



# Udzungwa Mountains National Park

Enhancing the Visitor Center Experience.

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LARCH499F

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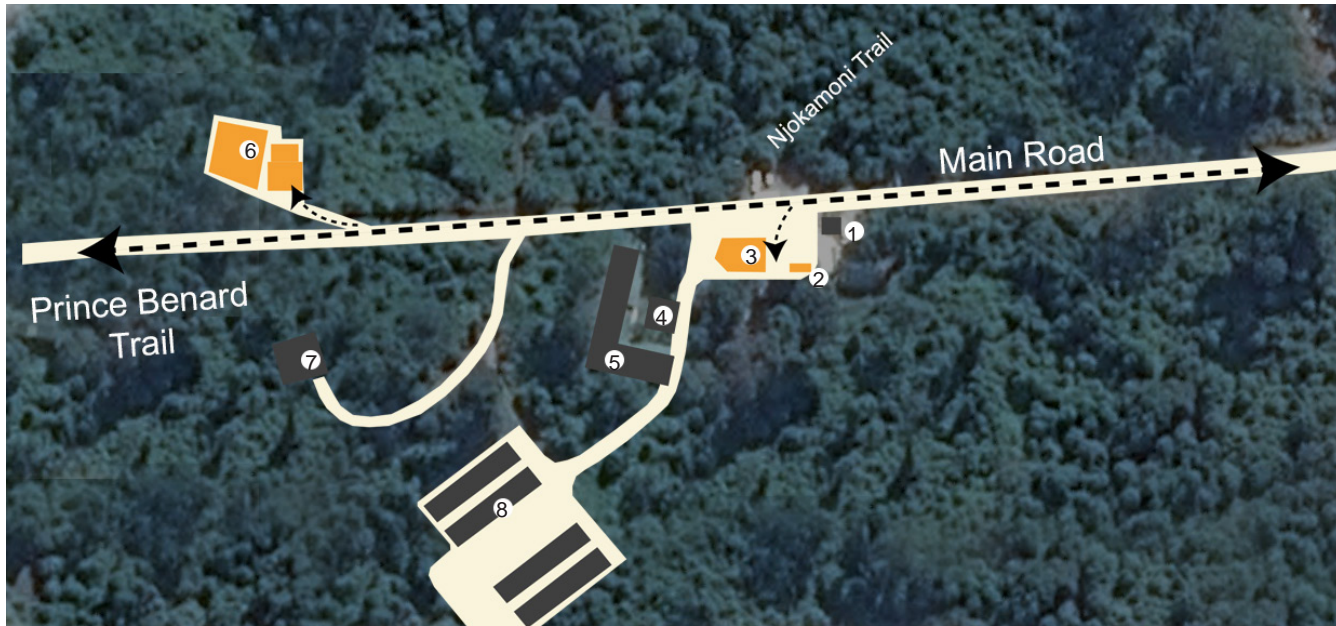
The Pennsylvania State University



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## Site circulation and Use:



### Legend:

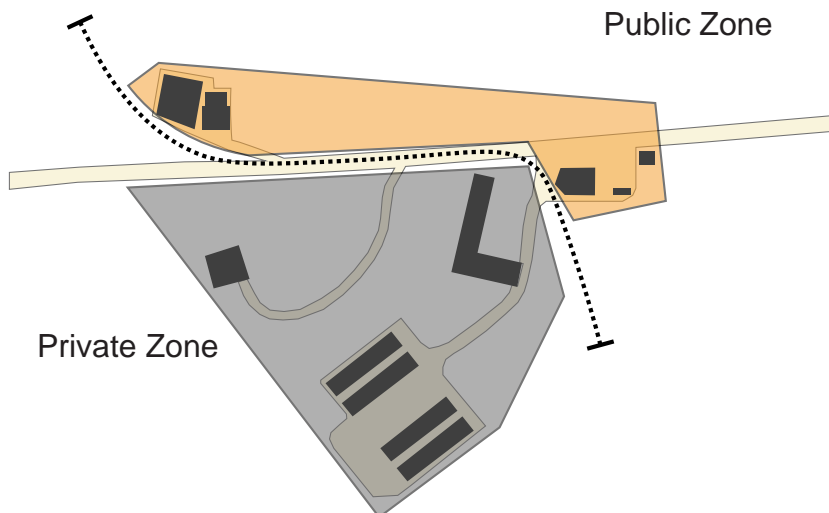
- 1. Center Entrance
- 2. Bathrooms
- 3. Visitor Registration Center
- 4. Army Room
- 5. Staff Offices
- 6. Visitor Information Center (VIC)
- 7. C.B.P. House
- 8. Staff Quarters

← - - - - - → Visitor Circulation

■ Staff Usage

■ Visitor Usage

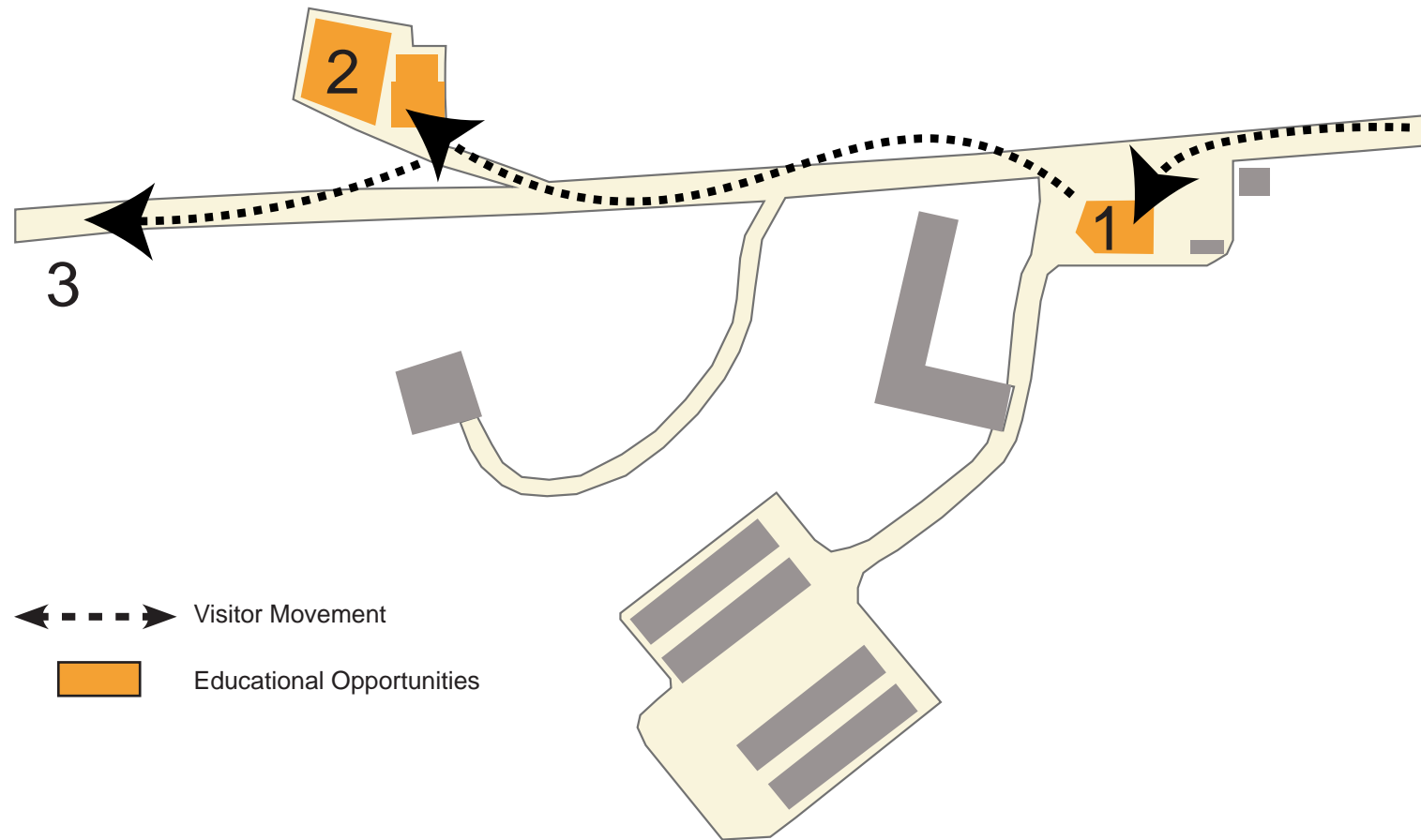
## Distinction between Public and Private:



## Conclusions:

- The spaces which visitors use within the center is concentrated in two main areas, which include the registration office and the future VIC building.
- There is a clear distinction between public and private spaces that should be preserved in the design process.
- The experience of the space is naturally very linear and with a strong axis. This could become a feature for a possible design, but does not necessarily have to be retained.

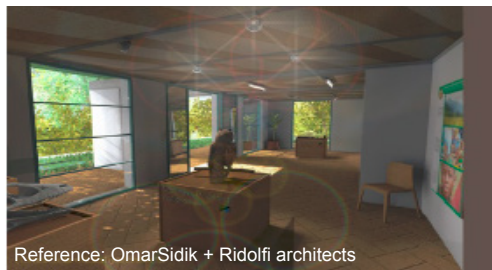
Currently, circulation of visitors within the site is very direct and involves going from one building to another before entering the trails. However, the transition between buildings lacks a meaningful experience, and does not give visitors the opportunity to spend time outside while still being in the park node. Additionally, all the educational experiences are concentrated within buildings, mainly the inside of the visitor registration center and the future visitor center building.



1. Registration Office



2. VIC Building



Reference: OmarSidik + Ridolfi architects

3. Trail



Promoting connections between this node and the rest of the park through the use of outside spaces will elevate the overall experience for visitors; making the educational opportunities that the park offers much more immersive and interactive.



Providing an immersive educational experience for visitors is important in order to influence their attitudes and values towards the park's conservation. Management strategies in conservation-related institutions often follow the premise that providing visitors with information will educate them and consequently change their attitudes and behaviors (Ballantyne et. al. 2007). However, research in educational psychology suggests that this view is too simplistic, and the institutions need to implement interpretive materials that are specifically designed to meet the knowledge, interests and needs of visitors in order for education to be effective (Ballantyne et. al. 2007).

The subject of environmental interpretation involves presenting the information of conservation and natural science in a way in which people not involved with these subjects will understand and connect with (Ham 1992). In order to do so, the educational experience must combine facts with meaningful messages that visitors can understand at a personal level. Making connections, both intellectually and emotionally, to the subject of learning is a way to achieve nature interpretation and enhance the quality of learning (Ballantyne et. al. 2007). Increasing environmental interpretation in the visitor experience involves immersing them into the landscape, which can be achieved through the use of interactive audio and visual materials, in-depth content, and meaningful nature interaction experiences (Ardoin et. al. 2015). Immersive and interactive activities, such as the one in figure one, can therefore be pleasurable, meaningful and personal (Ham 1992).

Environmental interpretation can also play a role in influencing people's knowledge, attitudes, and behavior in regards to conservation and wildlife. In a literature review over the subject of nature-based tourism and visitor outcomes, the authors analysed 24 research papers that dealt with the topics of education and interpretation in regards to environmental knowledge, attitudes, and behaviors. As shown in table number one, 11 of the 24 essays recommended these two factors as a way to increase knowledge and foment positive values and behaviors towards wildlife conservation (Ardoin et. al. 2015). Additionally, three essays recommended creating an emotional connection to the topic of learning, while another three recommended providing the opportunity for a time of reflection in the learning experience (Ardoin et. al. 2015).

While the Udzungwa Mountains National Park (UMNP) currently has some amount of educational components within their headquarters, most of their material lacks immersion and a meaningful experience. As explained in the previous slide, all educational components are within inside spaces and prevent visitors from engaging with the landscape as they learn. Through the use of more environmental interpretation and experiences that immerse visitors with nature, the park can greatly improve the visitor experience, as well as influence their knowledge and attitudes towards the UMNP's conservation.

Figure 1: Children learning about elephants at their local zoo.

Source:(Esmithsonian Insider n.d.)



Table 1: Salient Features of Research on the nature-based tourism experience. Source: (Ardoin et. al. 2015)

Identified feature	Supporting articles
Interpretation/education	Coghlan et al. (2011); Dearden et al. (2007); Higham and Carr (2002); Hill et al. (2007); Hughes and Morrison-Saunders (2002); Mayes and Richins (2009); Powell and Ham (2008); Smith et al. (2008); Stamation et al. (2007); Tubb (2003); Weiler and Smith (2009)
Time for reflection	Ballantyne, Packer, and Falk (2011); Ballantyne, Packer, and Sutherland (2011); Hughes (2011, 2013)
Creating an emotional connection	Ballantyne, Packer, and Sutherland (2011); Hughes (2011, 2013); Skibins et al. (2013)
Strategies and opportunities for action	Ballantyne, Packer, and Sutherland (2011); Hughes (2011); Powell et al. (2009); Rattan et al. (2012); Skibins et al. (2013)
Exposure to wildlife	Hovardas and Poirazidis (2006); Mayes and Richins (2009); Skibins et al. (2013); Tisdell and Wilson (2005)
Level of participation and type/intensity of activities offered	Coghlan and Kim (2012); Hughes and Morrison-Saunders (2005a, 2005b)
Viewing actual environmental damage	Dearden et al. (2007)
Trip duration	Dearden et al. (2007)
Pre-existing visitor characteristics	Ballantyne, Packer, and Falk (2011); Hughes and Morrison-Saunders (2005a)
Prior preparation	Dubin (2008)
Post-visit support	Ballantyne, Packer, and Falk (2011); Ballantyne, Packer, and Sutherland (2011); Hughes (2011, 2013); Hughes et al. (2011); Rattan et al. (2012)



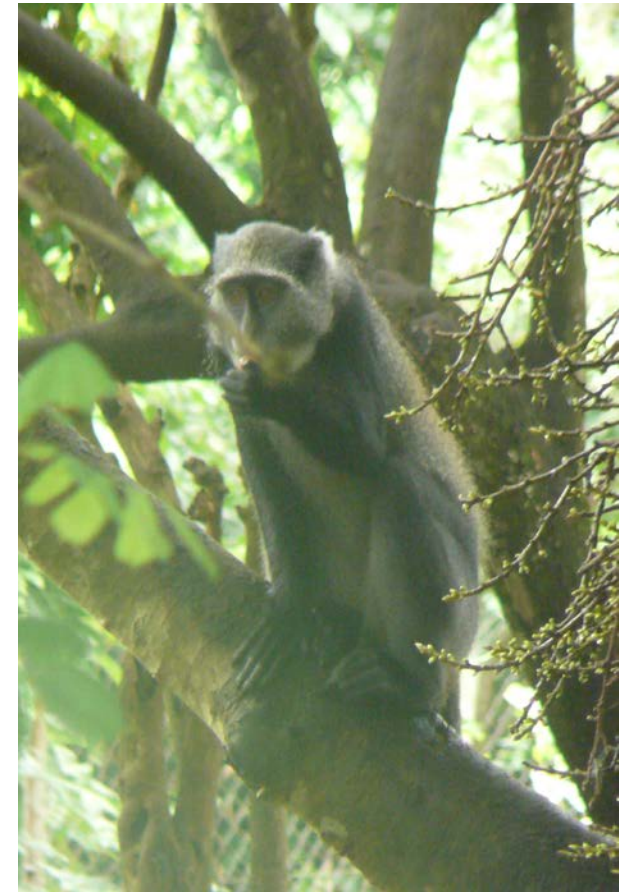
The project draws inspiration from some of the most unique features of the UMNP, including its endemic animal and plant species and its natural landscapes. Mainly, the design attempts to highlight the presence of Udzungwa's endemic primate species and native plants; as well as the presence of waterfalls in the area, which are important water catchment areas and generate hydropower.



Tanzania derives 60% of its electricity from hydropower, mostly generated in the Udzungwa Mountains (World Bank 2009).



There are over 4,000 plant taxa on the Eastern Arc Mountain Region, 800 of which are endemic (Fisher et. al. 2012).



There are at least 96 endemic vertebrate species in the Eastern Arc Region, including endemic primates such as the Sanje Mangabey and the Red Colobus (Fisher et. al. 2012).





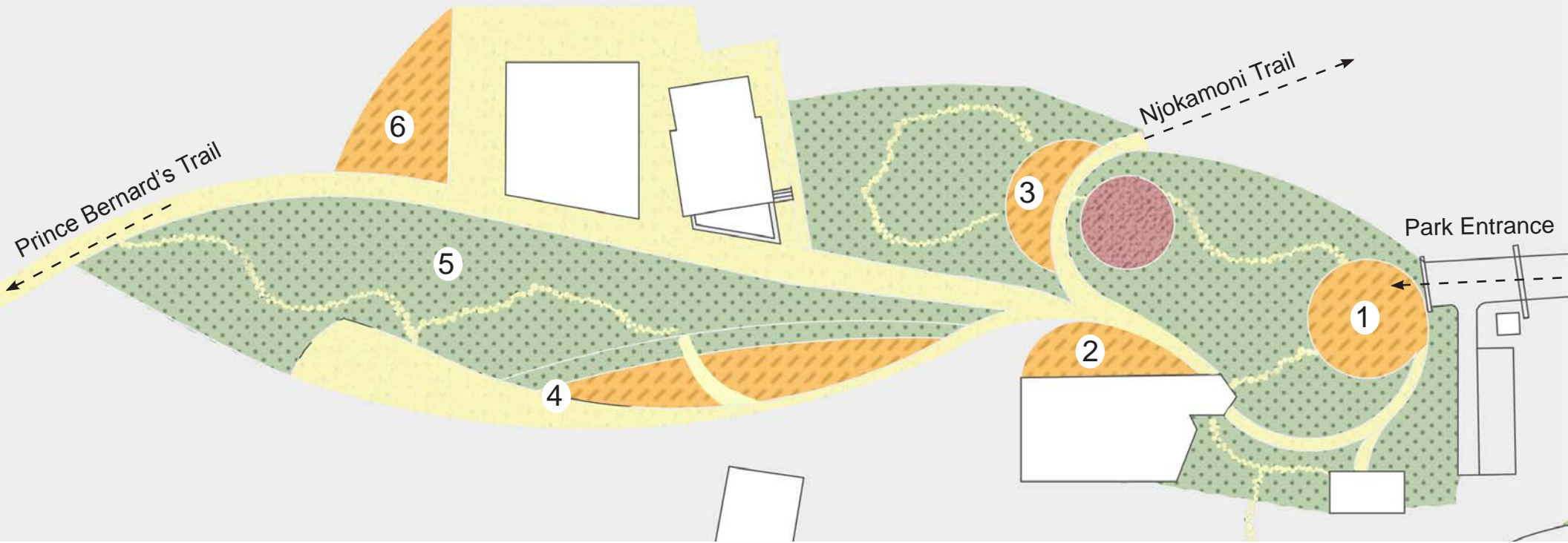
## Legend:

1. Welcoming Area
2. Rain Drum Court
3. Ethnobotanical Pharmacy and Garden
4. Children's Playground
5. Outside Classroom
6. Butterfly Gardens
7. Wooden Deck



# Site Zoning Diagram

P6



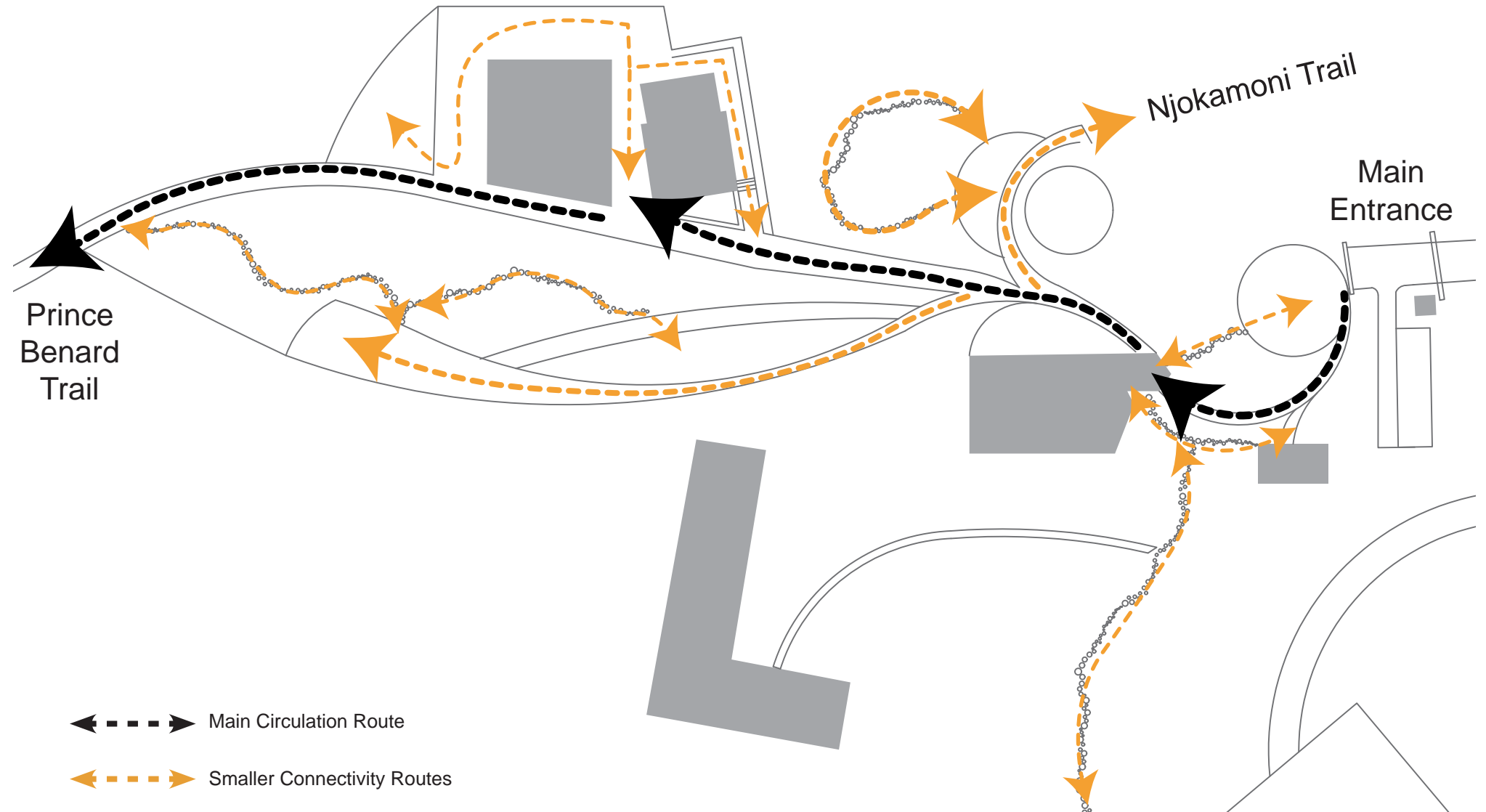
<b>1</b> Welcoming Area				<b>4</b> Monkey Exhibition			
<b>2</b> Drum Courtyard				<b>5</b> Butterfly Gardens			
<b>3</b> Ethnobotanic Courtyard				<b>6</b> Wooden Courtyard			

Vegetation Areas    Courtyard Areas    Walkways    Pharmacy Center



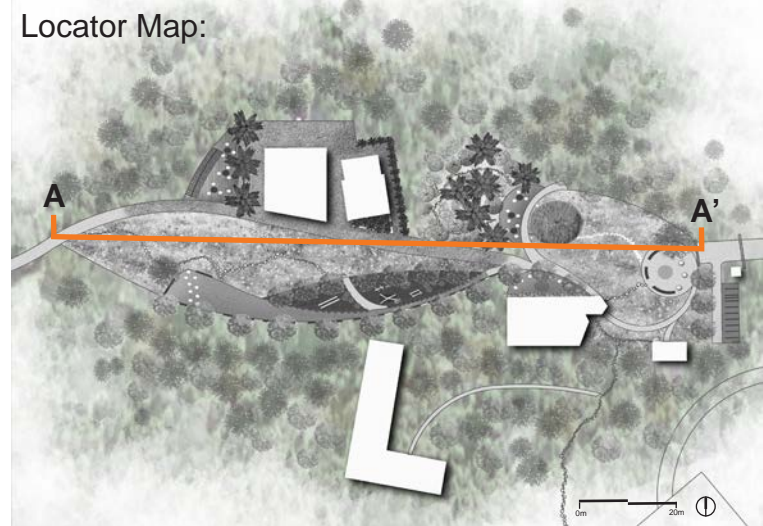
# Circulation Diagram

P7

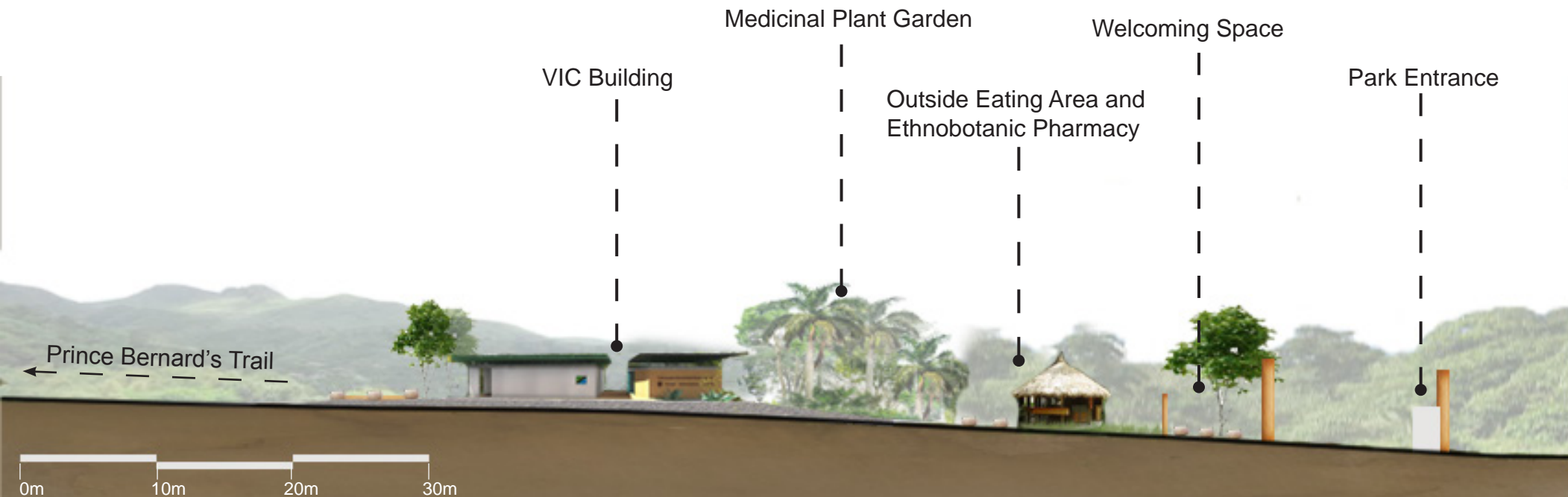


The design still maintains the circulation hierarchy of the three main visitor stops within the node (Entrance, Ticket Center and VIC). Meanwhile, it provides the opportunity for other kinds of circulation within subspaces.

The proposed ramp for the VIC building is used as a main point of circulation within the design, in order to expose more visitors to the future buildings and to the views of the mountains in this area.



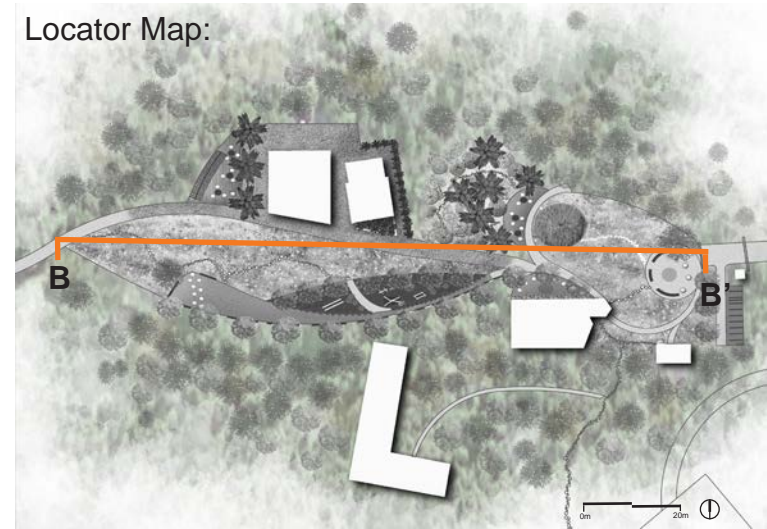
## Section A-A':



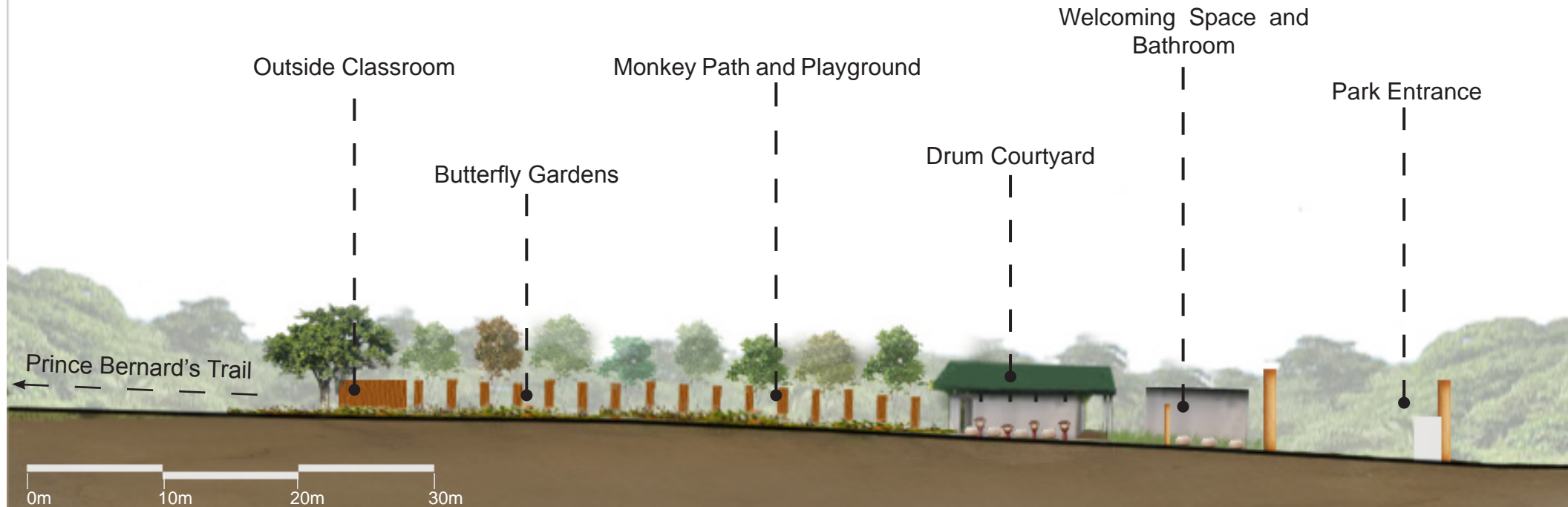


The circulation within the design takes you in a sequence of spaces that touch upon each of the buildings. The welcoming area leads visitors to the ticket center and the drum courtyard, and subsequently to the Monkey Educational Exhibit.

Locator Map:



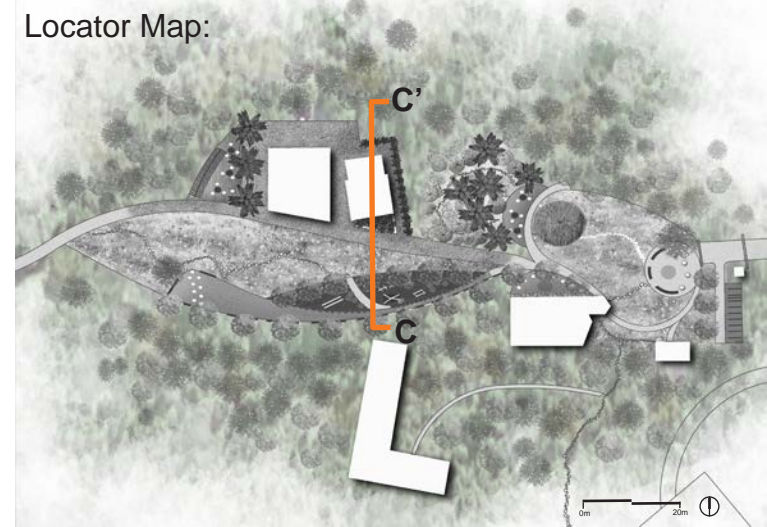
## Section B-B'





The existing ramp going towards the VIC building will become the main route of circulation towards Prince Bernard's trail, bringing more attention towards this building to visitors. The slightly higher elevation provides views of the butterfly garden and adjacent playground.

Locator Map:



## Section C-C'

Monkey Walkway

Butterfly Gardens

VIC Building

Children's Playground

Main Circulation Route (Ramp)



0m 3m 9m

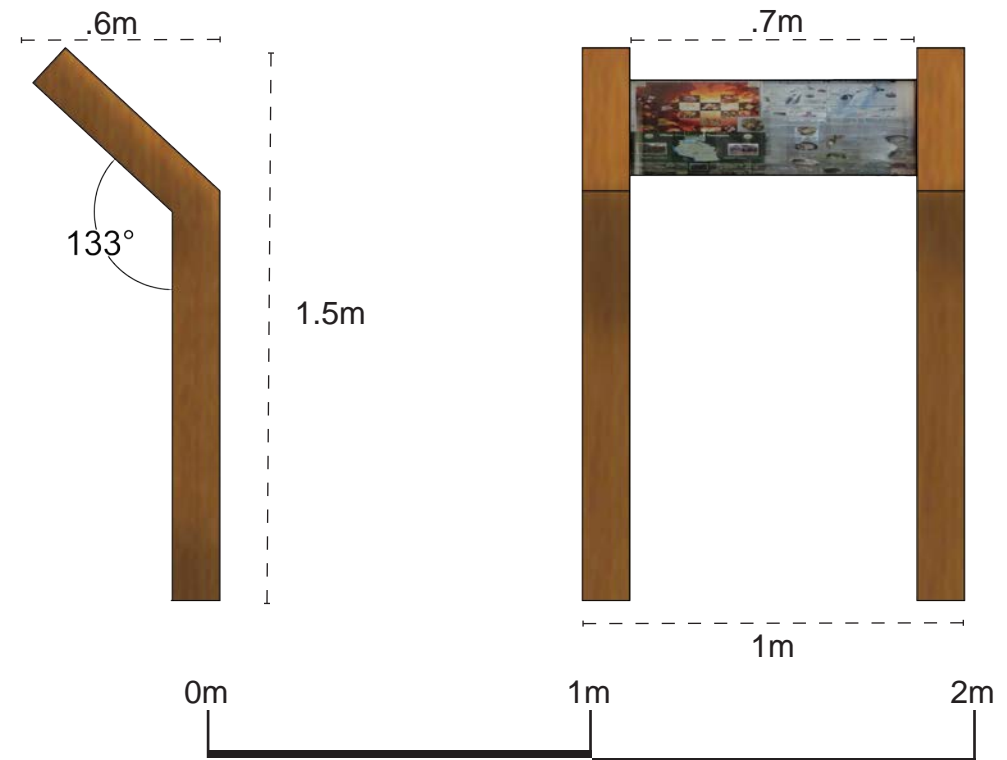


## Information Signs



The information signs will be distributed throughout the entire node area and can also be utilized in parts of the park trails. These signs will contain information about specific subjects of focus, as well as interactive games that can create a more immersive experience. The content of these signs will focus on topics such as:

- Endemic animal and plant species of the UMNP
- Importance of biodiversity in the local ecosystem
- Importance of Udzungwa as a water catchment area and hydropower generator.
- Impacts of deforestation in the Udzungwa Mountains

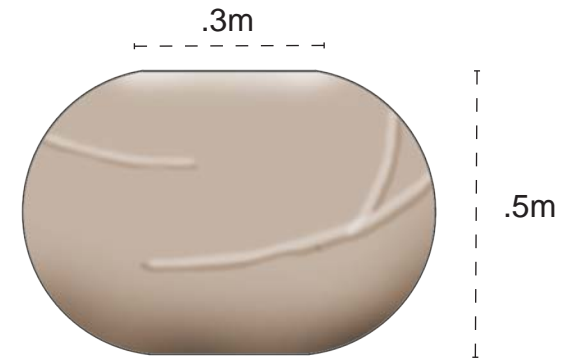




## Formal Seating



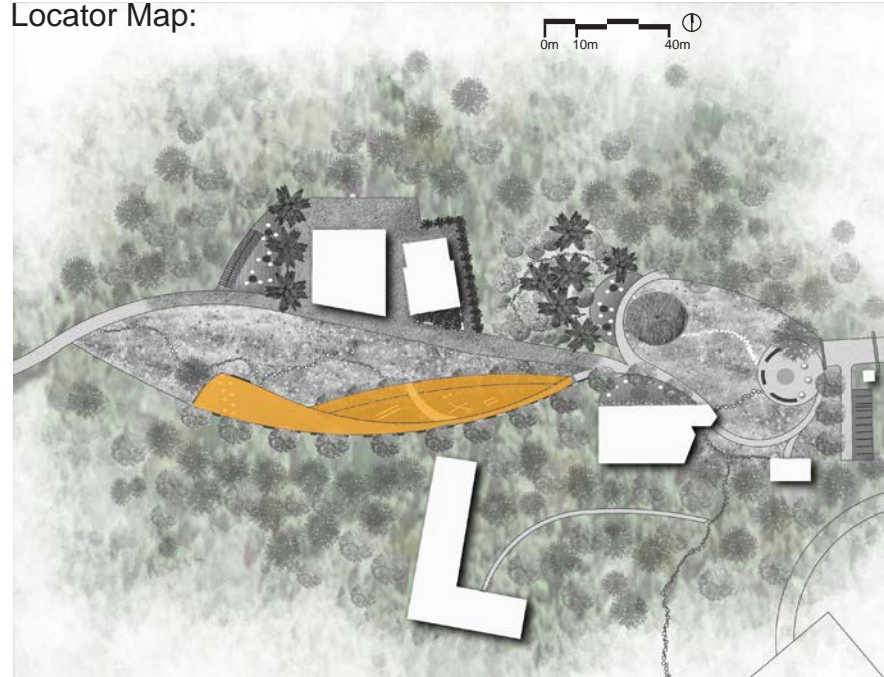
The formal seats throughout the site draw inspiration from spherical seats used throughout the villages near the Udzungwa Mountains. This seating adds a cultural component to the entire design.





The monkey educational exhibit is designed around the endemic primates that live in UMNP. The overall shape of the exhibit reminisces that of a monkey tail, such as the one shown in figure 2. The main pathway functions as the elongated part of the tail, while the outside classroom represents the fluffy, white end.

Locator Map:



Monkey Tail Diagram:

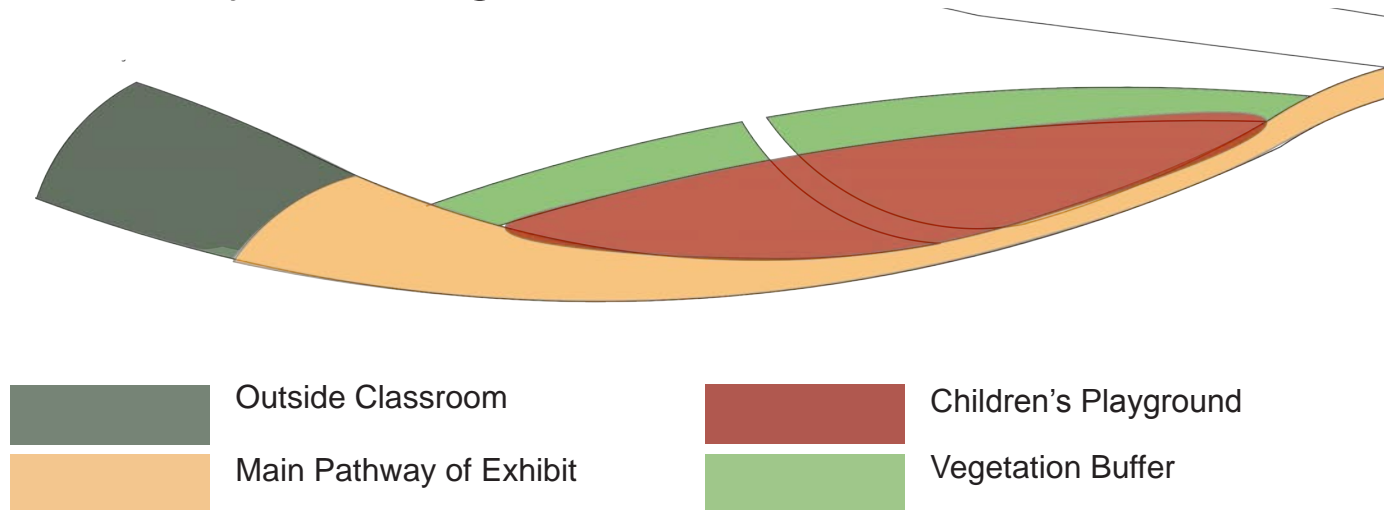
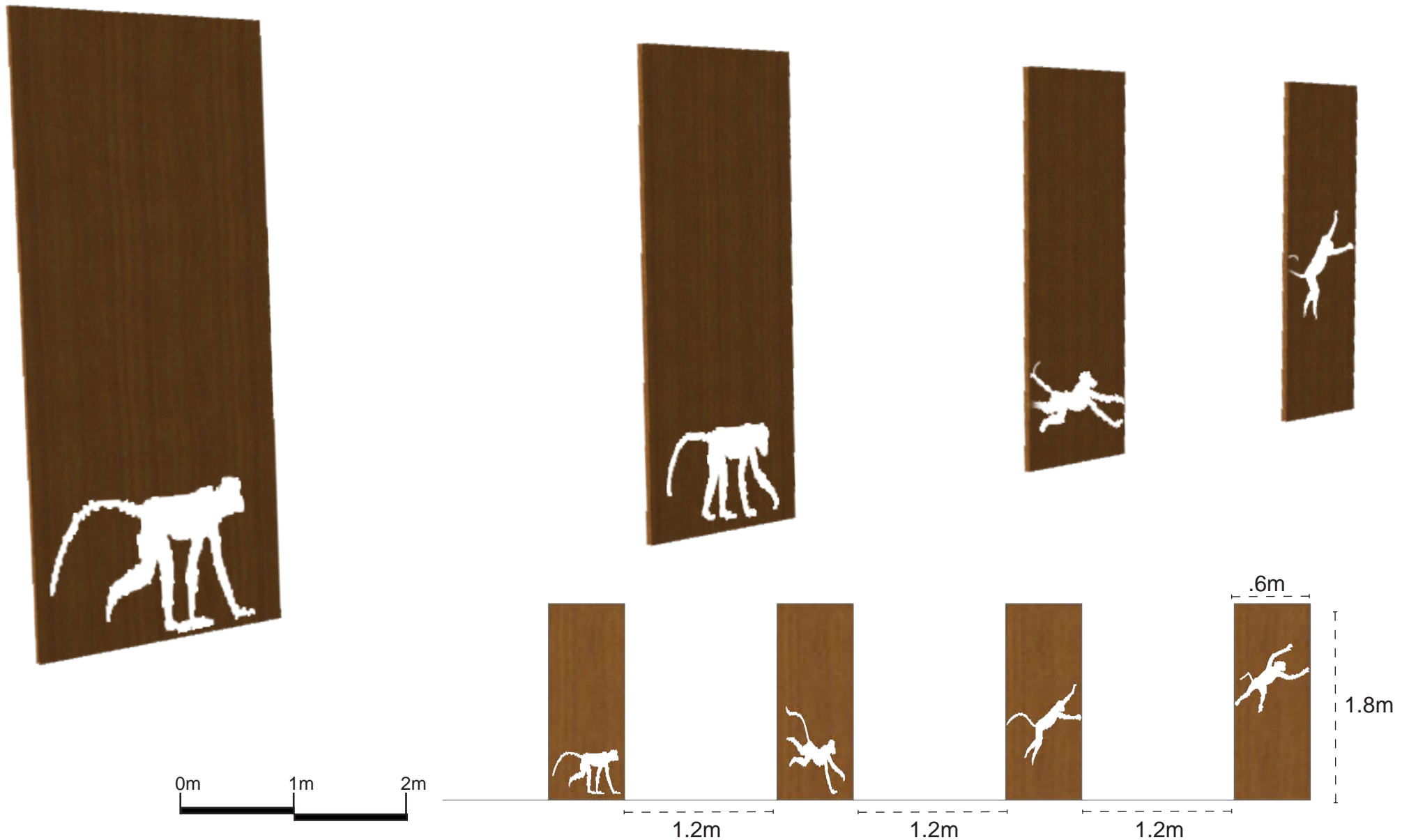


Fig 2: Black and White Colobus, one of the species found in UMNP. Source: (Beaton 2009.).



## Monkey Wooden Boards

The teak wood boards that are placed along the path have a carved silhouette of a monkey, which changes positions from one board to another. This creates an allusion of movement that makes the visitor feel like the monkey is walking alongside of them.







The walkway functions as a connection between the outside classroom and the rest of the site, as well as providing smaller connections to the Butterfly Gardens. This walkway is more interactive and aesthetically pleasing.

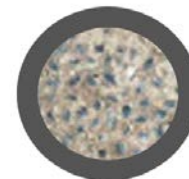
## Materials Used:



Teak Wood



Native Plants



Oil Palm Seed





The outside classroom will provide people with information about all the monkeys that are found in the UMNP, as well as the impacts of deforestation on monkey populations.





The elements of the playground focus on climbing activities, since this is something which primates are known to do and is enjoyable for children. Little branch tunnels and houses are another play component.

## Materials Used:



Teak Wood



Rope



Branches



Sand

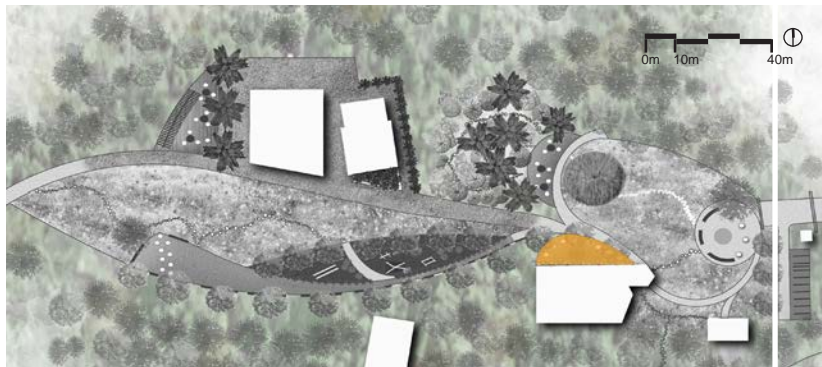


Soil



The design implements an African drum courtyard, which adds a cultural component to the visitor experience. The main aspect of the courtyard consists of using gutters and drippers to spew rain drops over drums fitted with plastic heads. This form of artful rainwater design has been implemented in other educational institutions, such as the Cedar River Watershed Educational Center in Seattle; their Rain Drum Courtyard has 21 drums which play music through computer-programmed dripping systems (Pucci 2005). As shown in Figure 3, the raindrops drip over the drums to create sound. While the precedent uses computer generated programs, this same effect can be achieved through simple Rube Goldberg mechanisms, or by tilting the gutters of each drum at different angles.

Locator Map:



## Raindrum Courtyard Diagram

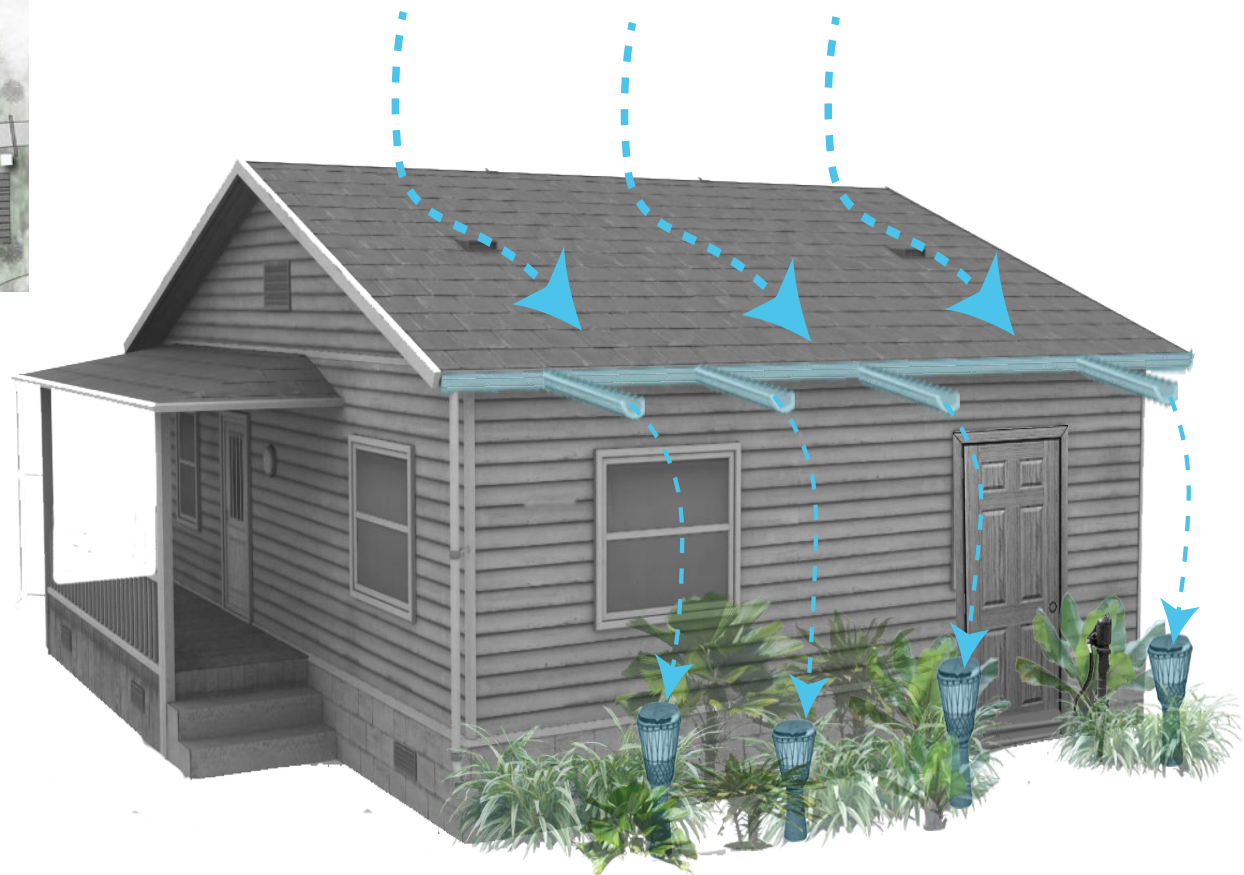


Fig 3: Raindrops falling over a drum in the Cedar River Center.

Source: (Teashon n.d.).





The drum courtyard can function through rain during the rainy season. During the dry season, visitors can choose to play the drum themselves, or use a pump that activates the drippers with stored rainwater.

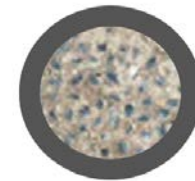
## Materials Used:



Local Drums



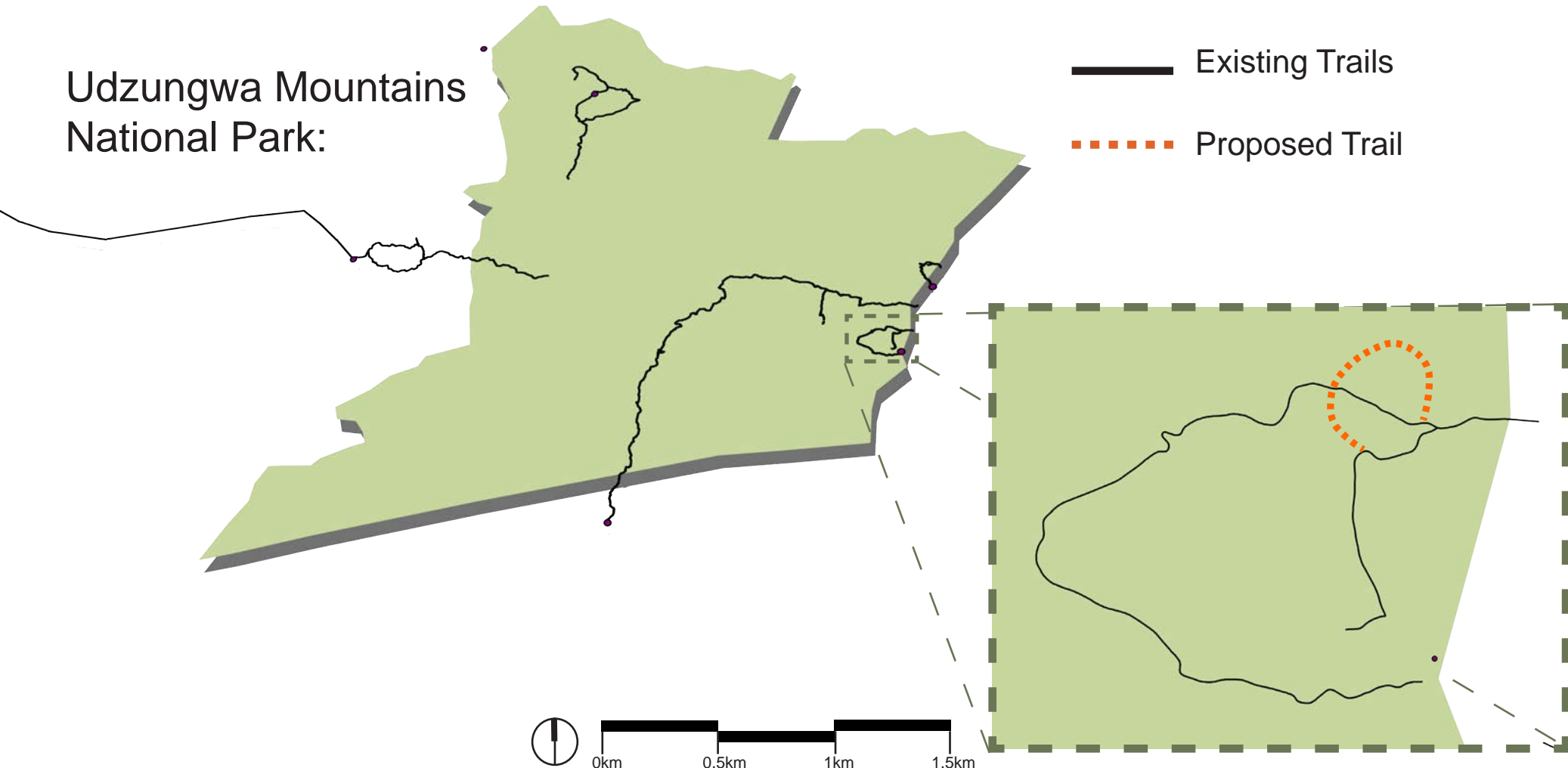
Native Plants



Palm Oil Seed

Udzungwa Mountains  
National Park:

— Existing Trails  
- - - Proposed Trail

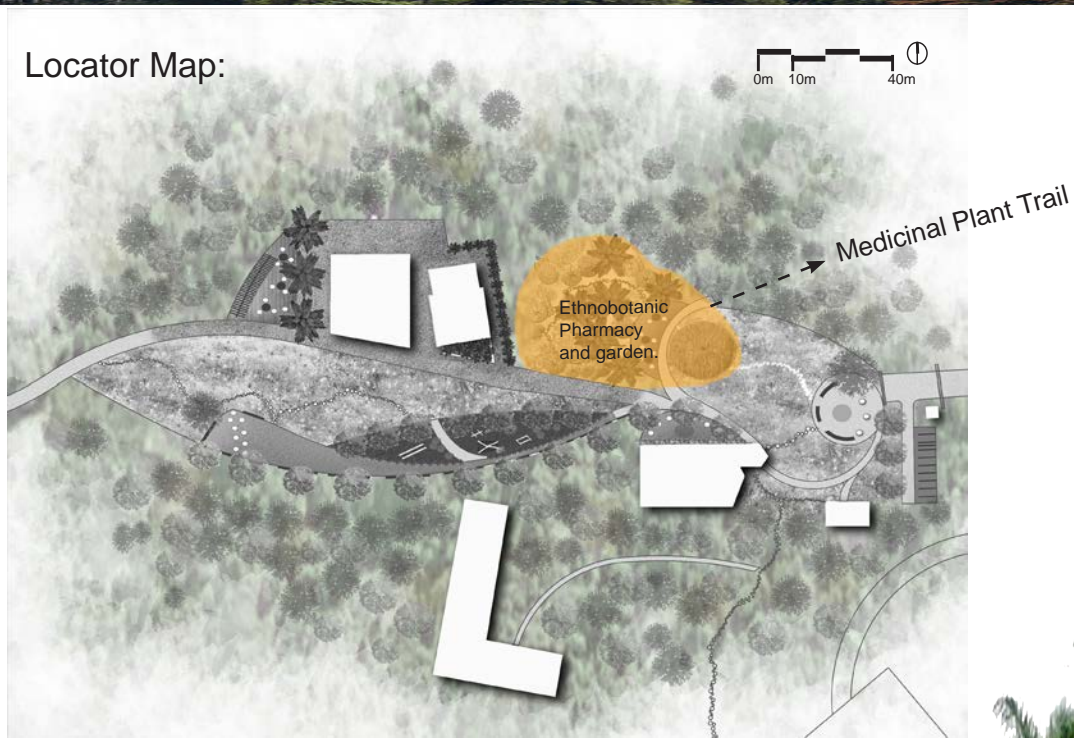


Proposed Medicinal  
Plant Trail

The project proposes the addition of a medicinal plant trail within the existing Njokamoni trail, which can begin within the visitor center node and connect to different sections of the Njokamoni and Prince Bernard's trails. This particular trail would exhibit a range of native plants which are used by local people for medicinal purposes. This feature adds a cultural component to the trails, while showcasing the park's high amount of diversity.

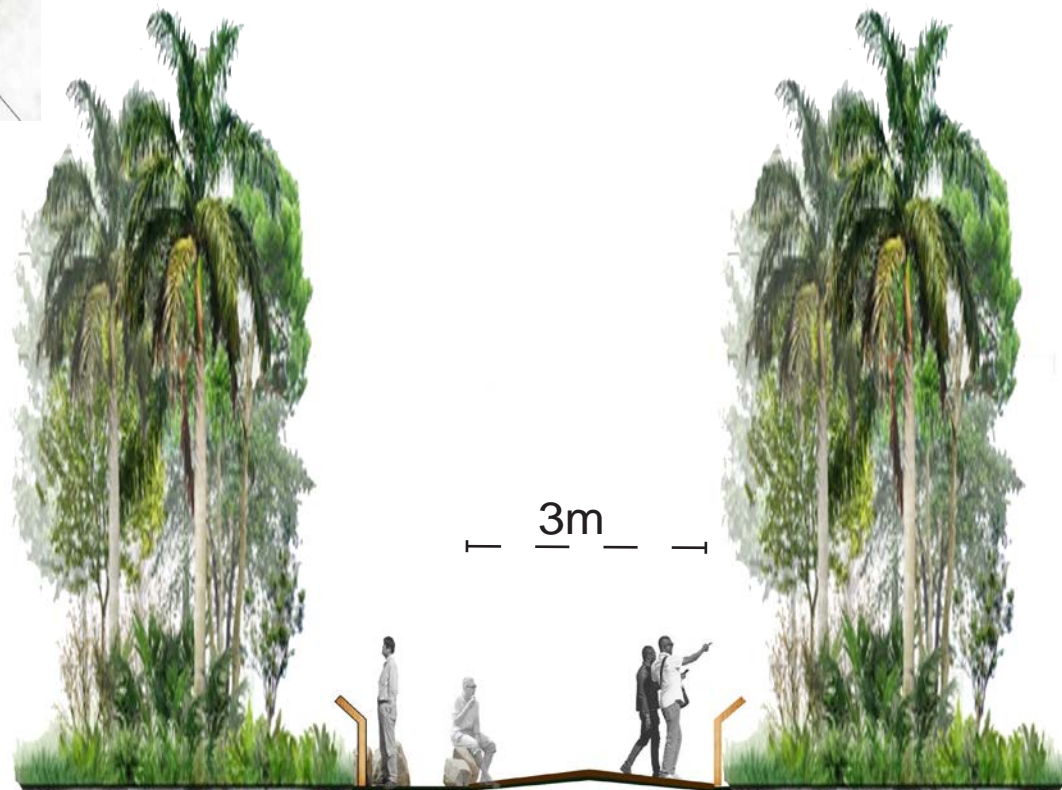


Locator Map:



The trail entrance will be located next to the Ethnobotanical Pharmacy area and the medicinal plant garden. At other points of the trail, it will connect to other main pathways

The trail itself will be wider than other trails found in the park, in order to make it more accessible for higher amounts of visitors. The trail will also implement small resting areas and signage.







The medicinal plant trail will implement information signs that can give visitors more background as to what each plant is used for and how the local community uses it. Additionally, small areas with signs and rock seating can be created in order to make the hike more enjoyable.



# Medicinal Trail Plant List Part 1

P23

Sources: (Dharani and Yenesew 2010), (Shangali et. al. 2008), Ruben Mwakisoma and Aggrey Uisso.

Scientific Name	Local Name	Use	Methods of Use
<i>Acokanthera schimperi</i>	Mmemeng'oro	Snakebites and stomach pain	Powdered dry leaves and roots are used for snakebite, leaf infusions are taken for stomach.
<i>Adansonia digitata</i>	Mbuyu	Fever, exhaustion, diarrhoea	Bark decoctions are used for steam bathing for fevers, root decoctions are taken for exhaustion and fruit pulp is used for diarrhoea.
<i>Adenia cissampeloides</i>	Ligolomosi	Madness and mental disturbance	Root powder added into leaf decoction and taken orally twice per day, or added to bathing water.
<i>Agarista salicifolia</i>	Mkolongo	Toothaches, diarrhoea	Decoction of bark is rinsed in the mouth twice daily , leaf powder is boiled and taken three times daily.
<i>Agelaea pentagyna</i>	Mlungamo	Rheumatism, Pneumonia	Decoction of roots is taken for seven days for rheumatism; leaves are pounded and boiled, then taken twice daily for pneumonia.
<i>Albizia amara</i>	Mtanga	Open wounds and purgative	Leaves are used to treat wounds and bark decoctions to induce vomiting.
<i>Albizia gummifera</i>	Mtanga	Rashes	Bark powder is stirred in warm water and foam is applied twice daily.
<i>Bauhinia spp.</i>	Msegese	Diarrhoea	Leaves can be chewed to treat diarrhoea.
<i>Bersama abyssinica</i>	Mbasamono	cold, headaches, menstruation pains and infertility	Bark is sniffed for colds and headaches, bark and roots are taken for menstruation pains and infertility.
<i>Cassia alata</i>	Msekeseke	Fungal infections	Leaves and roots used to treat ringworm, impetigo, scabies, leprosy and eczema.
<i>Catunaregum spinosa</i>	Mtutumo	Loss of appetite and vomiting	Liquid from the bark is boiled and drunk before bubbles go down.
<i>Cordia sinensis</i>	Mtundwa	Malaria, dry coughs	Root decoction is used for malaria; dry fruit is eaten for coughs.
<i>Deinbollia kilimandscharica</i>	Mkongwa	Hernia	A decoction from the roots is taken orally.
<i>Dichrostachys cinerea</i>	Mohanidume	Burns, body swellings and arthritis	Powdered bark decoction is used for all three ailments.
<i>Dodonaea angustifolia</i>	Mguina	Diarrhoea, bleeding wounds, skin rashes, flu	Leaf infusions are taken for diarrhoea and colds; leaves are pounded into powder and mixed with water for wounds and rashes.
<i>Dombeya rotundifolia</i>	Mtogo	Abdominal pain	Dry roots are pounded, burned and sniffed.
<i>Dracaena manii</i>	Mdetema	Measels	Leaves can be drunk to treat measels.
<i>Ekebergia capensis</i>	Mulimuli	Fungal infections, skin rashes, acne, chronic coughs	Poultices made from the powdered bark are applied externally to skin; root decoctions are used to treat coughs and scabies.



# Medicinal Trail Plant List Part 2

Sources: (Dharani and Yenesew 2010), (Shangali et. al. 2008), Ruben Mwakisoma and Aggrey Uisso.

Scientific Name	Local Name	Use	Methods of Use
Entada Abyssinica	Lifute	Flu	Bark is dried on the sun, squeezed and sniffed. Liquid squeezed from bark can be applied twice daily on the eyes; roasted and crushed bark forms a paste for burns and inflammation.
Erythrina abyssinica	Kirundirundi	Trachoma, burns and body swelling	Dried root powder mixed with hot water is drunk twice daily for stomachaches; boiled roots are drunk for chest pains.
Euclea divinorum	Mdaa	Stomachaches and chest pains	Root decoctions are used for diarrhoea and colds; boiled bark powder is drunk for colds and chest pains; leaf decoctions are taken for intestinal worms.
Grewia bicolor	Umwimwi	Diarrhoea, colds and chest pains, intestinal worms	Boiled leaf powder is drunk for malaria; Children are washed with a beer made from fermented fruits as maesles treatment.
Kigelia africana	Mfungutua	Malaria and Maesles (in children)	Gum of the plant can be dissolved in water and applied to skin; leaves can be eaten fresh or dried and mixed with other dishes.
Moringa oleifera	Mlongitongi	Skin and fungal infections, malnutrition	Fresh pounded roots can be boiled and drunk for malaria; ground roots and bark can be sniffed for headaches; boiled stem bark can be drunk for whooping cough or brochitis.
Ocotea usambarensis	Muheti	Malaria, headaches, whooping cough	The bark is used for stomach pains while the leaves are used as an inhalant to relieve fever.
Prunus africana	Mnandawi	Stomachaches and fever	Pounded fresh leaves are chewed for heartburn and drunk for abdominal pain; dry root powder is drunk daily for 2-3 days for hookworms.
Rhus natalensis	Uhehefu	Heartburn, abdominal pain, hookworms	Root decoction stimulates appetite and alleviates abdominal ailments.
Ricinus communis	Nyonyo	Laxative, stimulates appetite	Liquid is drunk from the vine.
Simylux ancepsy	Mkwangasale	Cavities	Fruit pulp can be rubbed on the teeth, or applied to the skin; Boiled fresh leaves can be applied as ear drops.
Solanum incanum	Matulatula	Toothache, earache, warts and skin ailments	One teaspoon of dry fruit kernels can be taken twice daily for diabetes; boiled fresh bark can be used as a mouthwash; seeds can be grinded as a sniff powder for nosebleeds.
Syzygium cuminii	Mvenge	Diabetes, weak gums, wounds and nosebleeds	Fresh bark and roots are pounded and drunk with cold water for stomach ailments.
Syzygium guineense	Mvenge	Stomachaches and anthelmintic	Roasted seeds are pounded and drunk for premature ejaculation; Ripe fruit with removed seeds can be mized with water and drunk for stomach problems.
Tamarindus indica	Mkwaju	Premature ejaculation, indigestion	Fresh bark is drunk to treat malaria, and boiled fresh leaves are drunk to treat pneumonia; boiled leaves are inhaled in steam vapour to treat fever.
Teclea nobilis	Mpembesa	Malaria, pneumonia and fever	Pounded fresh leaves or seeds can be mixed with water and applied on skin; steeped fresh leaves can be drunk for malaria and fevers.
Trichilia emetica	Mbokoboko	Skin ailments, malaria and fever	Blood clotting and loss of consciousness
Unknown	Likamanda	Blood clotting and loss of consciousness	Liquid is drunk from the vine.
Unknown	Mmavimmavi	Severe fever on children	Leaves can be drunk to cure fever in children.
Utika masaica	Lougen	Leg Inflammation	Pounded leaves can be applied on skin.





The ethnobotanical pharmacy gives visitors the opportunity to buy some of medicines made by local community members using native medicinal plants. In addition to medicines, visitors can also buy products such as balms or juices, all made using native trees.

## Materials Used:



Teak Wood



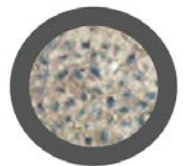
*Bambusa vulgaris*



Thatching



Sand



Palm Oil Seed



# Ethnobotanical Pharmacy Products

P26

The Pharmacy could feature medicines made from some of the plants found in the trails which are used for more common ailments like skin issues or stomachaches. Additionally, the pharmacy could sell juices and balms which are also made using native plants found in the park.

Species in Trail List which could also be sold in the Pharmacy		
Scientific Name	Local Name	Medicinal Purpose
<i>Bersama abyssinica</i>	Mbasamono	cold, headaches, menstruation pains and infertility
<i>Dichrostachys cinerea</i>	Mohanidume	Burns, body swellings and arthritis
<i>Ekebergia capensis</i>	Mulimuli	Fungal infections, skin rashes, acne, chronic coughs
<i>Euclea divinorum</i>	Mdaa	Stomachaches and chest pains
<i>Prunus africana</i>	Mnandawi	Stomachaches and fever
<i>Ricinus communis</i>	Nyonyo	Laxative, stimulates appetite
<i>Simylux ancepsy</i>	Mkwangasale	Cavities
<i>Solanum incanum</i>	Matulatula	Toothache, earache, warts and skin ailments
<i>Syzygium cuminii</i>	Mvenge	Diabetes, weak gums, wounds and nosebleeds

Species Used for Fruits (Juices)	
Scientific Name	Local Name
<i>Allanblackia stuhlmannii</i>	Mkani
<i>Alsodeiopsis schumannii</i>	Mmavimmavi
<i>Borassus aethiopum</i>	Mtapa
<i>Euclea divinorum</i>	Mdaa
<i>Ficus syconorum</i>	Mkuyu
<i>Flacourtia indica</i>	Mgora
<i>Grewia similes</i>	Mkole
<i>Hoslundia opposita</i>	Mteremtere
<i>Landolphia kirkii</i>	Mlimbo
<i>Opilia amentacea</i>	Mlende
<i>Parinari excelsa</i>	Mgama
<i>Rhus natalensis</i>	Uhehefu
<i>Solanum anguivii</i>	Songwa
<i>Syzygium cordatum</i>	Msu
<i>Telfairia pedata</i>	Ng'eme
<i>Vangueria infausta</i>	Msada
<i>Ximenia caffra</i>	Mhingi

Source: (Msuya and Kideghesho and Moshia 2010).

Species Used for Bee Keeping (Balms)	
Scientific Name	Local Name
<i>Sorindeia madagascariensis</i>	Mpilipili doria
<i>Dichrostachys cinerea</i>	Mkulagembe
<i>Burkea africana</i>	Mkarati
<i>Combretum adenogonium</i>	Mkunguni
<i>Brachystegia spiciformis</i>	Mriti
<i>Parinari curatellifolia</i>	Mbula
<i>Croton Megalocarpus</i>	Zilo
<i>Syzygium cordatum</i>	Muvengi
<i>Acacia albidia (F. Albida)</i>	Mkababu
<i>Brachystegia bussei</i>	Miombo
<i>Uapaca kirkiana</i>	Mguhu
<i>Acacia tortilis</i>	Mgunga
<i>Terminalia sericea</i>	Mbukoko
<i>Combretum molle</i>	Mlama
<i>Albizia versicolor</i>	Mduruasi
<i>Faurea saligna</i>	Mhenyi
<i>Trema orientalis</i>	Mgendagenda

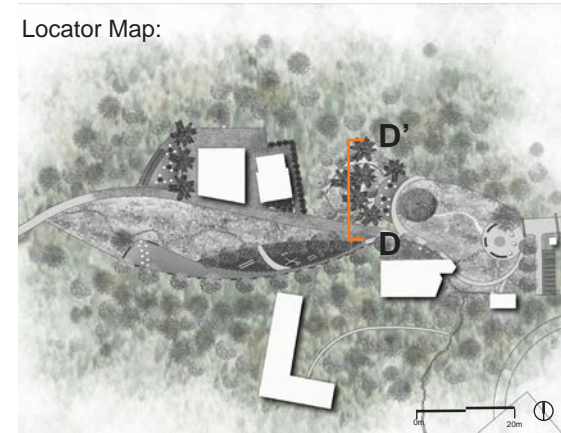
Source: (Ministry of Environment and Tourism 2003).



# The Medicinal Plant Garden

The design of the medicinal garden is meant to act as a refuge, where all the taller species of plants are located in the outer ring of the garden so as to enclose the space away from the rest of the node. The shorter species of plant are located in the middle ring, which makes them easier to observe for visitors.

Locator Map:



## Section D-D':





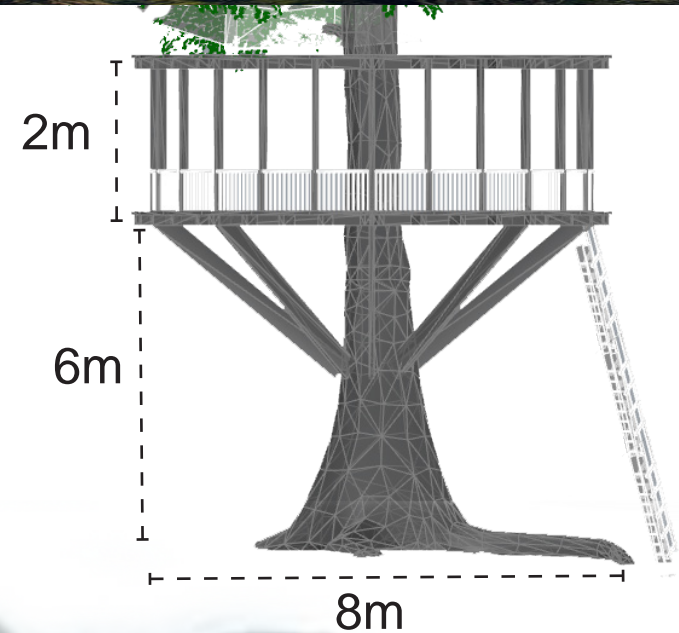


Adapted from: (3D Warehouse 2012).

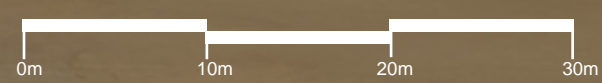
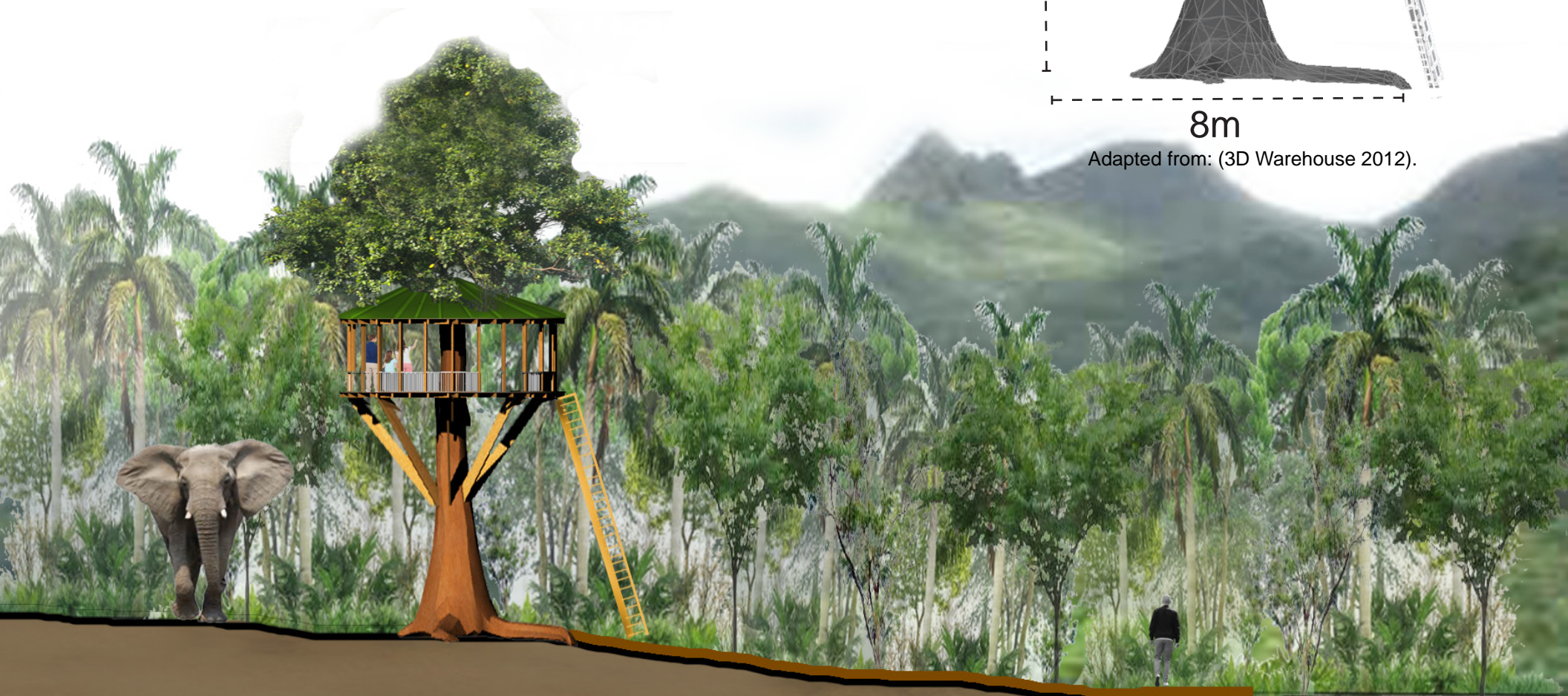
Future development for the park could include observatory tree houses in strategic spots of the park, in order to enhance the visitor experience within the trails themselves. These houses allow visitors to appreciate views, and enjoy spending some time within the forest.



Observatory houses can be implemented in strategic places, including sites that are at higher elevations and that provide particularly interesting views. These houses will need to be at least 6 meters off the ground in order to allow large mammals to pass underneath without any conflicts.



Adapted from: (3D Warehouse 2012).




Adapted from: (3D Warehouse 2012).




# Phase Construction Plan and Funding

As the design presented is a large-scale project and presents many challenges in terms of expenditures, several organizations that could become potential funding partners have been identified. The following table presents a construction phase plan, which indicates a possible order of construction within the project and identifies possible donors within each section.


## Phase 1:

Locations: Medicinal Plant Trail and Garden, Ethnobotanical Pharmacy, and Butterfly Gardens.	
Possible Donors: The International Center for Ethnobotanical Education (ICEE), the Association for Tropical Biology and Conservation (ATBio), Botanic Gardens and Conservation International (BGCI), The World Bank.	

## Phase 2:

Locations: Monkey Tales Educational Exhibit.	
Possible Donors: The Primate Conservation Organization (PCO), The World Wildlife Fund (WWF), The African Wildlife Foundation (AWF), The Wildlife Conservation Society (WCS), The World Bank, The Norwegian Agency of Development Cooperation (NORAD).	

## Phase 3:

Location: Courtyards, connective Walkways, observatory houses, and additional Infrastructure	
Possible Donors: The World Bank, Ministry of Foreign Affairs of Denmark (DANIDA), NORAD	

## Note On Maintenance:

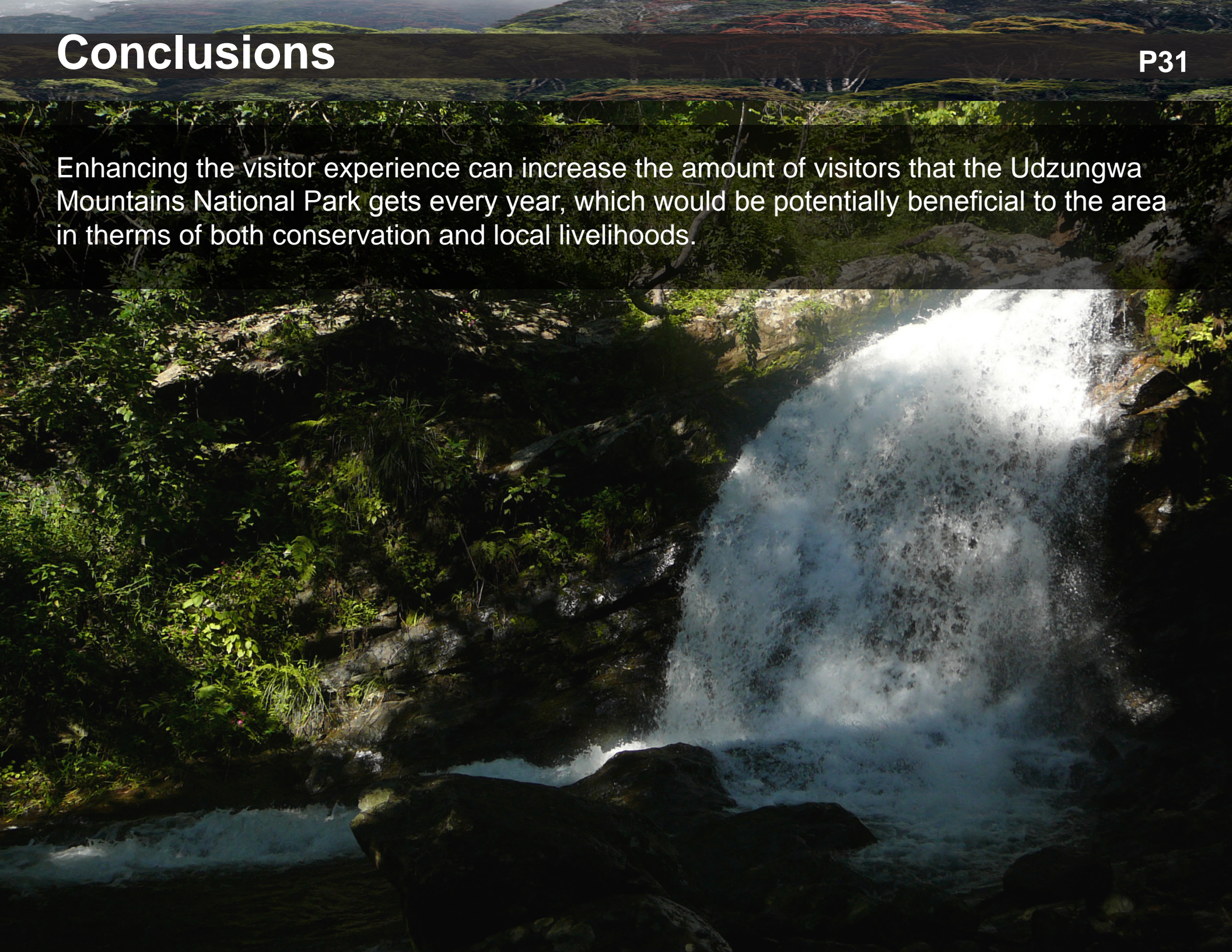
As many of the spaces within the design implement teak wood, all wooden elements will be painted with antiseptic paint in order to assure more long-lasting infrastructure. Additionally, the integration of many new gardens will require higher amounts of plant maintenance than the current state of the node, which will increase current maintenance costs.



# Conclusions

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Enhancing the visitor experience can increase the amount of visitors that the Udzungwa Mountains National Park gets every year, which would be potentially beneficial to the area in terms of both conservation and local livelihoods.





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**Thank you!**

