative** in areas such as site response, building technology, material choice, universal design, sustainable design, representation of contemporary African Architecture and the creation of spaces that promote connection with nature.

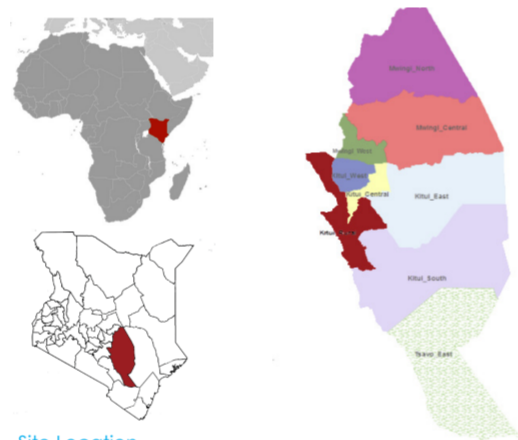
The project features an extensive brief of spaces which include an auditorium, museum, library, restaurant, recreational facilities, sports grounds, accommodation, camping grounds, meditation gardens, riverfront boardwalk, farmland and sculptural gardens and monument among others.

This entry won first place in the design competition.

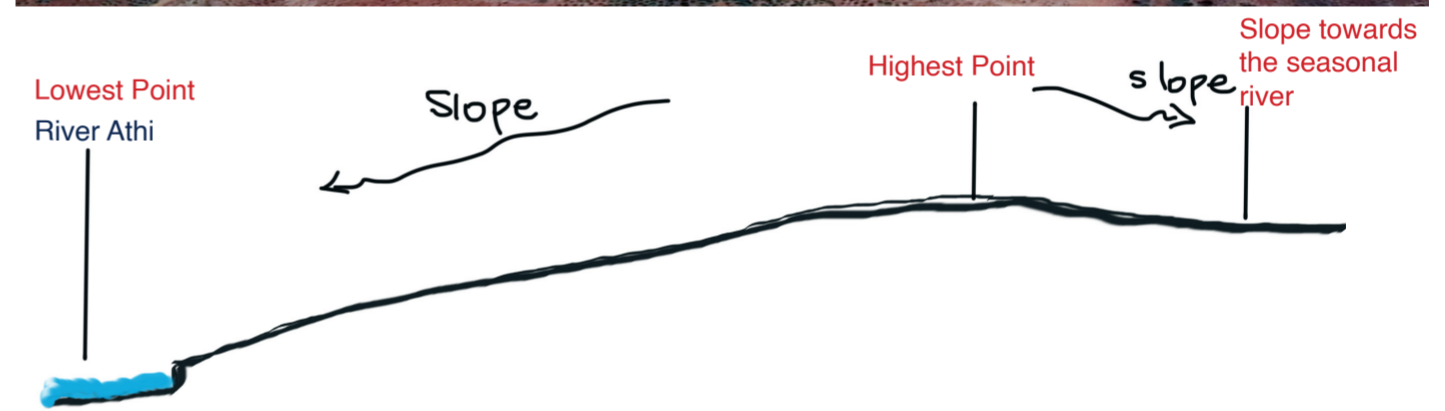
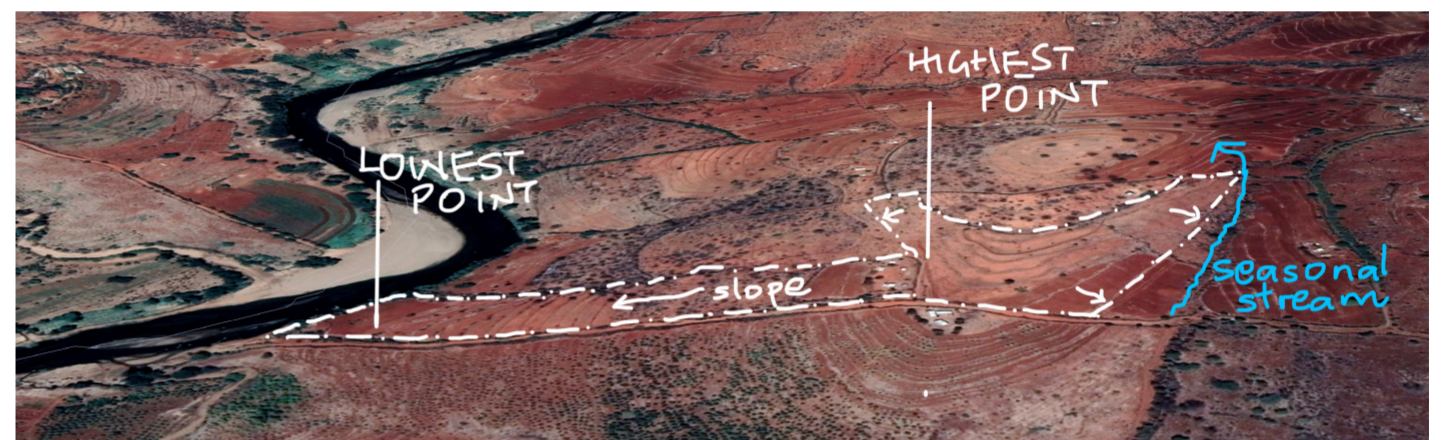
01 THE SITE

SITE LOCATION

The site is located in Kyaina village, Yatta/Kwa Vonza Ward, Kitui Rural Constituency, Lower Yatta Sub-county in Kitui County. It is about 3.5 km away from Muselele shopping centre and 25 km from Katangi shopping centre. The site is located along the Athi River and borders the river to the South. It is surrounded by extensive farmland on all other sides.

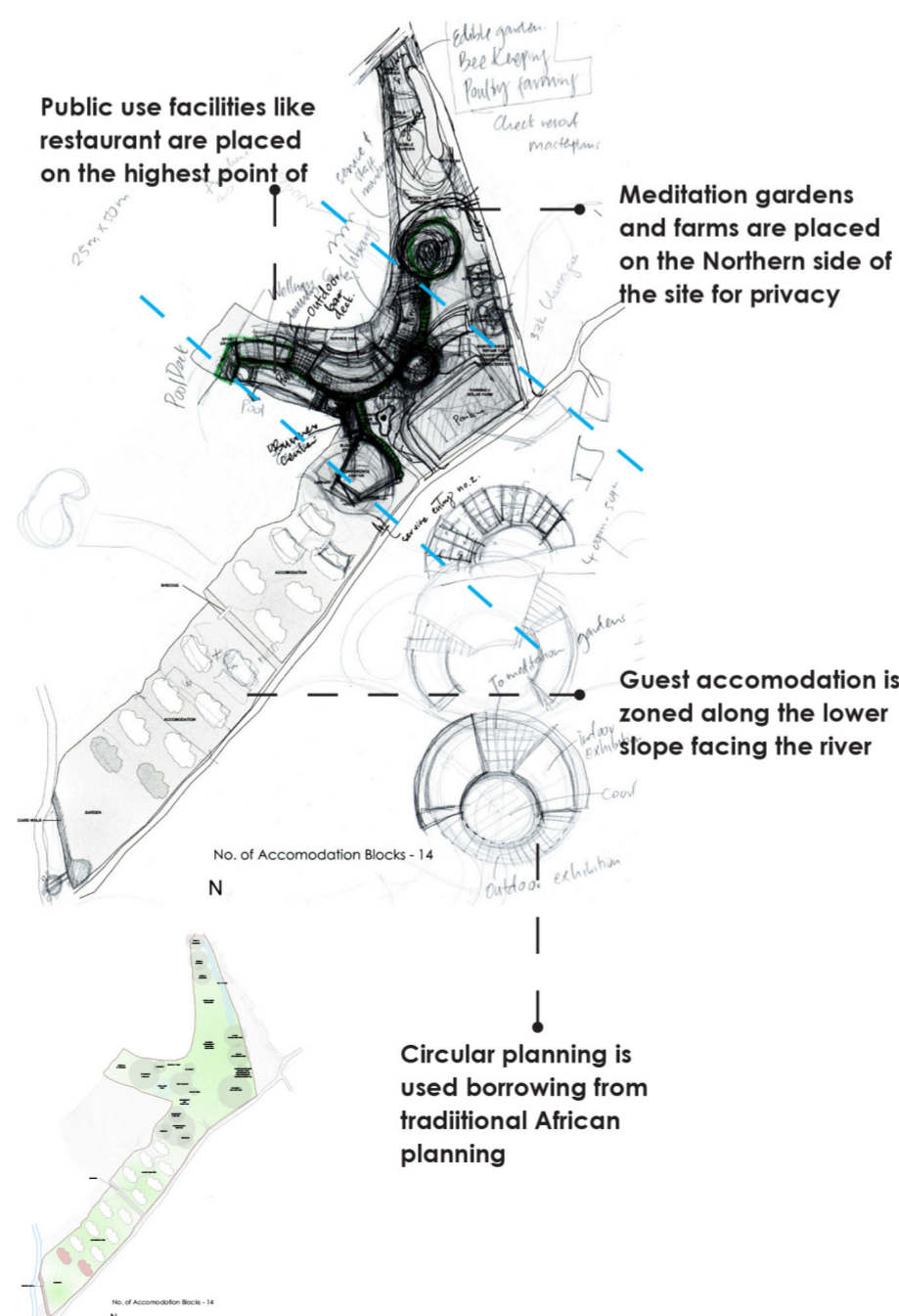


Site Location

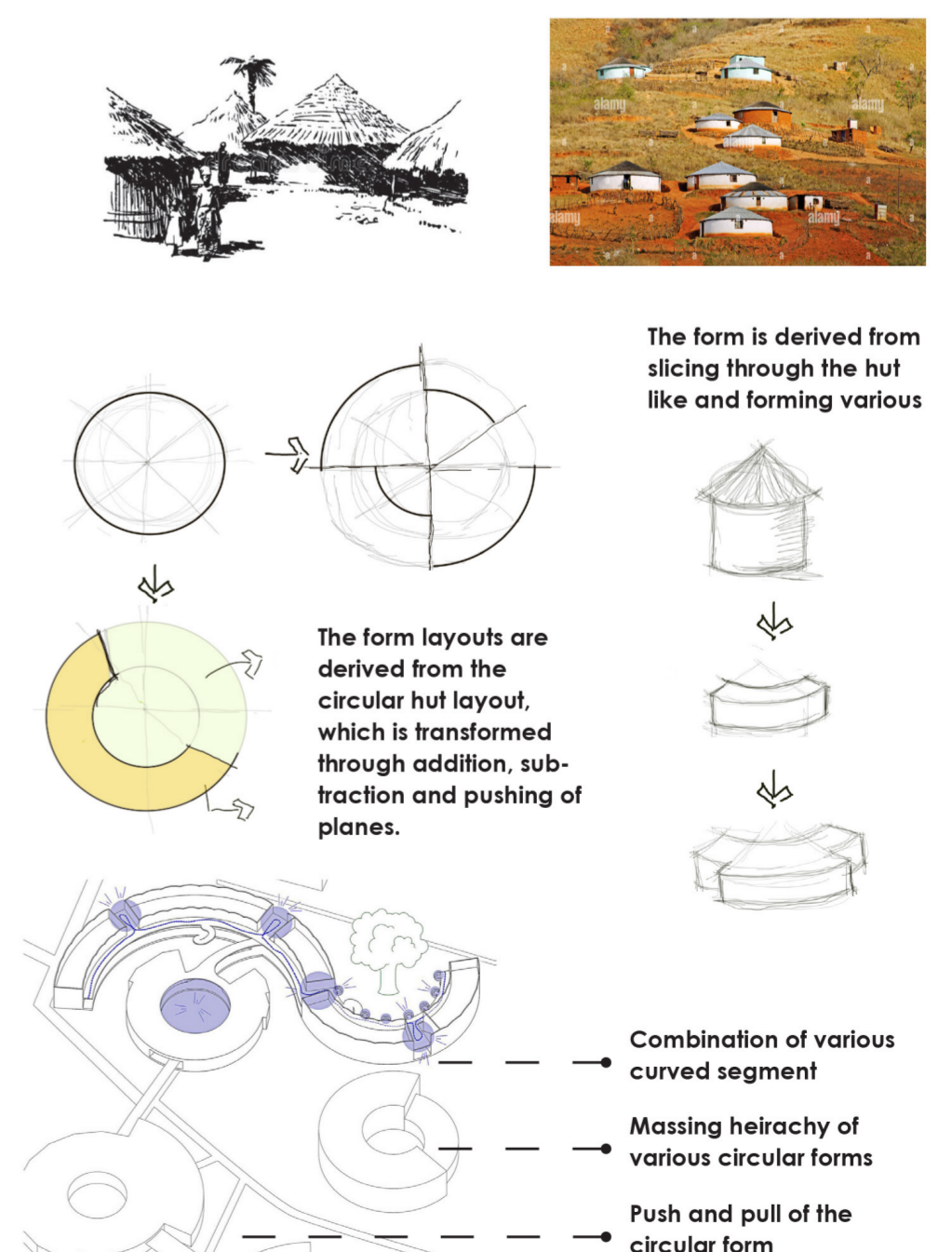


02 CONCEPT DEVELOPMENT

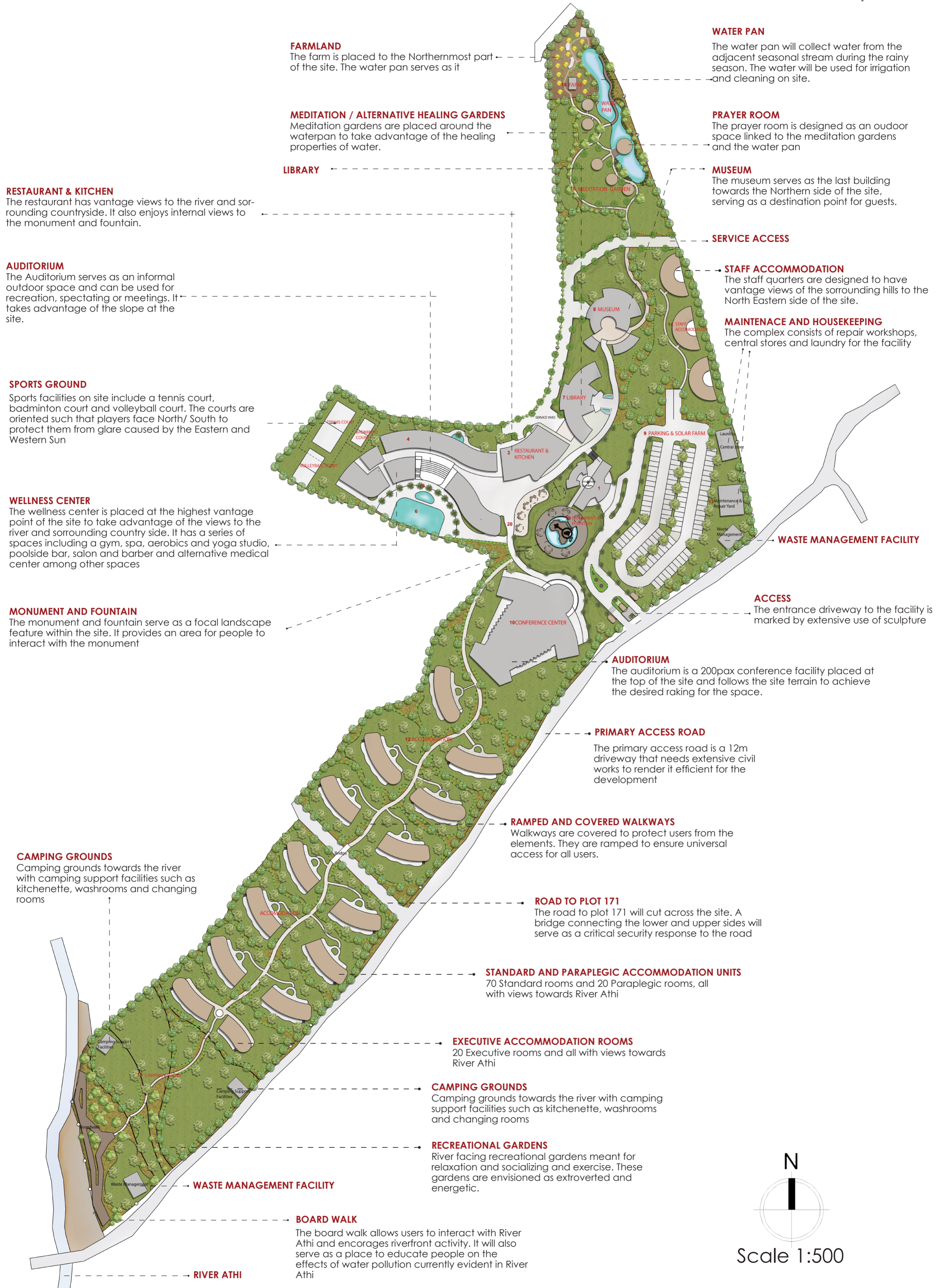
Planning Concept



Form Concept



Master Plan



FARMLAND
The farm is placed to the Northernmost part of the site. The water pan serves as it

WATER PAN
The water pan will collect water from the adjacent seasonal stream during the rainy season. The water will be used for irrigation and cleaning on site.

MEDITATION / ALTERNATIVE HEALING GARDENS
Meditation gardens are placed around the waterpan to take advantage of the healing properties of water.

PRAYER ROOM
The prayer room is designed as an outdoor space linked to the meditation gardens and the water pan

RESTAURANT & KITCHEN
The restaurant has vantage views to the river and surrounding countryside. It also enjoys internal views to the monument and fountain.

MUSEUM
The museum serves as the last building towards the Northern side of the site, serving as a destination point for guests.

AUDITORIUM
The Auditorium serves as an informal outdoor space and can be used for recreation, spectating or meetings. It takes advantage of the slope at the site.

SERVICE ACCESS
STAFF ACCOMMODATION
The staff quarters are designed to have vantage views of the surrounding hills to the North Eastern side of the site.

SPORTS GROUND
Sports facilities on site include a tennis court, badminton court and volleyball court. The courts are oriented such that players face North/ South to protect them from glare caused by the Eastern and Western Sun

MAINTENANCE AND HOUSEKEEPING
The complex consists of repair workshops, central stores and laundry for the facility

WELLNESS CENTER
The wellness center is placed at the highest vantage point of the site to take advantage of the views to the river and surrounding country side. It has a series of spaces including a gym, spa, aerobics and yoga studio, poolside bar, salon and barber and alternative medical center among other spaces

WASTE MANAGEMENT FACILITY

MONUMENT AND FOUNTAIN
The monument and fountain serve as a focal landscape feature within the site. It provides an area for people to interact with the monument

ACCESS
The entrance driveway to the facility is marked by extensive use of sculpture

AUDITORIUM
The auditorium is a 200pax conference facility placed at the top of the site and follows the site terrain to achieve the desired raking for the space.

PRIMARY ACCESS ROAD
The primary access road is a 12m driveway that needs extensive civil works to render it efficient for the development

RAMPED AND COVERED WALKWAYS
Walkways are covered to protect users from the elements. They are ramped to ensure universal access for all users.

ROAD TO PLOT 171
The road to plot 171 will cut across the site. A bridge connecting the lower and upper sides will serve as a critical security response to the road

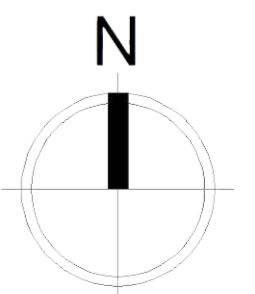
STANDARD AND PARAPLEGIC ACCOMMODATION UNITS
70 Standard rooms and 20 Paraplegic rooms, all with views towards River Athi

EXECUTIVE ACCOMMODATION ROOMS
20 Executive rooms and all with views towards River Athi

CAMPING GROUNDS
Camping grounds towards the river with camping support facilities such as kitchenette, washrooms and changing rooms

RECREATIONAL GARDENS
River facing recreational gardens meant for relaxation and socializing and exercise. These gardens are envisioned as extroverted and energetic.

WASTE MANAGEMENT FACILITY
BOARD WALK
The board walk allows users to interact with River Athi and encourages riverfront activity. It will also serve as a place to educate people on the effects of water pollution currently evident in River Athi



Scale 1:500

03 DESIGN STRATEGIES

RESPONSE TO SITE CONDITIONS

The site's distinctive characteristics require an intentional response to design with the site and not against it. Significant conditions include the site's terrain, surrounding physical features and the presence of waterways.

1. Building Along the Countours

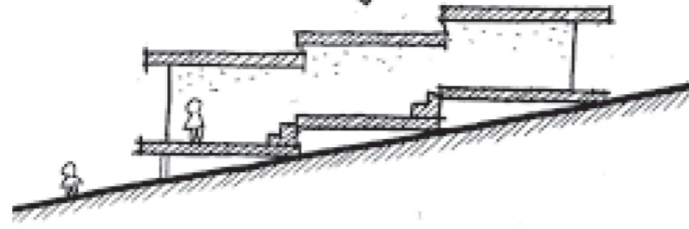
Buildings take advantage of the site's terrain during siting. The buildings and roads on the site follow the contours to prevent extensive cut and fill.

The auditorium uses the site's terrain to achieve the necessary raking for a conference facility.

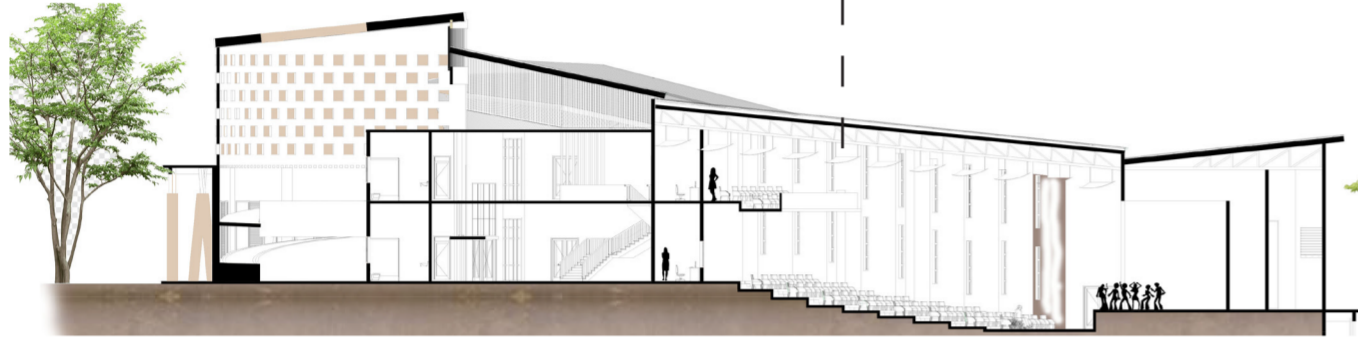


2. Terraced Design

The design terraces the building along the site of the slope to ensure minimal manipulation of the existing terrain. Terraced design also ensures that all buildings along the slope enjoy views without obstructions by adjacent buildings.



View of the auditorium which takes advantage of the site terrain. Raking follows the contours down the slope.



3. Response to the Surrounding Views

Buildings are oriented to enjoy maximum views to the river and surrounding countryside on all sides. This is a response to the site's context. While guests enjoy views to Athi River, staff quarters are oriented to enjoy views of the surrounding hillscape.

4. Planning and the Privacy Gradient

The site's slope informs the planning concept as it relates to privacy gradient. Public spaces such as the auditorium, reception, restaurant, wellness centre and library are located on the highest points of the site. Private spaces for guests (accommodation) are sited along the slope facing Athi River while staff and maintenance spaces are placed on the slope facing the temporary stream. This technique uses the site's terrain to demarcate zones and establish a clear privacy gradient.

5. Response to the Seasonal Stream

The seasonal stream to the North of the site determines the placement of the water pan. The pan is designed to tap water from the stream during the rainy season. The water can then be used on the site for irrigation, cleaning and recreation throughout the year.

6. Response to the Natural Storm Drain

The natural storm drain along the western edge of the site will serve the site.

7. Response to Athi River

Athi river borders the site to the South. The river front serves as a great destination for the users of the healing farm. The design makes the river a focal point by orienting buildings towards it. Furthermore, the landscape concept creates a boardwalk that allows visitors to experience the river.

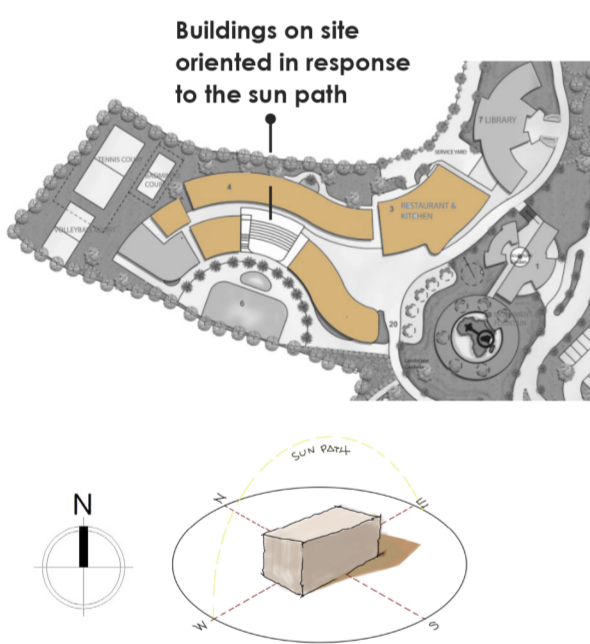
A challenge noted along the river is plastic pollution deposited along the river banks. The project can play a crucial role in safeguarding the river by educating its visitors on the effects of pollution on the River Athi.

ENVIRONMENTAL DESIGN STRATEGIES

The design adopts various strategies to respond to the site's hot and dry climate. These environmental design strategies seek to ensure thermal comfort in the development while using passive design strategies. The measures adopted are:

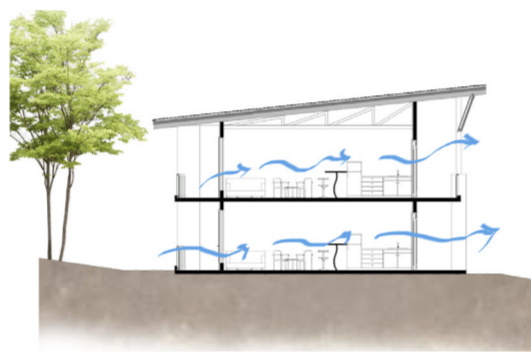
1. Building Orientation

Several buildings on site are oriented with their long facades facing North and South. This minimizes excessive heat gain into by reducing exposure of the building mass to the hot Eastern and Western sun. The illustration below shows a section of the masterplan with the proposed orientation.



2. Single Bunking

The design uses single bunked spaces and avoids double bunked design. The layouts also adopt long narrow buildings to promote cross ventilation and achieve effective cooling within the buildings.



5. Location of Fenestrations

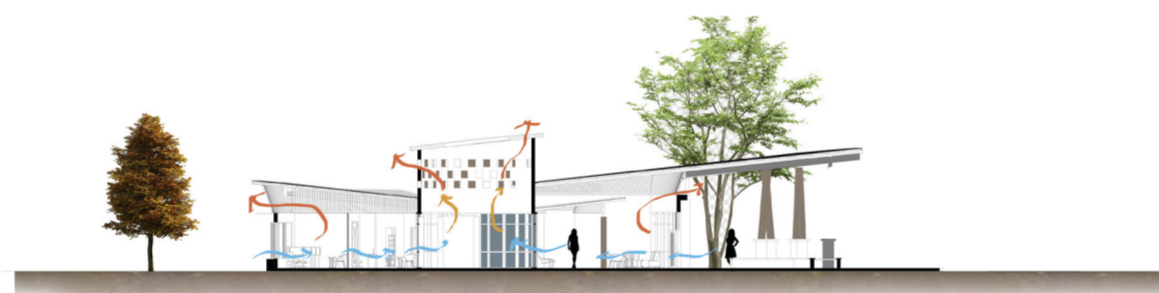
Fenestrations are located extensively along the Northern and Southern facades to minimize heat gain from the Eastern and Western sun. Fenestrations are also sunshaded through the use of balconies and louvres as needed.



Balconies shade fenestrations from the sun

4. Stack Ventilation

The buildings have high ceiling heights with both low level and high level openings. The combination of increasing spatial volume and the presence of high level fenestrations ensures effective stack ventilation which cools the spaces effectively.



6. Use of Thermal Mass

The building uses thick external walls, at least 200mm wide. The walls' thickness create effective time lag, ensuring spaces remain thermally comfortable during the hot afternoons and cold nights.



VIEW OF THE MUSEUM AND COVERED WALKWAY



THE RESTAURANT AND WELLNESS CENTER

MATERIALS SELECTION

The project uses sustainable materials and follows the following principles in material selection.

1. Locally Available Materials

Materials proposed in the design are locally sourced with a low embodied energy. The primary proposed construction material is brick which is locally made within the context of the site. It is the traditionally building material found within the site and its neighbourhood.

The design also adopts the use of locally sourced stones found from the extensive rock deposits in the region. These stones will be used for paving walkways, cladding buildings and building landscape works within the project.



Mud brick structure on site



Soil in the site context can produce mud bricks



A selection of local stones found near the site

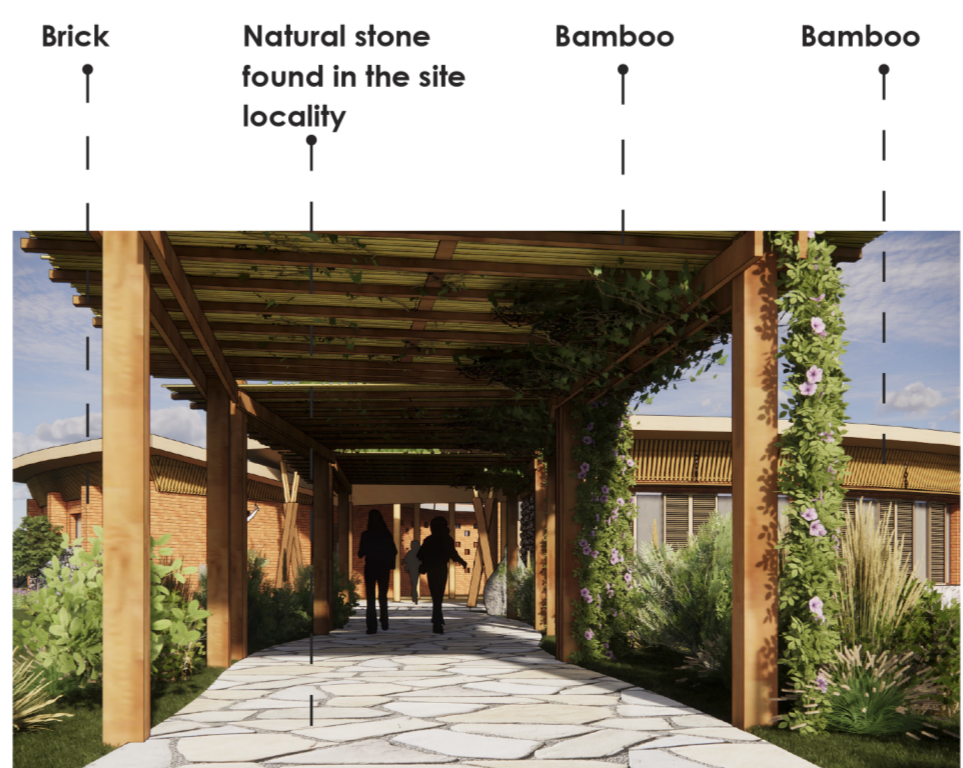


2. Renewable Materials

The design adopts the use of renewable materials. Specifically, railings and covered walkways are built with bamboo, a fast growing timber. These materials are also non-toxic and good for the environment.

3. Healing Materials

The use of natural materials like brick, local stones and bamboo is intended to promote the overall healing effect of the project. These materials are known to have calming effects and create comfortable spaces that rejuvenate and uplift users.



View of Local Materials used on site

SUSTAINABLE DESIGN STRATEGIES

The design considers the following sustainable practices to make the healing farm efficient in its use of energy, water and waste management.

1. Use of Solar Energy



The design proposes a solar farm above the parking structures. Solar energy will reduce the farm's reliance on power from the main grid, saving costs in the long run. It will also reduce the farm's carbon footprint.

2. Water Management

The site lacks adequate water supply from the main grid. The farm will need to have adequate water. The project proposes a borehole for water. Additionally, a water pan will tap water during the rainy season for use on the farm and for irrigation. The project will also promote the use of water saving fixtures in toilets, taps and bathrooms to prevent water wastage by users.

3. Waste Management

The design proposes two inhouse waste management biodigesters within the site. This will serve the farm which has no access to sewer service. The design also encourages the recycling of grey water within the site for use in landscaping and cleaning of outdoor spaces.

4. Rainwater Harvesting

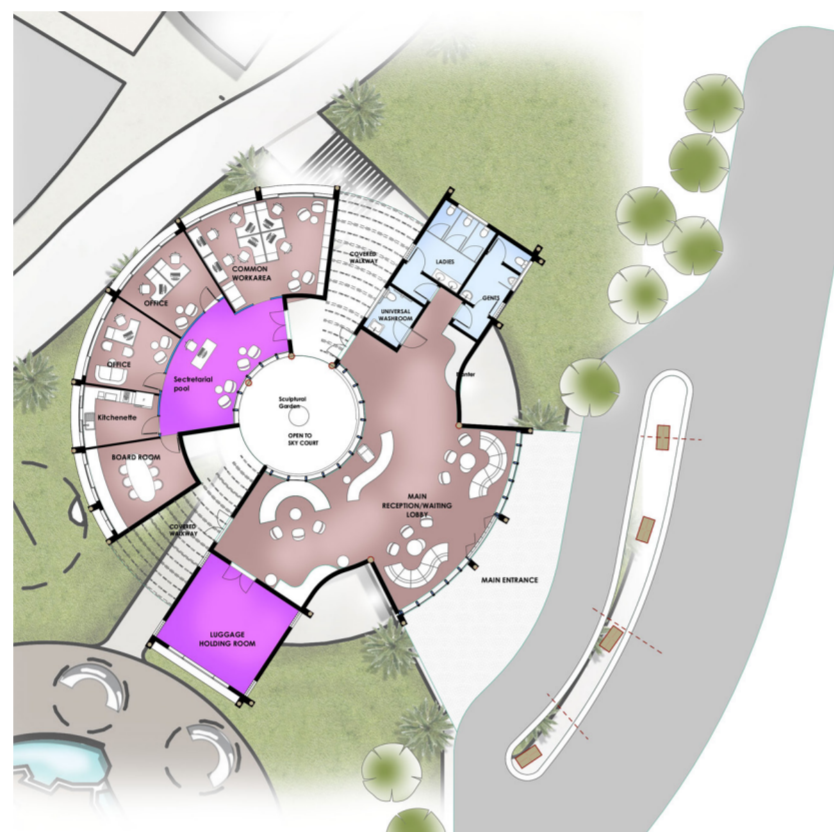
The design will incorporate extensive rain water harvesting from the building within the site. Water harvested from rains will be directed to the water pan. Rain water harvesting will reduce the cost of supplying water to the site while conserving natural resources.



THE RECEPTION & ADMINISTRATION

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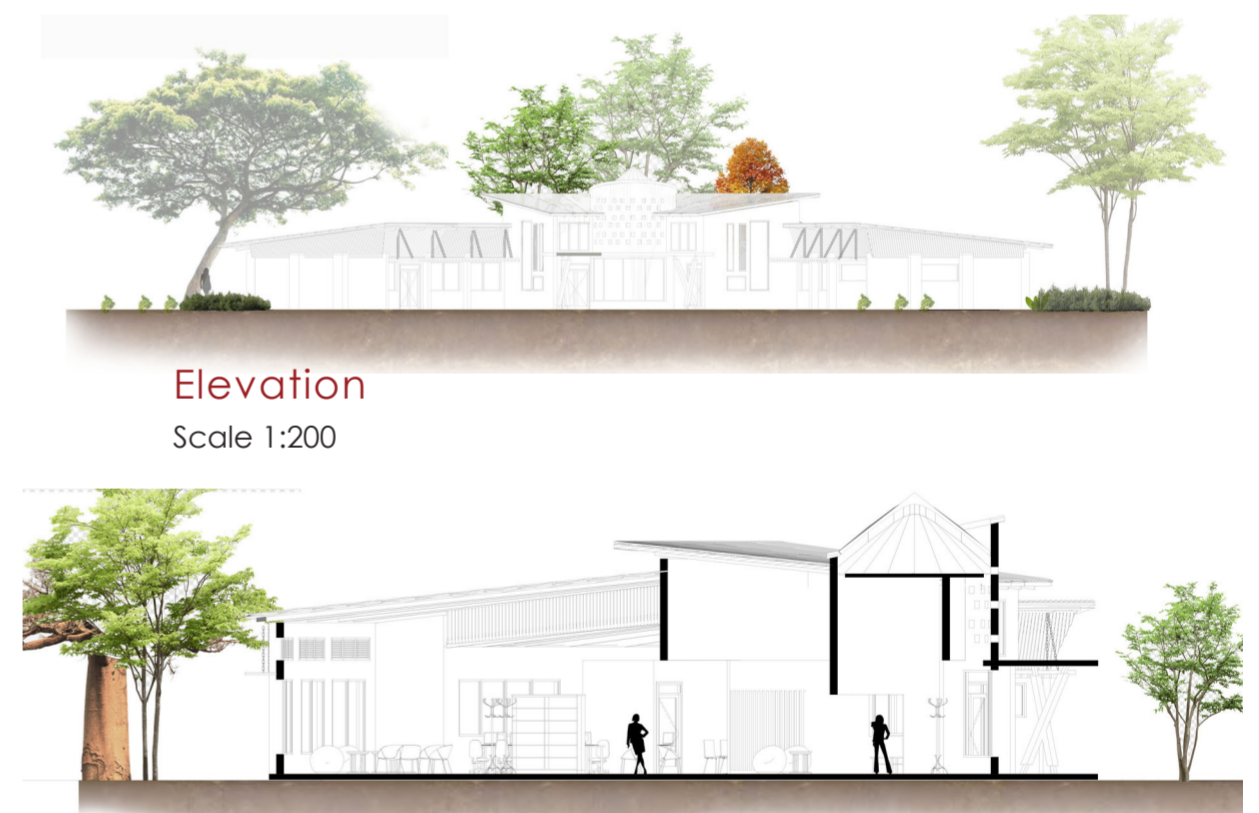
 Layout Plan
 Scale 1:200



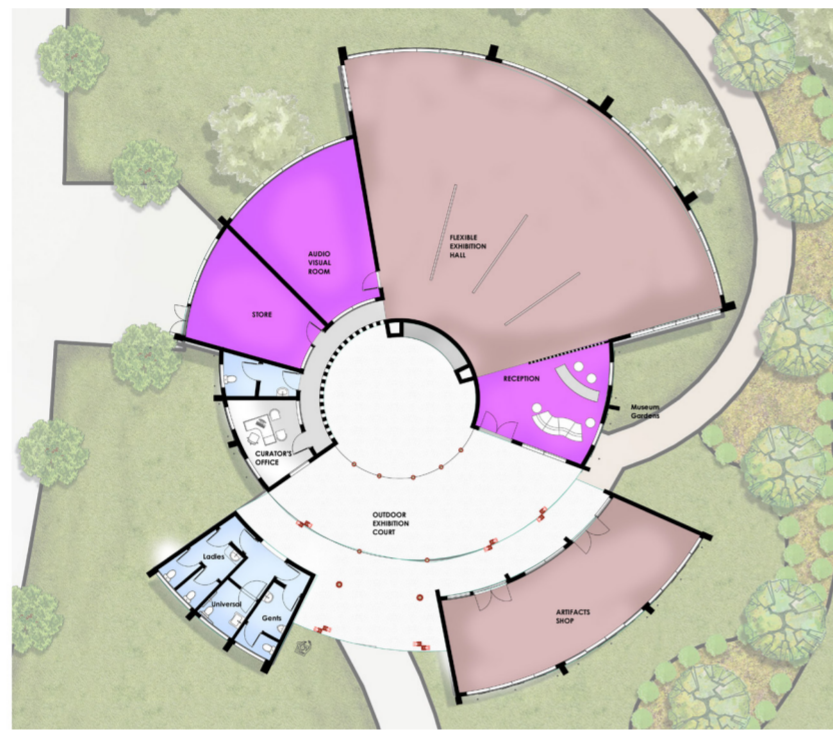
THE LIBRARY

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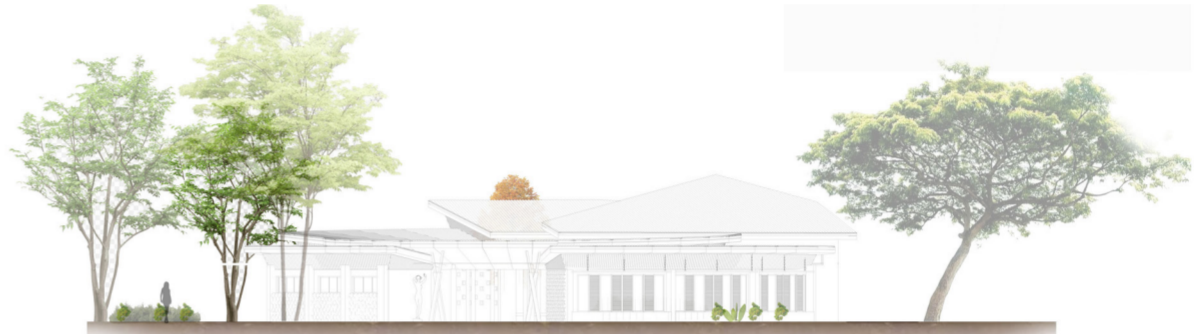
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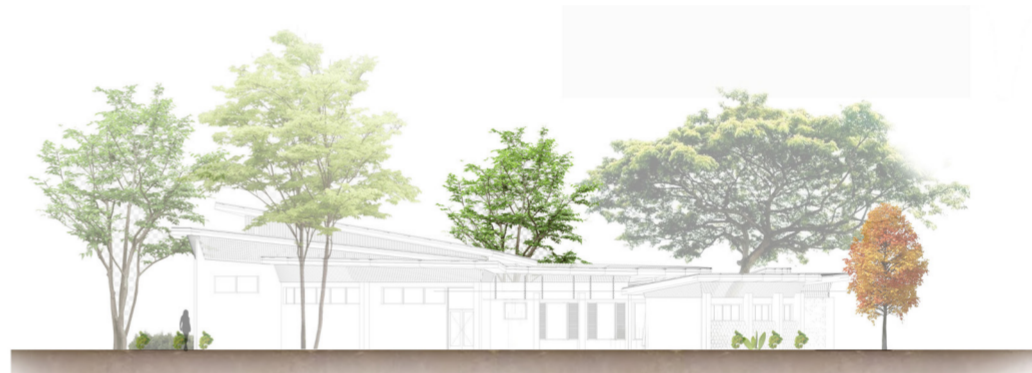
THE MUSEUM



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 Layout Plan
 Scale 1:200

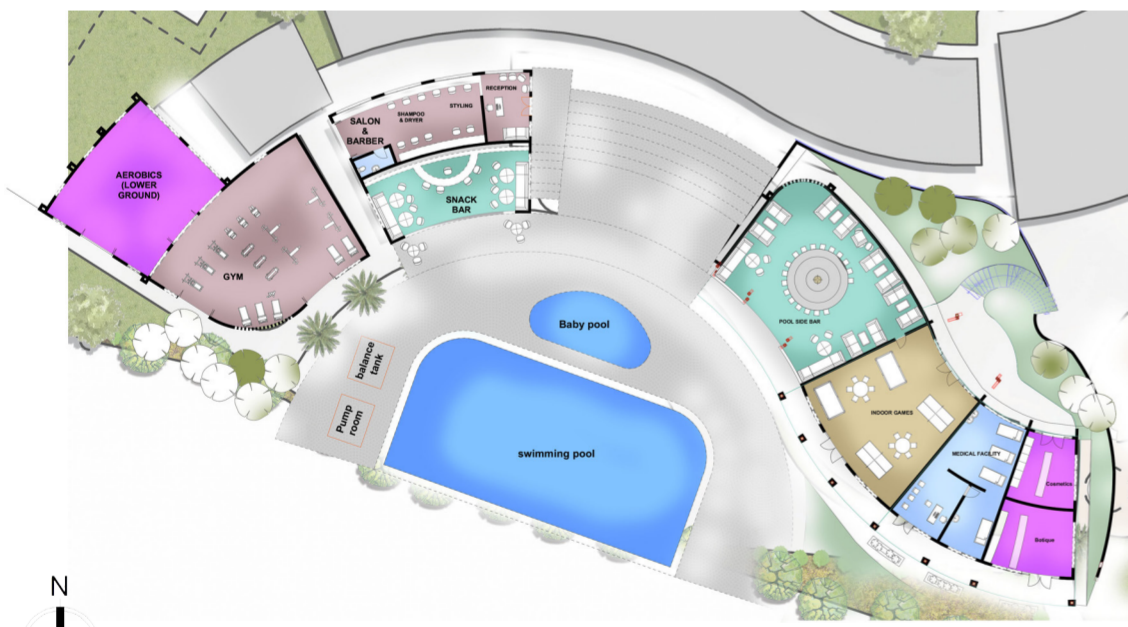


Elevation 01
 Scale 1:200

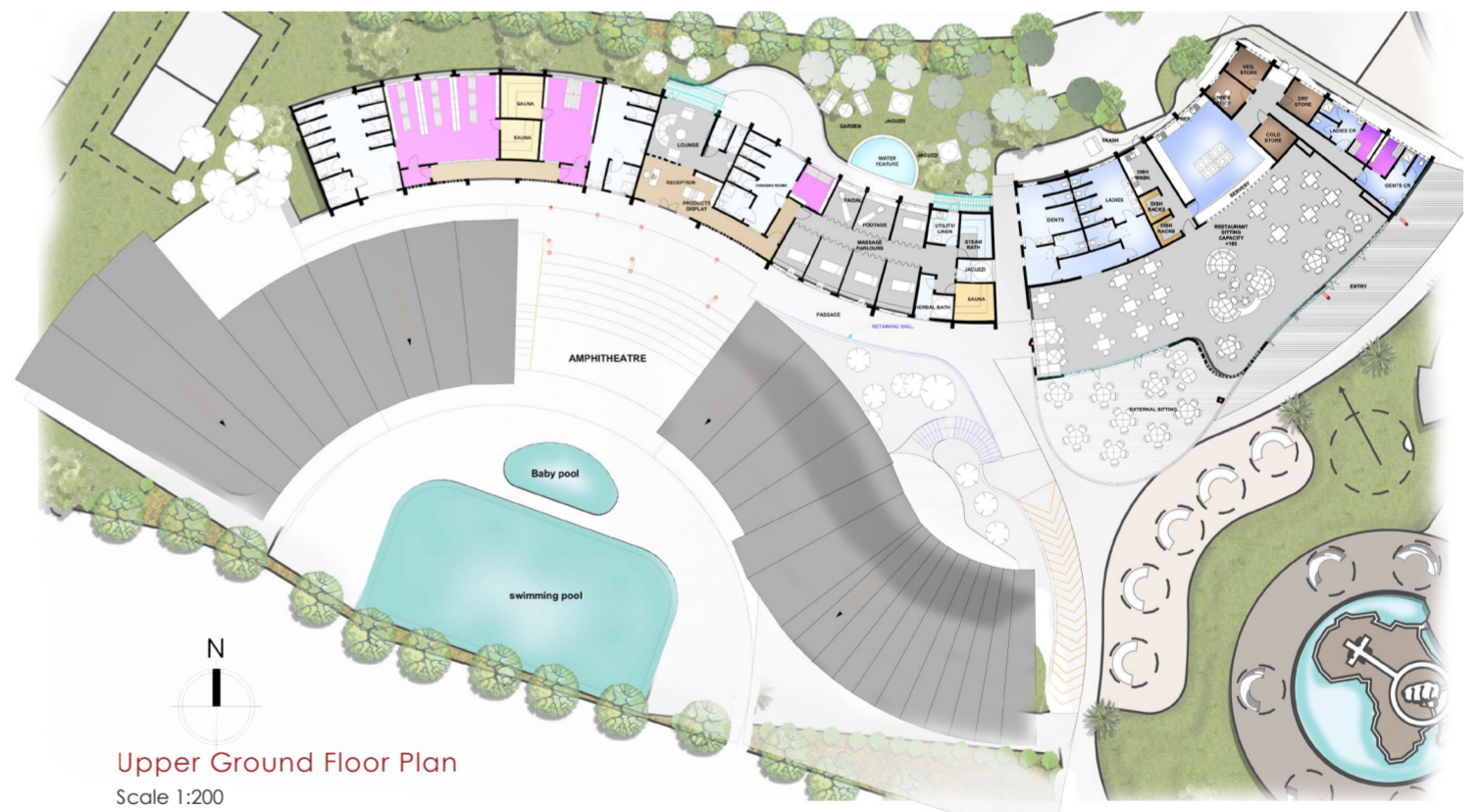


Elevation 02
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THE RESTAURANT & WELLNESS CENTRE



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 Lower Ground Floor Plan
 Scale 1:200



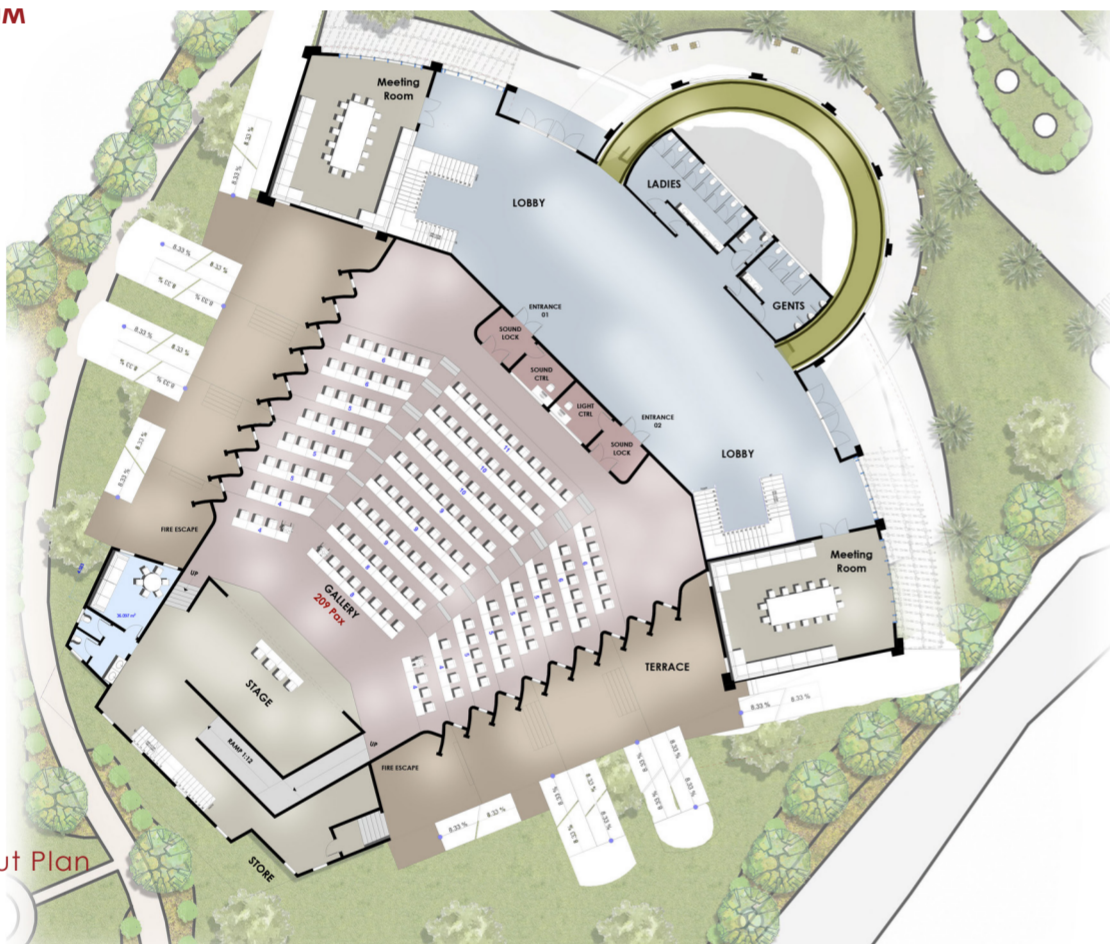
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 Upper Ground Floor Plan
 Scale 1:200



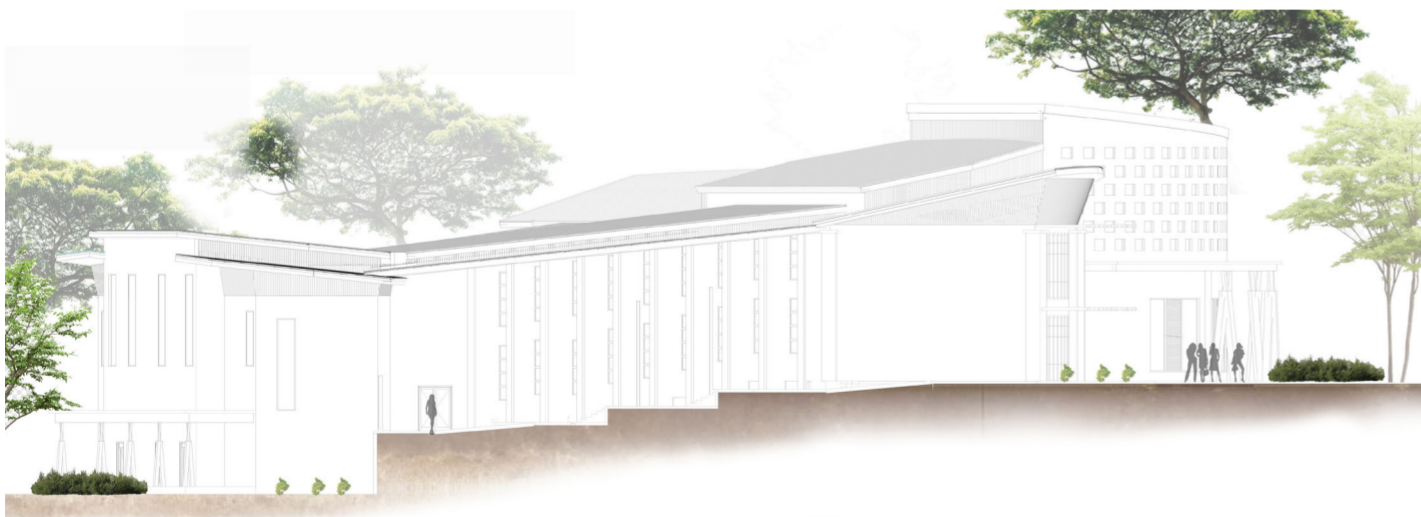
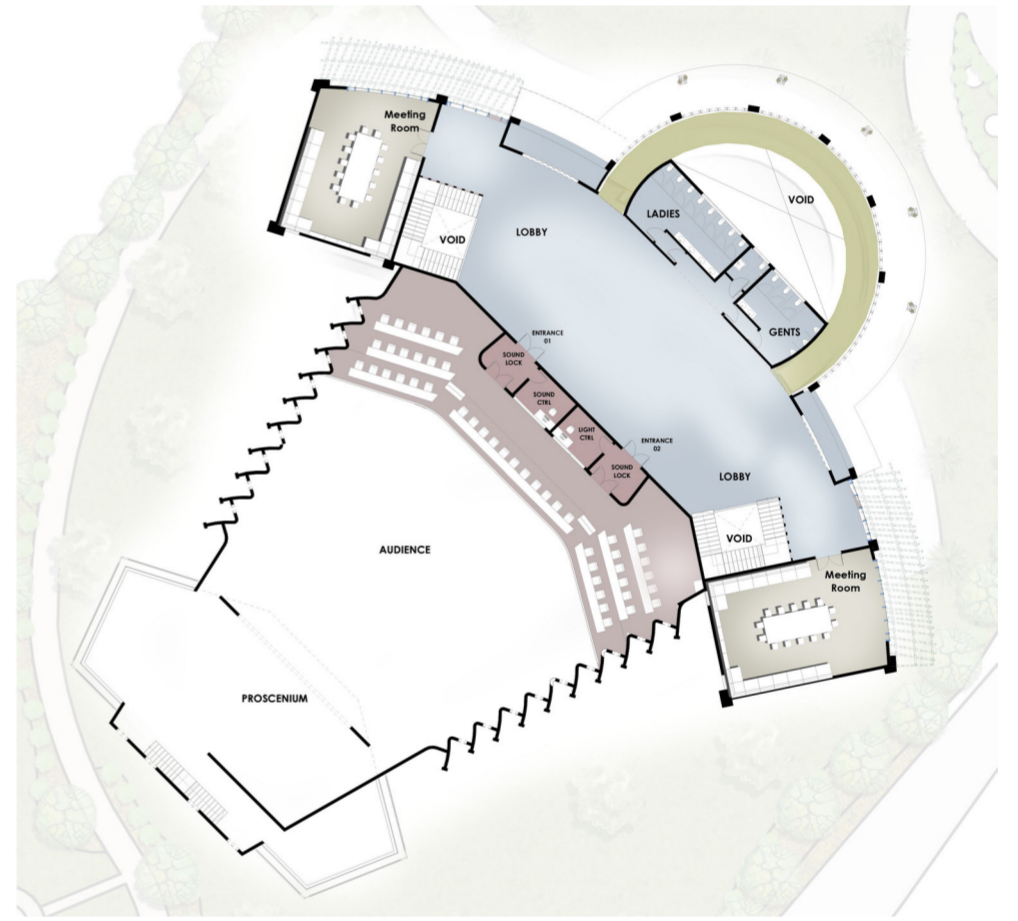
THE AUDITORIUM



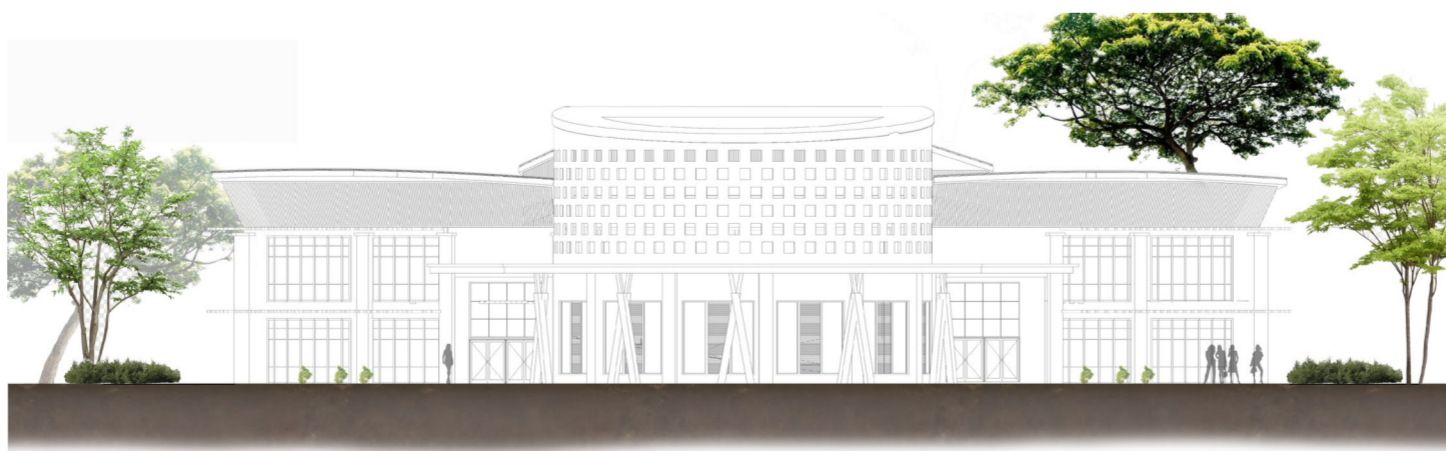
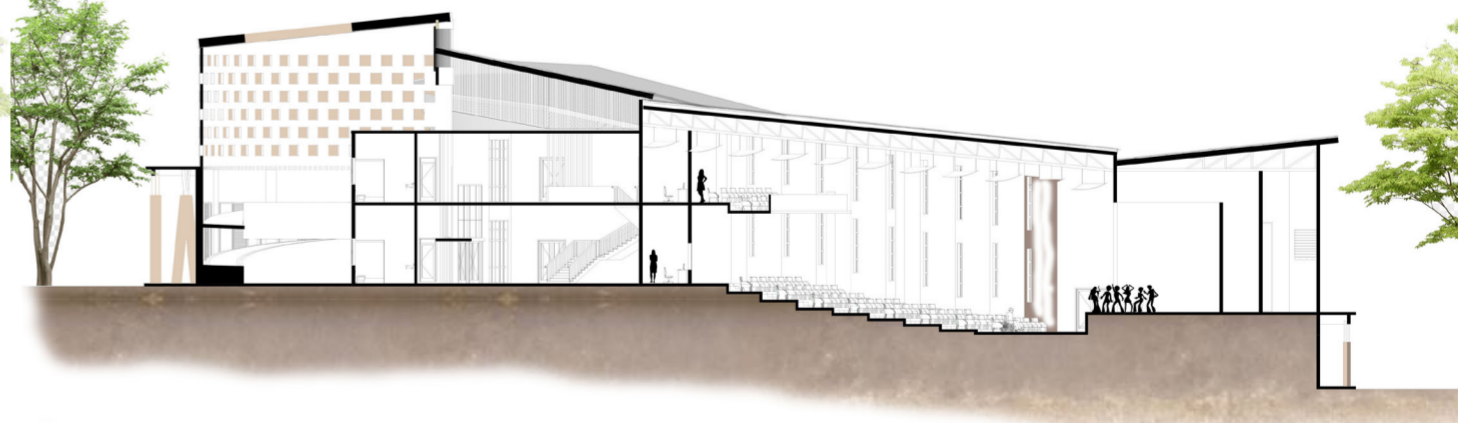
THE AUDITORIUM



Ground Layout Plan
Scale 1:200

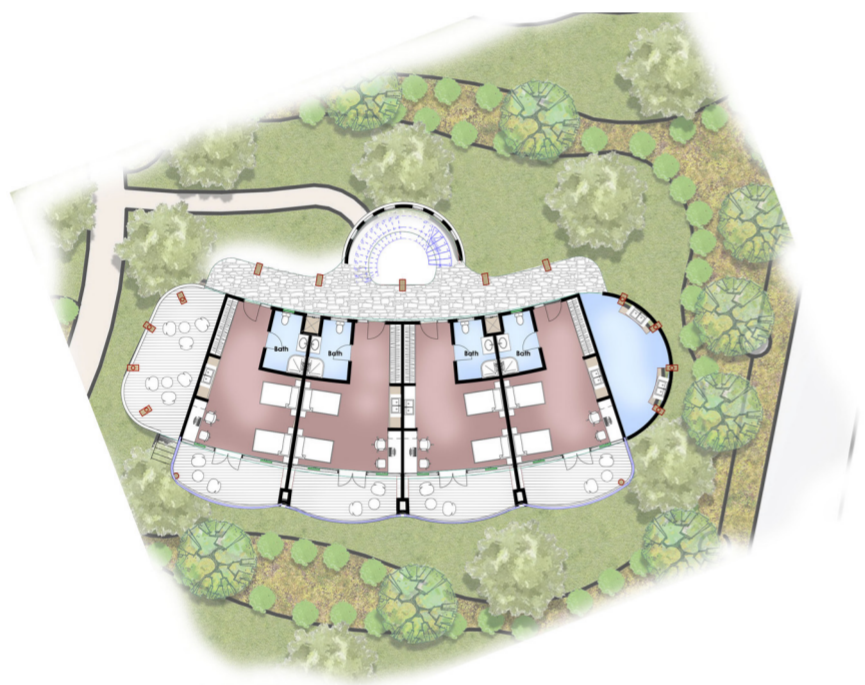


Elevation 01
Scale 1:200



Elevation 02
Scale 1:200

STANDARD ROOMS



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Typical layout Plan
Scale 1:200



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Typical layout Plan
Scale 1:200



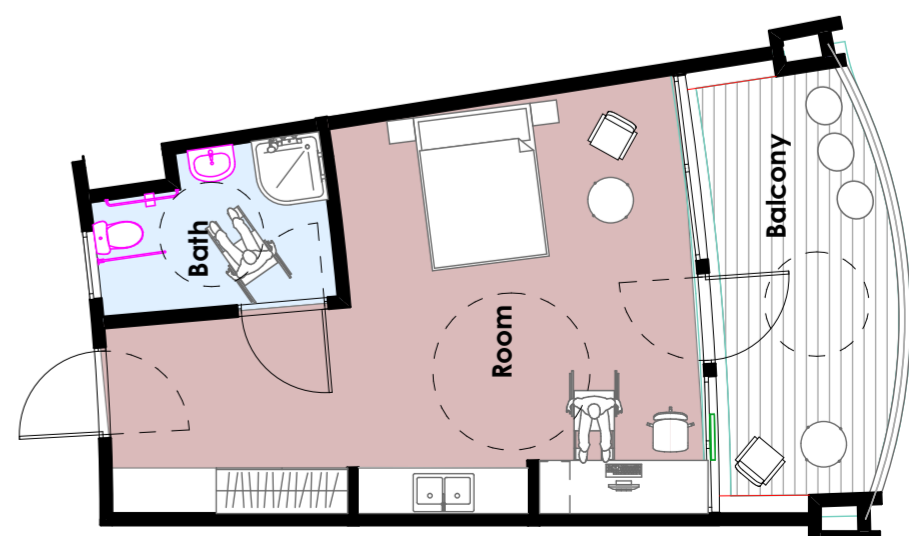
Elevation
Scale 1:200



Elevation
Scale 1:200



Section Design
Scale 1:200





LANDSCAPE DESIGN STRATEGIES

Landscape design on the healing farm captures the following main ideas:

1. Sculpture and Outdoor Art

The design incorporates sculpture extensively as seen on the masterplan. Sculptures on site celebrate African culture and the ideas of the Feminist Movement. The main entrance is lined with sculpture and the main monument serves as a key element on site.

2. Water

The landscape design uses water extensively to promote the healing effect of the farm. The therapeutic effects of water are captured in the design of the meditations gardens around the water pan. The pool, river and fountains within the site also promote well-being for users visiting the

3. Native Plants

The landscaping concept uses native plants that thrive in the dry climate of the site. The plants are extensively used along the boundary lines and gardens. The use of plants increases the healing effects of the farm.

4. Edible Gardens

The landscape design also incorporates an edible garden of herbs and fruit trees. The gardens, while serving a practical function, help create better spaces for the users.

SHRUB SPECIES

Cordia sinensis(35)
exhibits a range of growth forms, from low shrub to a multi-stemmed tree up to 12m in height. The fruits are edible and are eaten in a variety of cuisines.



Desert Willow Tree(400)

It occurs in clusters, withstands tough conditions



Citrus sinensis(50)

16 to 32 feet (5 to 10 meters) fruit tree



Nerium oleander(1000)

Nerium grows to 2-6 m (7-20 ft) tall. Used as an ornamental plant in parks, along roadsides and gardens.



Hibiscus micranthus(400)

It can grow up to 2.5 metres tall



Lantana viburnoides(800)

The genus includes both herbaceous plants and shrubs growing to 0.5-2 m (1.6-6.6 ft) tall. Flower bed in gardens.



Punica granatum(200)

Grows between 5 and 10 m (16 and 33 ft) tall. Fruits are edible.



Aberia caffra(30)

A traditional food plant in the areas it occurs. Has potential to improve nutrition, boost food security, foster rural development and support sustainable landscape



Acalypha wilkesiana(500)

is an evergreen shrub growing to 3 metres



Sanchezia nobilis(200)

It is a semi-woody shrub with large, foot-long glossy leaves divided by thick colored veins



Brittlebush(450)

It's a desert shrub produces little yellow flowers.



GROUNDCOVERS

Cenchrus setaceus(9035sqm)
It is drought-tolerant, grows fast, reaches 3 feet in height. Used as ground cover



Paspalum notatum(29806sqm)

It makes a relatively low-maintenance turf as well, with its tolerance for minimal maintenance, drought tolerance, and with less disease and insect damage than some of the other warm-season grasses.



TREE SPECIES

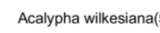
Acacia xanthophloea (351)
Medium-sized tree up to 25 m tall is a popular garden tree and has been grown in hedges. It is occasionally planted as an ornamental tree outside its natural distribution area



Vachellia xanthophloea (193)
The trees grow to a height of 15-25 m (49-82 ft). Used as a live fence or hedge and in ornamental planting for shade and shelter in amenity areas.



Acacia tortilis (41)
Also known as Umbrella thorn. Usually about 4-8 m high, but it can reach 20 m. Is native to arid and semi-arid areas



Babul (Acacia nilotica) (45)
can reach a height of 20-25 m. remain a shrub in poor growing conditions. provides shade



Roystonea regia (66)
Used as an ornamental. is a large palm which reaches a height of 20-30 metres (66-98 ft) tall



Erythrina abyssinica(53)
Small to medium sized tree. Grows in open woodland and rocky hillsides



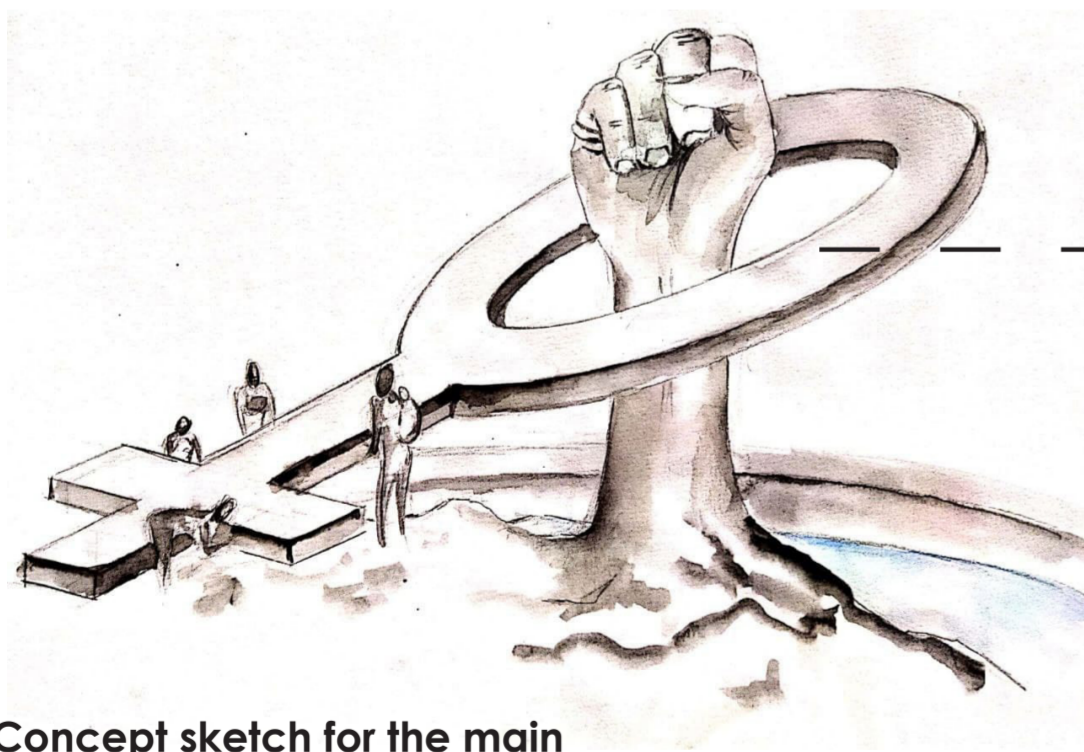
Delonix elata(41)
The tree is used for shade and is widely grown as live fence



Mangifera indica(17)
It can grow up to 15-30 metres. The tree is more known for its fruit.



Saguaro Cactus (30)
It can grow arms up to 40 feet tall.



Concept sketch for the main monument on site.

LANDSCAPE DESIGN

