THE KUSH TRAIL TO PROMOTE PATRIMONIAL TOURISM OF THE ANCIENT AFRICAN KINGDOM OF KUSH, AS A MEANS TO REJUVENATE THE ECONOMY OF SUDAN

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TABLE OF CONTENTS

PAGE

CHAPTER

ABSTRACT i

DEDICATION ii

CHAPTERS

CHAPTER 1 – Introduction 2

CHAPTER 2 – History 2

CHAPTER 3 – Theoretical Case Studies 2

CHAPTER 4 – Challenges 5

CHAPTER 5 – Challenges Case Studies 7

CHAPTER 6 – Methodology 11

CHAPTER 7 – Discussion 11

CHAPTER 8 – Proposal 11

BIBLIOGRAPHY 16

Design Progress and Explorations 18

Design Final drawings 31

Presentation 39

Coloring book Sample 40

DEDICATION

to my family and friends that never doubted me, never called me when am busy, never stopped sending me money when am broke, I love you.

The Kush Trail to Promote Patrimonial Tourism of the Ancient African Kingdom of Kush, as a Means to Rejuvenate the Economy of Sudan

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THE KUSH TRAIL TO PROMOTE PATRIMONIAL TOURISM OF THE ANCIENT AFRICAN KINGDOM OF KUSH, AS A MEANS TO REJUVENATE THE ECONOMY OF SUDAN.

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ABSTRACT:

In the Sudan, decreasing economic viability has depleted the country's capital resources resulting in poverty, unemployment, and inequitable opportunities for its citizens. The paper discusses the following question: can architectural strategies supporting tourism assist in rejuvenating the economy of Sudan?

To address this question, the following case studies are discussed: The Adrère Amellal Oasis project in the Siwa Oasis at the western desert of Egypt. Sudan and its bordering country Egypt, shares history and resources, and the project translates through architecture, how economic sustainability can be introduced into harsh environments through the hospitality industry. At the same time, the tourism of Sudan's regional neighbor Uganda will be reviewed as an economic analysis of the impact of tourism on Uganda. While to better understand the impact of the build environment on an international level, the Boston Freedom Trail will be analyzed as a visual application at an urban scale, which connects historical tourist attractions. These examples have similarities in different aspects that can be abstracted to applicable input in Sudan.

A brief overview of the history of Sudan is offered to present the kingdoms and related tourism attractions with relevant data. Economic based theories can be used to strategize the investment on the short and long term to address how tourism can help save the economy of Sudan. For example, contributions in hospitality and cottage industries, which can be reflected through modern and vintage textile fabrics weaving techniques created within the community, will enhance the overall experience of tourism. In addition to increased tourism, weaving techniques can be translated to architectural facades. The goal of this paper's inquiry is to propose the Kush Trail as an architectural intervention of different projects, that can reflect the identity of a culture, and to invest within Sudan through tourism.

INTRODUCTION:

The republic of Sudan is a country in northern African, and it is classified as the third largest country in the region.[1] Sudan has an important role as a link between Arab and African countries. This paper unfolds the question if tourism can impact the current economic situation of Sudan by investing in the existing assets of culture and heritage, to create revenue that can empower the economy?
Through the study of the Sudanese history and the influence of tourism in developing countries and first world countries, an analysis of how investing in tourism can influence the economy for the short and long term is conducted, to abstract the best applicable materials to the host environment in Sudan.
Three main case studies are examined to understand different conclusions at the economical, architectural and urban level. The case studies are as follows: The Adrère Amellal Oasis project in the Siwa Oasis at the western desert of Egypt. Adrère Amellal Oasis hotel observes a conservative architectural character that was developed for the economical sustainability of its region. Subsequently, the case study of Reviewing Uganda's tourism sector for economic and social upgrading is only concerned with the tangible fiscal outcomes of the tourism sector. Thirdly, an analysis at the urban scale, the Boston Freedom Trail at state of Massachusetts in the United States, considers the link of tourism attractions and their connection within the urban fabric.
Since the early ages of my childhood I was known as an independent talkative child that asks too many questions trying to unfold the world around me. The world in which I lived in, was not surrounded by modern technologies and designs I now experience. Rather, design was constrained with culture, heritage and traditions in a straitened horizon with the idea of protecting heritage. Coming from Sudan, there are societal rules that specifically influence the way in which one carries themselves in day-to-day activities.

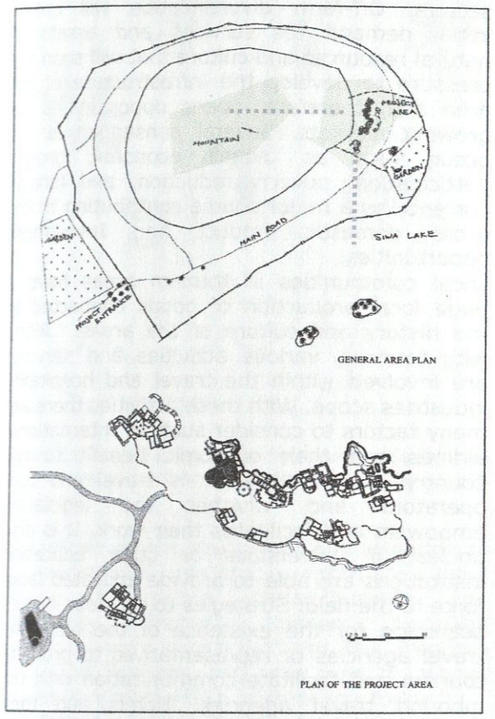
HISTORY:

The ongoing economic struggles and the Sudanese Civil War have a large influence in the existing migrating population. On the other hand, the economy has some potential even though the political policies implied are sometimes bigger than what individuals can handle.
The Sudanese community is facing a vague fate caused by the fluctuating economy and the current government management, resulting in many crises in the country including hunger, genocides, separation, segregation, and racism.[2]
Sudan has been facing an increase currency inflation crisis for the last 30 years with the current old government system. The Sudanese currency had been falling in value since 1989 on a daily basis. However, some days, currency fluctuation can be on an hourly basis. The country has an economic deficit due to the mismanagement of resources with the entities responsible.
Since 1989 the inflation has made many individuals, families, companies and investors to struggle, and they were facing the destiny of whether coming close to declare bankruptcy or collaborate with corrupt individuals to sustain their lifestyle.
The corruption perception index of 2017 had ranked Sudan 175 out of 180 global countries, as the country's economics are believed to be highly corrupt. [3]
The approach of restricting solutions to the economic problem only, and through architecture and design fields, is a reductive thinking to a large coherent problem. Rather, a suggestion of an integrated system of rules and strategies concerning the economy viability of tourism with architectural interventions to facilitate tourism can help sustain the Sudanese economy.
Theoretical

THEORETICAL CASE STUDIES:

The following case studies will highlight the economical and architectural aspects that can be associated with the subject of empowering tourism within a region for economic sustainability.
The Adrère Amellal Oasis project in the Siwa Oasis, at the western desert of Egypt is a seven-star resort made of limestone and concrete blocks, and is considered one of the outcomes of the Siwa Sustainable Development Initiative. This initiative was formed by the private firm EQI (Environment Quality International) with the goal of development of rural areas while sustaining the local community. The opulent resort was developed by Siwa's local community cooperation to insure its vision. The Siwa

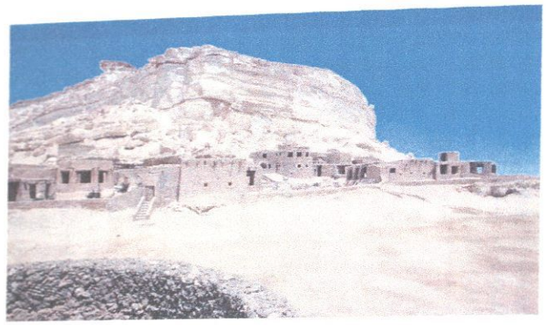
environment is very delicate with water limitations because of its' desert context.[4]



Figure[5]: Site plan of the project and its organic natural formulation as well as the connection with the attractions near it.

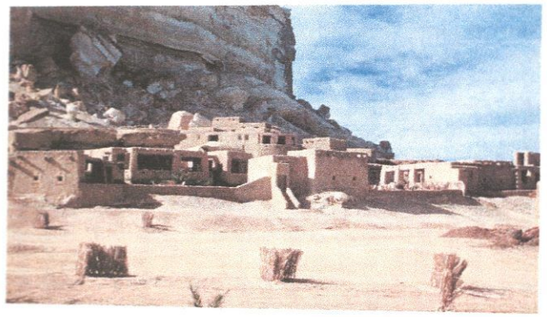
The Community support was introduced by retaining all the Siwans that had participated in constructing the buildings as workers within the complex, while also stimulating cottage industries by providing employment and purchasing the local products of the Siwans. The location of the Adrère Amellal is between the White Mountain and the Salt Lake of Siwa, and is growing in popular attractions within their respected local region.[6]
The main concept of the resort is to provide the tourist with a satisfactory experience through authentic lifestyle. Adrère Amellal will give a chance to its visitors to reconnect with themselves and to have a break from the outside world. The resort does not allow mobile phones within the premises, and electricity is not provided in order to imitate the Bedouin lifestyle of the rural Siwans. Instead, lamps are lit using oil, while gas cylinders are used to heat water. In general, water is supplied from the tank at the highest area in the site and transfers through gravity, in addition, waste - water is recycled.
In order to prevent insects, the palm timbers used in the roofing require regular sparing using salt water. The wind around the hotel is continuously splitting the plaster from the sand walls.
Such repairs require constant maintenance to keep the ecological fabric in the right shape. Therefore, a high maintenance cost is needed to cover the labor -intensive budget. However, all the maintenance costs return to the local community since they are the one responsible for the maintenance, as a sustainable dynamic for the community.
The hotel is considered a seven-star hotel despite its lack of electricity. Room per night is 300 dollars and that price is generally high compared to hotels in the region, but all of this is part of the movement to sustain and revive the area of Siwa.
The project had attracted a great deal of visitors and the area is now developing to attract more tourists towards the western desert of Egypt.
The images show the general location of the site and the connection to the oasis and the mountain and how they resemble the authentic and vintage construction, while still bringing a seven-star service to the area. Egypt is a neighboring country of Sudan and both countries share much history, as both are connected by the Nile River, the main water supply that feeds both countries.

Tourism is a journey of satisfaction or business enterprise. Tourism gives a country the opportunity to have strong currency and high profits if applied and promoted in the best way in international travel markets. Thus, the right promotion of tourism attractions provides an opportunity for the Sudanese economic system to grow and benefit from these sources for accelerated change. Tourism activities and investment is a good way to lead to economic prosperity in the country and raise the quality standards.[7]



Above: The luxury resort sits on a 60-hectare site at the foot of the Adrère Amellal Mountain.

Below: The entire complex is constructed in the local architectural tradition of kershef stone walls and palm roofs. In some cases mud brick was used.



Figure[8] :Pictures of the project

The second case study, within the region of Africa, is concerned with the economic benefits a country can achieve by introducing tourism to its economic system.
In "Reviewing Uganda's tourism sector for economic and social upgrading "by Francis Mwaura and Solomon Ssekitoleko, both Uganda and Sudan are developing countries with an export-oriented economy according to the Economic Complexity Index (ECI).[9]
The export-oriented economies focus on increasing productivity and exports. The case study is an economic analysis paper identifying the benefits of tourism in a tangible manner considering Tourism leakages.
The authors also address the benefits of the tourism sector to the capital resources of Uganda that can be later on realized in Sudan. Sudan can profit from employment and off-farm diversification. Off-farm diversification is the strategy by which a farmer can add a potential source of income in addition to his farm using untapped resources or meeting unfilled local demand such as taking care of a tourist attraction.[10]

This will upgrade areas that have limited attraction opportunities for development sectors. Off-farm diversification will create initial demand for services and assets of natural resources and culture that will soon put pressure to develop the infrastructure of the area and, therefore, opens opportunities for growing markets. Several consequences will occur such as overall economic growth participation, poverty reduction, and foreign currency as a major source contributing to the gross domestic product and Investment opportunities.
Local communities in tourism areas have a huge local production of goods connected to the history and culture of the areas. Along with tourism, various activities and services are involved within the travel and hospitality industries scope. With these activities there are many factors to consider such as International airlines and their economic benefit to the country. Another factor is travel and tour operators and whether the legislation empowers and facilitates their work. It is also unclear if universities or other education institutions are able to provide educated labor force to the field. Strategies to consider include searching for the existence of the outbound travel agencies or representatives to promote tourism and facilitate communication with the inbound travel agencies. Hotels and their classification should be noted, and rating hotels would assist the country's mechanism for assessment.
By incorporating some of the tourism strategies noted by the authors, Mwaura and Ssekitoleko a total framework (Fig.1), can be considered to support an architectural program and design to upgrade Sudan's tourism sector. The total framework will be poor if not bounded by the right supporting elements indicated in the case study, and it will be hard to implement any architectural or physical plan to upgrade the sector.

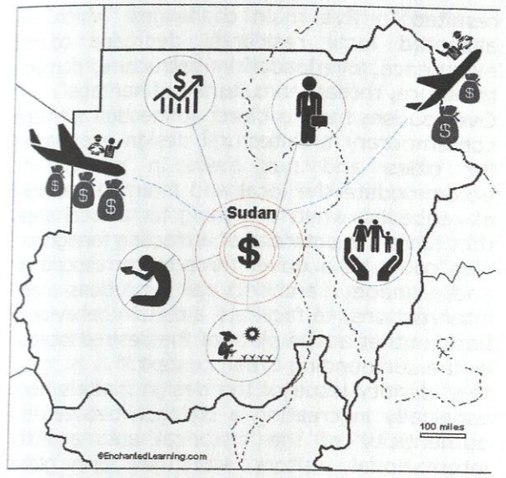


Figure 1: General Diagram of the benefits Sudan can achieve from tourism abstracted from the points mentioned.

The following case study will draw attention to an international case study, within the United States of America, Massachusetts, and specifically Boston. Sixteen historical landmarks were connected with The Freedom Trail. The Freedom trail was able to attract tourist from all the USA to empower tourism.
The Freedom Trail in Boston, Massachusetts, is a brick marked path that connects significant diverse locations of the history of the United States. The idea of the trail was first introduced by local journalist William Schofield in 1951. Schofield suggested building a pedestrian trail to link important local landmarks that was executed by the year 1953. By the year 1953, the trail annually hosted 40,000 people. According to the Freedom trail foundation, the trail has more than 4 million people a year weighed against 22 million visitors to Boston annually. The Freedom Trail helped in the creation of opportunities in the fields of education, tourism and hospitality with annual spending estimated over 1$ billion.[11]
The Freedom Trail has minimum construction but revives the city of Boston in a way that highlights the historical buildings, and can be a true guide for tourists around the city. Using such a strong physical line may affect the prices around the area that surround the trail to rejuvenate the urban fabric, the economy, and the dynamic of the city.

Whether the intention of this trail is to upgrade certain areas or not, the trail definitely did. The opportunity to consider similar tactics used in the Freedom trail to connect important historic events in particular areas in Sudanese cities as well as landscape is an exciting proposition.
The first precedent study of the Adrère Amellal hotel was only focusing on the economic aspect of tourism and how it can be quantified. While on the other hand, the Boston Freedom Trail is a visual physical application of how a simple coherent project connecting historical events can be translated to a thoughtful approach for development along the trail. The Freedom Trail will influence how a large footprint of historical sites can be connected in an urban fabric and how this can influence the value of the surroundings neighborhood regarding infrastructure and services.

CHALLENGES:

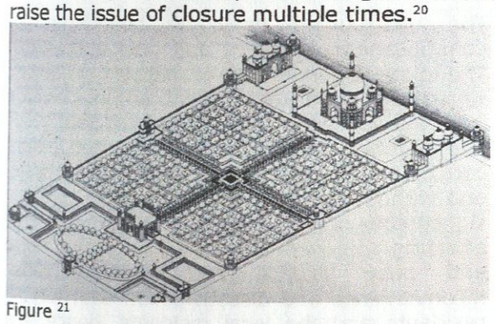
The Impact of addressing tourism as a solution, can actually face two major challenges, which are the infrastructure and the mass number of tourists, which can destroy the ecological atmosphere of the attraction sites. The main goal is how to respect and sustain tourism in regard to the architectural interventions at the historical sites themselves, and the overall urban context.
Overtourism is the unaccepted deteriorated quality of experience of the tourist attraction.[12] It's also defined as the contradictory meaning of responsible tourism which is concerned with the how visitors may experience a place in a respectful manner that respect both, the destination and the guest. It can also be defined as "an excessive negative impact of tourism on the host communities and/or natural environment".[13]
Overtourism is a global issue and affecting many countries and monuments like; Spanish Steps in Rome, Italy- Mount Everest - Nepal, Barcelona, Spain - Venice, Italy - Machu Picchu, Peru - Cinque Terre, Italy -Santorini, Greece and multiple UNESCO Heritage Sites.[14]
Big cities generally have the infrastructure capabilities to host and serve multiuser environments, that are basically looking for a diverse and a dynamic population to engage with. These cities can host domestic and international tourists whether they are coming to visit relatives, leisure, or business. Until recently, the travel industry was viewed as one

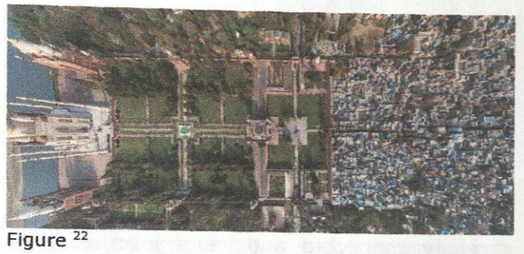
of the more practical financial development techniques for urban communities.[15]
Particularly in the aftermath of the economic crisis of 2008, it was viewed as an important driver for economic recovery or growth, and it was given plenty of scope to develop, thus reinforcing the relative importance of the industry in city destinations.
What is evidently happening is that with the growing number of tourists, the pressure on the existing infrastructure, that was initially designed based on the local demand, from public transportation, infrastructure, museums and other tourism related functions, is increasing tremendously and could reach to the point of collapse if this was not addressed carefully. Not only that, but the trend of the online accommodation facilities and the authentic lifestyle experiences, had created a dispersant pattern of tourist allocation and uncontrolled distribution, and therefore, the intertwining of that with the local life and outside the main tourist areas in cities.
In spite of the fact that the issue is most conspicuous in European urban communities, similar sentiments have been accounted for in different destinations as well, for instance tropical islands, hiker ghettos, or even ghettos.[16]
Overtourism is a highly complex, opaque phenomenon, that manifests itself differently in diverse city contexts, depending on the particular issues underlying it.
From the 1960s, authors had previously examined the manners by which the travel industry contrarily influenced tourist destinations. The idea was to discover the limit concerning the quantity of explorers who could visit, without genuine negative results, which might be higher or lower depending on the physical attributes of the city and travelers' behaviors, loyalty and pride.[17]
Thus, researchers have confirmed later on, that looking only at the number of tourists as a determining factor, is a reductive approach to a larger coherent problem, and that there are more factors involved such as visitor behavior, timing, concentration, location, and experience with tourism and local etiquette. All of these are yet subjective in their results, according to the tolerance of the host community towards tourist, which also have variable tolerance of their individuals depending on their various interests.[18]
A study conducted by the World Travel & Tourism Council partnered with McKinsey & Company, on the effects of overtourism, resulted in five main challenges "which are alienated local residents, degraded tourist experience, overloaded infrastructure, damage to nature, threats to culture and heritage".
Overtourism have a direct connection with the contemporary architectural design approaches for cities and put them in pressure to accommodate the local and international brief of requests, when designing for a local area, that have the potential of attracting foreigners. This could be a driver force to correspond to, and shape architectural solutions and interventions, to facilitate a certain behavior or ban another at the place of the desired location or the surrounding urban context.[19]
The identity issue of the design matters here, especially in creating a dialogue between the authenticity of the historical area and the international visitors with their own global demands. The issue will have cultural, political and social dimensions involved that will have a direct and/or indirect effect on the architectural theories and practices. All those factors will determine how to tackle the problem and the contemporary architectural intervention that will take place in the area.
In this paper, few case studies were addressed of successful and failed experiences to overcome overtourism's ecological or economical destructions. The idea behind the case studies is not to address the issue itself of overtourism, but to expand the horizon of the social political and cultural problem and their translation into the contemporary built environment whether architectural or urban interventions. Those case studies were chosen to highlight how the architectural theories should expand and reshape to contain the past, and to use the history as a tool to redesign and reshape the architectural environment or the urban fabric for the benefit of the historical monuments and the resident beneficiary, while granting both satisfactions.
This issue of overtourism will face rebranding a lot of cities, when and how to highlight historical or contemporary destinations through marketing and design strategies, and have a direct effect to my master thesis topic "The Kush trail to Promote Patrimonial tourism of the Ancient African kingdom of Kush, as a means to rejuvenate the economy of Sudan".
Many approaches to protect historical sites has been only concerned with banning certain behaviors at the tourist attraction itself, but the case studies will address the bigger context of site planning, facility utilization and urban context parameters as a means to limit

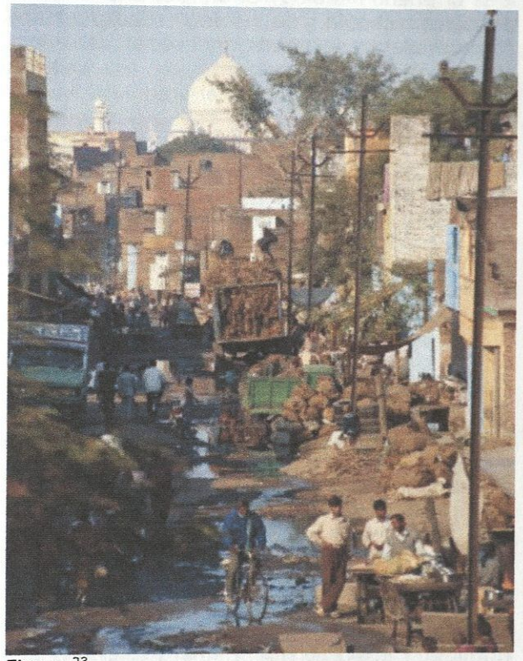
destruction to heritage and facilitate tourism in the best possible way.
This approach will question the reality of architecture since those monuments were built to resemble a true and honest spirit of their time.
Thus, by questioning the reality of Architecture, the issue of addressing the importance of that history in our contemporary world design approach and how carefully this should be addressed for the benefit of the contemporary world, will then be addressed.
Those case studies include Taj Mahal as a study related to a larger urban design problem, Egypt as a close up to how design parameters can reduce the overcrowding of tourists, Kyoto successful experience in steering crowds and Sudan preservation strategy in Meroe Royal Bath Design Proposal

CHALLANEGES CASE STUDIES:

This issue for example can be observed in the gleaming white marble of the Taj Mahal in Agra, India, which was built by the Mughal emperor Shah Jahan as a mausoleum to his wife Mumtaz Mahal. It has become discolored as a result of pollution in the surrounding city of Agra, in Uttar Pradesh state.
The court noted that the authorities were allowing expansion of industrial units near the monument, worsening the problem. Not only this, but the behavior of tourists and their lack on consideration of how the monument should be carefully addressed, had the government raise the issue of closure multiple times.[20]


Figure [21]


Figure [22]


Figure [23]

This issue in particular address the larger context of urban design around monumental destinations and how this should be carefully monitored to respect the heritage sites.
Although they are many reasons for this discoloration, and primarily there are being addressed as air and water pollution, but the larger number of tourists are affecting the surrounding site and causing a deteriorating life.
The impact of this examination is to highlight the possible destruction caused by the surrounding neighborhoods on the monument, and on the other hand the overload on the infrastructure of those neighborhoods caused by the overtourism.

This idea addresses what has being mentioned earlier of how to carefully monitor the number of tourists which are highly encouraged for economic reasons, but yet control the effects of those numbers. Not only that but to also address the issue of residents handling those tourists in a respectful manner to their towns and habitats.
Those surrounding neighborhoods should be carefully connected and redesigned with the idea of phenomenology of a place and whether a place should be solely designed to accommodate the needs and social behaviors of its permanent residents or as well as tourists'. The fact that a local area with limited capabilities is trying to accommodate international demand, is causing the site context to be toxic to itself. Thus, between Regionalism and critical regionalism Architecture relies the solution of the problem.
The Second case study is in Africa. Egypt has been known for its tourism since long time ago and throughout the Mediterranean coastline it stands out significantly for tourists. It has a rich content of important archeological ancient site of the pharaoh's kingdom. Those sites had been attracting millions of visitors annually. Even though there is a significant care of the urban fabric around those monuments but concerns were raised about the potential harm of the increased number of tourists in relation to the deteriorating condition of the monuments.[24] The Climate change is already affecting those monuments, but with the erosion, it's believed that tourists can speed up the aging life of the archeological sites faster than the climate change will. The increased humidity caused by the number of people have a direct link to the wear out some of the walls and artifacts. [25]
Such concerns had led to further expansion of Grand Egyptian museum that have the capacity of displaying large monuments in a controlled environment to ensure its protection. Even though that this solution can be redundant to a lot of factors like size of the monument and the experience of the monument in its natural habitat, it has the potential for tackling the issue of monuments and archeological preservation.

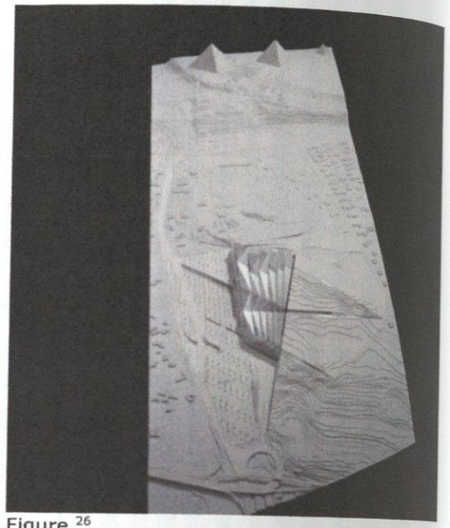


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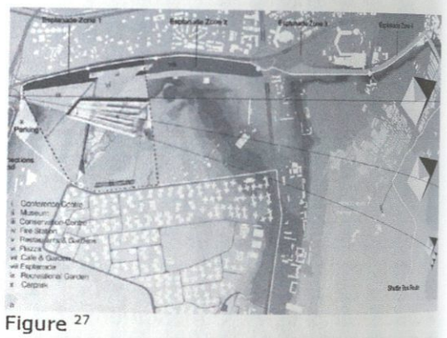


Figure [27]

The overtourism have no boundaries or consciousness of where and how it happens. The exploitation starts to happen gradually, which will then recommend an intervention from the academic and the business field.
The number of visitors as mentioned before can be the main trigger for raising the issue and without approaching the problem carefully sightseeing can lead to bigger problems effecting the overall city such as traffic, noise and busy streets. All of these cause inconvenience and dissatisfaction both for the residents and the local residents, hence, the experience could get spoiled.
This particular project for Grand Egyptian museum is a similar approach to re-telling a story of the acropolis museum architecture by Bernard Tschumi. The fact that this project was not based on the movement between the ancient sites and the modern museum but rather defined by visual axes extending from it

towards the three pyramids, is something to consider when actually taking those artifacts and in the impact of such separation on the tourist movement pattern. Space, event and movement are important factors to determine the design that will allow the attraction of the tourist who are looking for the authentic experiences they are looking for when visiting the archeological sites themselves verses museums.[28]
This Project shows the effect of overtourism and the solution that was approached and whether the project aims to only protect the artifacts without the proper care of the attraction of same or more tourist number, or both was considered the numbers of visitors and the quality of experience will determine such decisions.
Asia is full of Countries who found themselves suffering from the overtourism issue because of the natural scenes and rich heritage, and one of those is, Japan.
By 2020, Tokyo Olympics and Paralympics will take place and Japan had a target to increase the number of tourists to quadruple. Kyoto as one of the most popular cities, and which attracts more than 50 million tourists annually, is subjected to be exploited by overtourism, as a potential risk with that goal.
Kiyomizu Temple is one of those heritage victim sites which overtourism is taking place in, causing increased congestion, and noise pollution especially in the fall. Residents who need and depend financially on the tourism industry, are suffering from the crowds and the traffic on busses and other transportation systems.

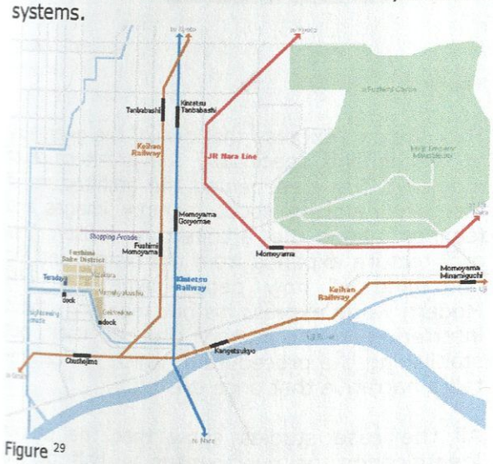


Figure [29]

The government had taken serious steps for tackling such problems and the way it was done, which was by dispersing crowds but yet maintaining the same number of tourists. "key is to disperse crowds in crowded times, crowded areas or crowded seasons". [30]
These solutions will have their effect in the built environment any will require design interventions. One of those time dispersion methods will be effective by promoting specific daytime sightseeing. The effect of this and maintaining a function of a site within limited hours will have its effects on the need's tourists may have by a certain time of the day. Those needs of earlier sightseeing will reshape the neighborhoods around the monument, to coffee and breakfast hubs and may be sunglasses stores. Others districts tried the dispersion by steering tourists from crowded destinations, creating other different attraction destinations outside the busy area. The potential of this solution depends when, what and where you will create as an intervention on the built environment genuinely.

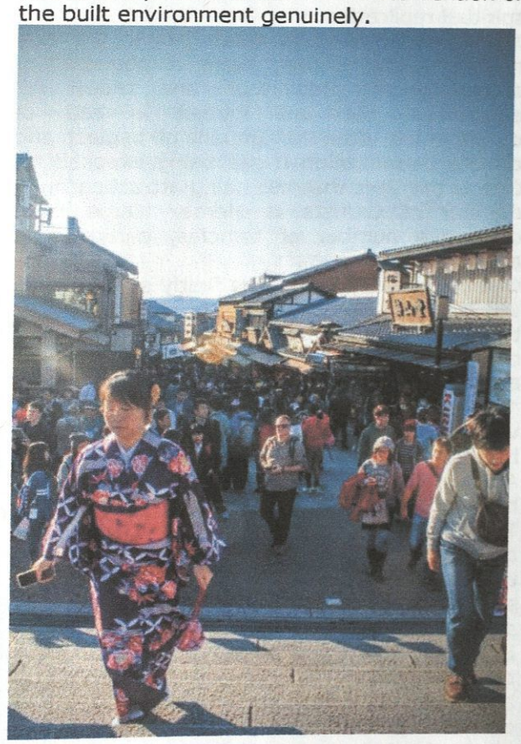


Figure [31]

The last method of dispersion Kyoto had practiced was the seasonal dispersion by promoting Autumn foliage and summer fresh green apple leaves.
Such efforts in understanding the main problems causing overtourism is the key to solve it and prevent it from happening in another location in the future. Kyoto was successful addressing the issue, and the method of dispersion was a good method to maintain and increase the number of tourist but balancing the load on residents and local infrastructure. This particular case provides solution that need design interventions to execute new hubs that can play a key role to disperse the tourist movement pattern either throughout the area, time of the day or time of the year. The new hubs have to address the issue of Historicism and the spiritual Urbanism since tourist are looking for those cultural historical specific experiences and will not want to be addressed with a traditional international hub that lacks the historical abstraction or spiritual replication.
The kingdom of Kush which lies in the Nile middle valley, Sudan, have a potential of archaeological sites that are ready for exploration but are indeed in-need of conservation after the amount of neglect and climate deterioration it has being exposed to.
One of the sites that has being attracting quite number of tourists is Meroe. Meroe have distinctive number of temples, palaces and pyramids.
One of those is, which was firstly excavated in 1912, Meroe Royal baths, is a genuine design that expresses a great authentication of the cultural exchange between the roman culture and African kingdoms.
"The Baths themselves are considered very valuable since it's the only one in Sudan having a Romanian style building in central Africa isn't common that shows the relationship between the Mediterranean and Africa".
The bath is hydraulic facility with a large basin that was combined with the royal palaces for the use of kings and queens. The colorful walls surrounding the site was decorative and have several pipe accesses for the water to come in.
In-order for such site to be visited normal tourism number can destroy it in no-time and any mass tourism with the wrong behavior can cause a quite destruction for the site. After excavations recently made by the German institute it was advised to find a solution to protect the monument, but yet attract tourists. A shelter was proposed for the site that will add long-term durability inspired by the monument design philosophy. The idea of the design is to maintain a controlled humidity and climate conditions that will protect the fragile historic antiquity and create optimal interior climates for the artifacts. A site like this have the potential to expand the tourism dialogue and affect tourism in Sudan.[32]



Figure [33]

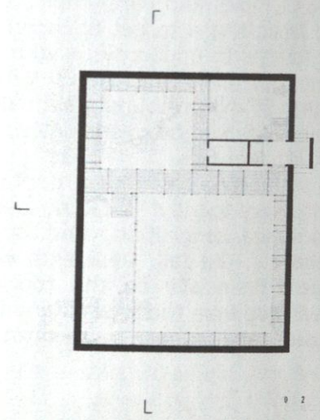


Figure [34]

This site can express the idea of the geometry of feeling and specifically the architecture of memory. The idea behind the architecture of memory revolves about memory images and feelings about the architecture facility. This architecture expands from the history and the reimaging of how people lived. The way Modern world express historic memory without interfering in the history dialogue itself, but stablishing the procedure in which you can re-tell a narrative that once existed.

All the case studies show that the proper identification of overtourism is half of the answer, and by actually defining the goal whether you want to limit a specific number or a banning a behavior or any other reason, a contemporary design theory can help in defining the architectural intervention that can be introduced to compliment the regulations of the new agenda. Tourism a door for telling and re-telling narratives that either existed or fictions. The global issue behind tourism and overtourism is affecting the world with the fast movement facilitation, and the need for interaction and to tackle such a problem it will always be a question of whether there is a global design strategy that work anyhow and anywhere to accommodate diversities that are generated in those locations.

METHODOLOGY:

The thesis will develop criteria of the attractions that could be attracting to the tourists while maintaining their safety. The methodology involves choosing the best sites that represent the heritage of Sudan and have the characteristics to attract the global tourists with their different backgrounds. The tourist attractions focus on existing archeological sites that have historical significance and value.

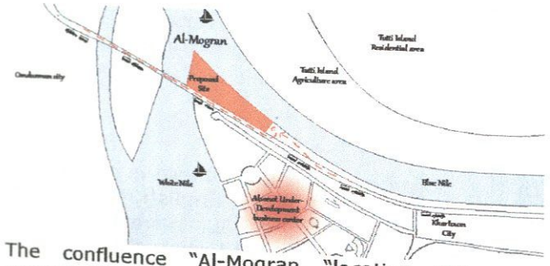
DISCUSSION:

In the Sudan, tourist attractions will help in creating a new recreational area that serves in the improvement of both the local and national economy. Sudan can utilize the touristic attraction to enhance the diversity in tourism patterns, precede attention of the importance of archeological sites in Sudan, and to the Kush kingdom in particular. This will increase the social connectivity between people and will provide new job opportunities, thus, the enhancement of the economic level in the country. Archeological sites that get promoted as touristic attraction serve the people in the fields of: recreation, culture, social and tourism. At the same time, it promotes the regional economic development through tourism. Not only Tourism helps in the economic growth but tourism serves in the achievement of cultural exchange between people, identifying Sudan's cultural heritage and highlight the Sudanese identity in the framework of modernity.
When we come to think of tourism people often get the idea of outbound travel, however, most of the tourism is domestic or local where people travel within the country borders. Domestic tourism can give the underdeveloped suburbs a chance to equalize with the developed cities within the region by re-spending money through tourism in those regions. Industrial countries dominate the domestic and foreign tourism industry where Europe, North America and pacific sea region take the large share with more than two thirds of the international tourists.
Sudan has a great deal of tourism characteristics in every aspect, whether geographical, historical or cultural. There are many potential areas that can attract tourists to them such as: in the northern region lies the Nubian kingdom that stretches to thousands of years of build monuments such as temples and pyramids, while in the east region the red sea attracts tourist to the city of Port-Sudan, which is filled with a rich sea life. The west region of the country is filled with Sahara desserts with endless volcanoes, while the south is filled with beautiful agriculture with a rich wild-life.
Sudan is characterized by extended cultural history, distinct location in the heart of Africa, cultural variety and diversity in climates, natural habitats and reservations parks. But meanwhile it also suffers from numerous hindrances such as the lack of investors, weakness in tourism infrastructure, insufficient legislative applications, increased prices, inadequate environmental and tourist awareness, and insufficient statistical analysis data for tourism.
The Ministry of Tourism, Antiquities and Wildlife of Sudan states that the number of tourists and tourism revenues in Sudan during the first quarter of this year increased by 4%, and announced the discovery of 196 new archaeological sites, all found in the northern state.[35]

PROPOSAL:

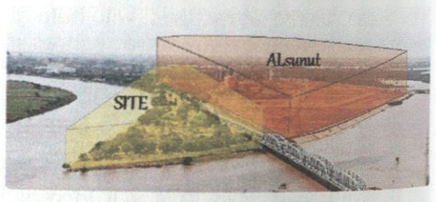
In the Holy book of Quran there is a verse in Surah Al-Anbiya (30) in English translation, Sahih international: "(21:30) have those who disbelieved not considered that the heavens and the earth were a joined entity, and we separated them and made from water every living thing? Then will they not believe?" [36]
The verse speaks about how every living thing was made from water. This verse along with the quote of Giorgio de Santillana and Hertha von Dechend, Hamlet's Mill "A river is like the flow of time", are the inspiration behind choosing sites to represent the design proposal

for tourism locations that can rejuvenate the Sudanese economy.
The sites were chosen to resemble a story of life, the story of the Nile and how it carried its identity from its' African routes and towards its' Arabian destinations. The Primary tributary of the Nile River is the White Nile which flows from the Great Lakes in central Africa. However, most of the water and silt comes from the Blue Nile which rises from Lake Tana in Ethiopia. Both rivers merge at the confluence in the northern part of Khartoum capital city. The Blue and the White Nile are to be considered the two main tributaries for the Nile River. The Nile River then completes its journey northward through the northern desert towards the Egyptian Delta, and ending with the Mediterranean Sea. The peoples of the kingdoms and civilizations of Sudan and Egypt had relied since ancient times on the river. Most of the cultural and historical sites in the Nubian civilization extend along the banks of the Nile.[37]
The sites reflect the main concepts of my case studies, which was to focus on the urban scale and the micro-scale of one architectural project. The main Idea is "Water and life" and this idea connected with the historical sites and kingdoms that are located near water sources. Water carries the identity of Sudan with it from from the upstream to downstream.
The location where the two Niles meet is known as "al-Mogran" (المقرن; English: "The Confluence") is the first point where my project begins.



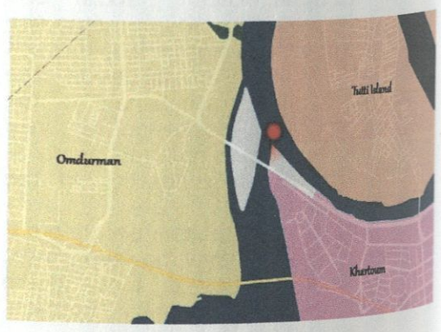
The confluence "Al-Mogran "location and accessibility

The site is located at the confluence of the two Niles and is surrounded by a mix of rural and urban spaces. It is occupied by a park that has been almost fully abounded since a tragic accident took place in September 2002, when a violent air storm accompanied by rain caused the concussion of one of the games of the Al-Mogran family park and the fall of those on board, especially children, where 17 people died. Since the incident took place the park was abandoned and the government had been trying to utilize the land for other purposes but with rejection from the public. The site serves a great location to attract the story of the Nile and the African routes Sudanese inherit from its south. This site has the ability to attract tourists from the Southern part of Sudan and those who wants to continue the discovery of the Nile from its routes to its downstream.[38]
The Confluence is located at the capital city of Khartoum which had been growing rapidly with 7.3% annual growth rate since 2000. However, the change in urban extent density was 0% annually at the same year of 2000. This could indicate that the growth is not concentrated at one area. The land is almost flat with a few changes of levels that are below 2 feet. The land use around the site varies but the nearest location is Alsunut business center that is yet to be developed to become the downtown for Khartoum with thousands of acres of commercial, residential and office buildings. The lot for the Almogran project is still under construction and three high-rise buildings are constructed and occupied till now.

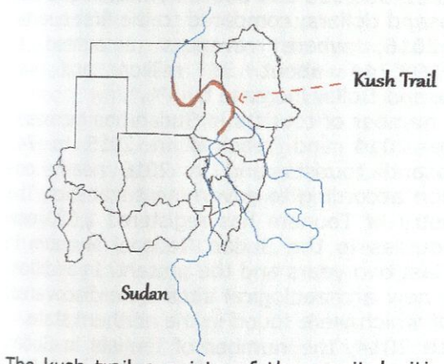


https://www.skyscrapercity.com/showthread.php?t=635501

The site is not yet included in any development plan rather it's presented as landscape and not utilized for any specific function. The Site is characterized by the great views to Khartoum, Omdurman, and Tutti Island.[39]



The following destination is an urban fabric that connects all the major cities in the Nubian / Kush kingdom that will be referred to as the "Kush Trail". The northern section of the river flows north almost entirely through the Sudanese desert to Egypt, then ends in a large delta and flows into the Mediterranean Sea. "The ancient Sudanese and Egyptian civilizations had relied upon the Nile river as their main water-source. Most of the social and cultural destinations are found around the Nile valley, north of Aswan, where large number of populace and urban communities are centralized." [40]
The Kush Trail is a virtual string of historic sites along the Nile that retells the history of the Kush kingdom. The Trail should include most of the significant archeological sites within the Kush kingdom. The kingdom of Kush shares most of the history of Sudan's current identity, as Sudan was once named the land of Kush. Possible connection of sites will be examined and whether one site can be distinct in resources for attractions.



The kush trail consists of the capital cities of the kingdom. Kush was centered at Napata at the area of Karima nowadays during its early phase, and during classical antiquity, the Kushite imperial capital was located at Meroë. The Kush trail is about 850 miles if it was to be connected using straight lines from one point to another. This trail will connect the archeological sites of Amara West, Sai Island, Sedeinga, Soleb, Sesebi, Tombos, Kerma, Elkhandag Town, Old Dongola, Jebel Elbarkal/ Karima, Nuri, Dangiel, Merowe, Musawarat Elsufra, and Khartoum.
All the locations are not utilized for tourism but rather few private agencies and tour operators conduct tours along the trail.

Name	Distance from previous in KM "1st location is Egypt border"	in Miles
Amara West	218 km	135.459
Sai Island	8 km	4.97097
Sedeinga	16 km	9.94194
Soleb	27 km	16.777
Sesebi	31 km	19.2625
Tombos	48 km	29.8258
Kerma	15 km	9.32057
Elkhandag Town	146 km	90.7202
Old Dongola	54 km	33.554
Jebel Elbarkal/ Karima	106 km	65.8653
Nuri	35 km	21.748
Dangiel	318 km	197.596
Merowe	173 km	107.497
Musawarat Elsufra	62 km	38.525
Naga	21 km	13.0488
Khartoum	98 km	60.8944

The large footprint of the trail will be the main challenge beside the limited infrastructure along the trail. Farming and trading are the common source of income in the area and the off-farm diversification could be introduced to increase the economical state of the population. The trail will give the opportunity for the inbound travelers to explore their ancestors' history. The capital monopolized most resources and with the accelerated movement, the trail can generate equivalent distribution of money to develop cities. The out-bound tourist will explore the different archaeological sites along the trail, as well as, to experience the lifestyle of the villagers that could offer their cottage industries as souvenirs or services to the tourists.

The Kush trail consists of the capital cities of the kingdom. Kush was centered at Napata at the area of Karima nowadays during its early phase, and during classical antiquity, the Kushite imperial capital was located at Merowe. The third approach to emphasize the Kush trail suggests focusing on capital cities of the Kush kingdom Kerma, karima "Ancient and Napata", Merowe.

The capital city if chosen will have a précised approached on redefining the main sources for tourism and cottage industry.

The first capital to be discussed is karima "Ancient Napata". The Kingdom of Napata was founded by the Nubian king Kashta, the founder of this state, and established a Nubian state whose capital was in the city of Napata, near the fourth waterfall. It emerged in the region as a significant force.

The center of this kingdom is Jabal al-Barkal 2 kilometers north of Karima and about 1.5 kilometers from the Nile. It was called the Holy Mountain. Napata was a religious capital with pyramids of some kings in the style of the pyramids, but it is smaller. Graves were found in the area of Kurru, 12 kilometers south of Napata, where for the first-time bodies were found stuffed in coffins.

The site of the Ancient Napata in Karima has been a major attraction to the tourist and the city itself is advanced compared to nearby cities and villages. The train is an option to reach the city from Khartoum. The city has water and electricity and some facilities such as a guest house, post office and clinics.

The location is characterized by its relative distance to most of the pyramids at the area and the Nile.

The ancient city of Merowe in the Shendi region of northern Sudan was one of the oldest capitals in ancient history. Meroe was a fertile capital of the Nubian kingdom, in the times of the Pharaohs, the Ptolemaic and the Romans, and had strong relations with the African peoples to the south. It was called Medway and Merouwa. Now, it is a UNESCO World Heritage Site.

In addition to some temples and other monuments, the area contains 220 pyramids, which served as shrines. It is called the Nubian pyramids for its difference in size and building standards from those Pharaonic to the north within the Egyptian borders. Most of these pyramids are still in the waterfalls between the fifth and sixth waterfall. The date of its creation dates back to the period of the Merowe kingdom, which extended from the 6th century BC until the fourth century AD.

The site is characterized by its relative distance to most of the pyramids at the area and the Nile. It could be reached from the capital city of Khartoum either by train or by car.

The two capitals have almost the same characteristics in regard to the attraction zones and archeological sites. The capital can be utilized with respect to the urban ecological environment to develop a tourist attraction that retells a story of an ancient kingdom.

These locations of the Confluence "AlMogran", Kush trail and Kush capitals are within the plan of development of the Ministry of Tourism of Sudan.

The performance report of the Ministry of Tourism for the last quarter of 2017 to the National Council stated that the number of tourists during the first quarter of 2017 year amounted to 202.923 thousand tourists, compared to the first quarter of previous year 2016, which registered the entry of 194.560 thousand tourists, an increase of 4%.

The total revenues for the first quarter of 2017 reached 308'996'254 about 38 million and 547 thousand dollars, compared to the first quarter of 2016, where revenues amounted to 500'198'244 about 36 million and 448 thousand Dollar increase by 4%.

The number of tourists in Sudan has increased since 2014 and reached in 2015 to 741 thousand tourists and in 2016 nearly one million according to government statistics. The Ministry of Tourism has registered 1,000 new antiquities in the Sudan National Museum in the last two years and the present. In addition, 196 new archaeological sites were discovered, all of which were found in the northern state.

Since 2014, the number of tourists in Sudan has increased, reaching in the year 2015 to 741 thousand tourists, while in 2016 nearly one million, according to government statistics.

The Ministry of Tourism expects the number to double to 2 million this year after the Sudanese and Chinese governments signed several agreements in November, including an agreement to facilitate the entry of one million Chinese tourists to Sudan in the coming month. According to a five-year government plan announced in 2015, the government aims to raise the number of foreign tourists to five million by 2020. Tourism revenues in Sudan reached $ 1.5 billion last year and are expected to reach $ 5 billion after the end of the five-year plan in 2020, a figure equivalent to more than a third of the budget revenues of about $ 14 billion this year. The country lost 80% of the hard currency sources, when South Sudan split, occupying three quarters of the oil fields, and accounting for more than 50% of public revenues.[41]

The statics and the facilities and attractions available, demonstrate the opportunity of developing such project for the benefit of tourism and hospitality industry within Sudan. With the right choice of design proposals Sudan can be able to enhance the tourism sector and hence the economy of Sudan. Promoting patrimonial tourism of the African kingdom of Kush, as means to rejuvenate the economy of Sudan.

The Design proposal have 4 main focus locations that will include architectural interventions to utilize them.

Before coming to conclusions, extensive research had taken place for precedents to abstract applicable approaches that could be useful for the design process.

The design process takes the subject of archeological resources management in relation the kingdom of Kush with specific attention to amenities and facilities needed to promote tourism at the northern region of Sudan. The Kush Kingdom has sustained many archeological sites from different historical periods, which need integrated protection to guarantee the continuity of its cultural and economic importance which can be used in tourism investment. there are also many natural resources which qualify to be tourism attraction.

The footprint related to design have important archeological sites in for their historical, economic and political importance in medieval and post medieval period in Sudan. The site includes several important Christian and Islamic architecture examples such as churches, monasteries, palaces, houses, mosques, Khalwas and cemeteries.

The study sets a plan for the management of the site, setting more specific attention to discuss the current condition of each building to know it's threatened to protect it, and construct a development plan to manage all the site, following methods of integrated management, which are represented in legal, administrative, technical and security protection. The Design Proposal also attempts to set a plan to use the site in the domain of tourism investment, using other natural fields of tourism attraction in the place such as Nile and desert. Linking the plan with general planning of tourism in the region.

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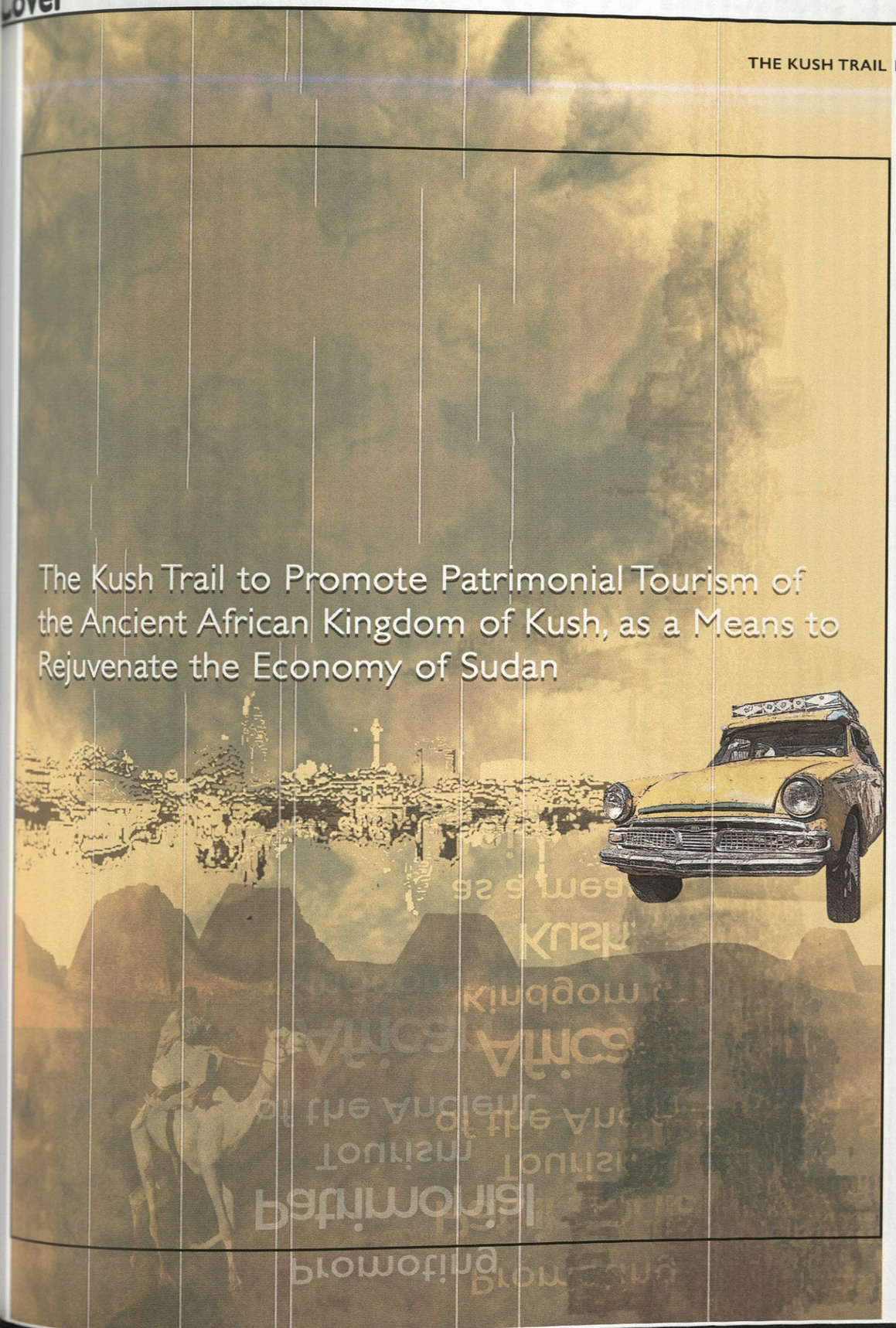
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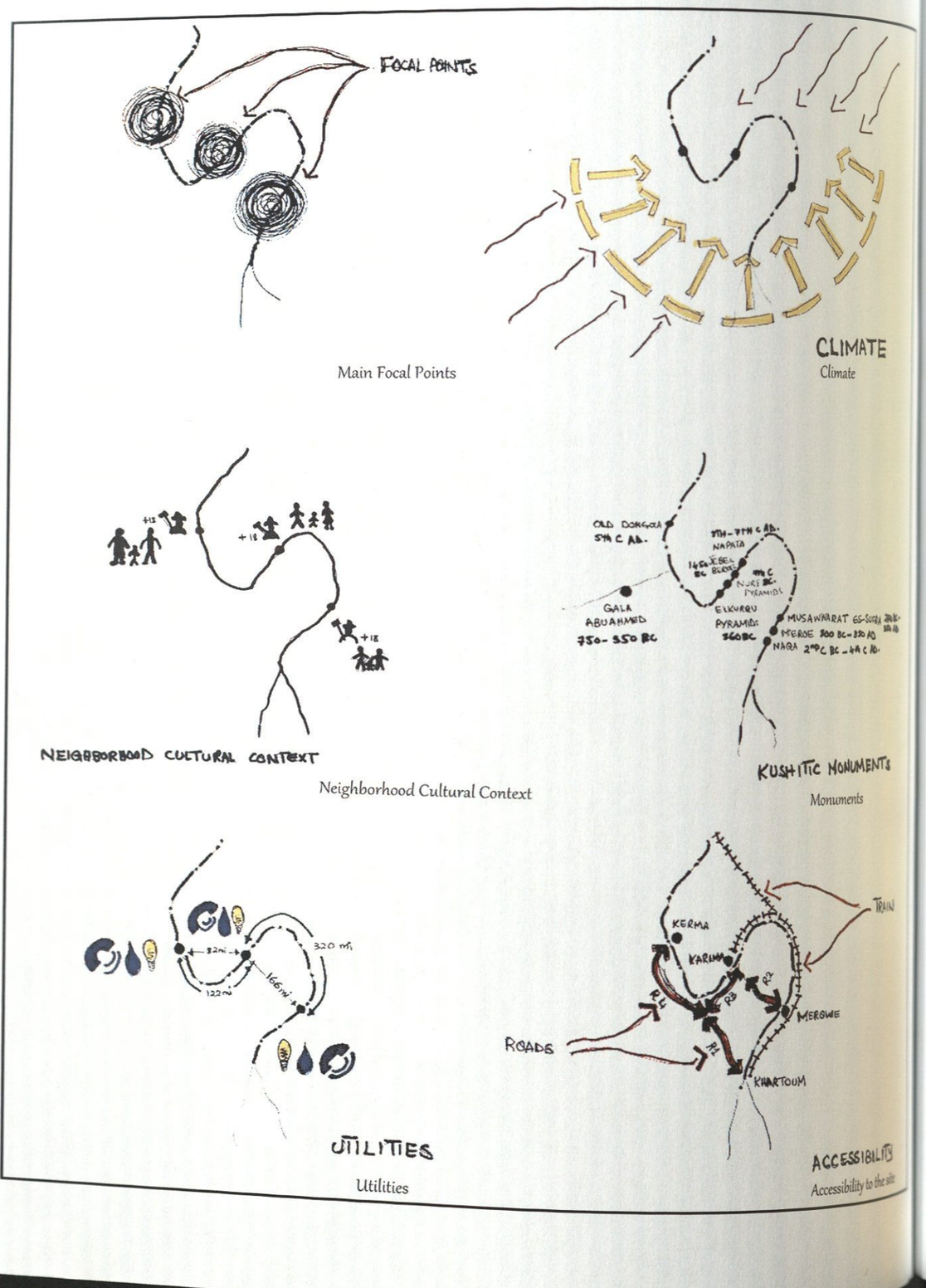
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Cover


The Kush Trail to Promote Patrimonial Tourism of the Ancient African Kingdom of Kush, as a Means to Rejuvenate the Economy of Sudan

First Sketches of Site Analysis



Main Focal Points

Climate

Neighborhood Cultural Context

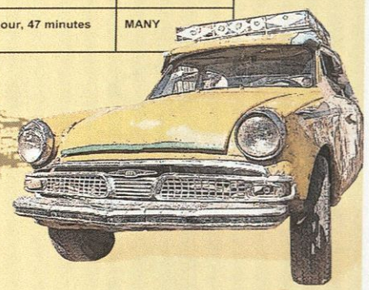
Monuments

Utilities

Accessibility to the site

Program

Name	Distance from previous	Distance from Previous in miles	Miles to hours of driving Average speed is 80 MPH	Miles to hiking hours using Naismith's Rule: Allow 1 hour for every 5km / 3 mile walked	Miles to cycling hours using Tour de France riders average of 34 mph on the flats	Accommodation Facilities available
Amara West	Distance from Egypt 218 km	135.459	1 hour, 42 minutes	54 hours ,11 minutes	3 hours, 59 minutes	N/A
Sai Island	Distance from previous 8 km	4.97097	0 hours, 04 minutes	2 hours, 0 minutes	0 hours, 09 minutes	N/A
Sedeinga	Distance from previous 16 km	9.94194	0 hours, 07 minutes	4 hours, 0 minutes	0 hours, 18 minutes	N/A
Soleb	Distance from previous 27 km	16.777	0 hours, 13 minutes	6 hours, 42 minutes	0 hours, 30 minutes	N/A
Sesebi	Distance from previous 31 km	19.2625	0 hours, 14 minutes	7 hours, 43 minutes	0 hours, 34 minutes	N/A
Tombos	Distance from previous 48 km	29.8258	0 hours, 22 minutes	11 hours, 56 minutes	0 hours, 53 minutes	N/A
Kerma	Distance from previous 15 km	9.32057	0 hours, 07 minutes	3 hours, 44 minutes	0 hours, 16 minutes	N/A
Elkhandag Town	Distance from previous 146 km	90.7202	1 hour, 08 minutes	36 hours, 18 minutes	2 hours, 40 minutes	N/A
Old Dongola	Distance from previous 54 km	33.554	0 hours, 25 minutes	13 hours, 13 minutes	0 hours, 59 minutes	N/A
Jebel Elbarkal/ Karima	Distance from previous 106 km	65.8653	0 hours, 49 minutes	26 hours, 20 minutes	1 hour, 56 minutes	Nubian Rest house/Karima
Nuri	Distance from previous 35 km	21.748	0 hours, 16 minutes	8 hours, 24 minutes	0 hours, 38 minutes	N/A
Dangiel	Distance from previous 318 km	197.596	2 hours, 28 minutes	78 hours, 49 minutes	5 hours, 49 minutes	N/A
Merowe	Distance from previous 173 km	107.497	1 hour, 20 minutes	42 hours, 49 minutes	3 hours, 10 minutes	Meroe Camp
Musawarat Elsufra	Distance from previous 62 km	38.525	0 hours, 29 minutes	15 hours, 13 minutes	1 hour, 08 minutes	N/A
Naga	Distance from previous 21 km	13.0488	0 hours, 10 minutes	5 hours, 13 minutes	0 hours, 23 minutes	N/A
Khartoum	Distance from previous 98 km	60.8944	0 hours, 45 minutes	24 hours, 1 minutes	1 hour, 47 minutes	MANY



The Program will include

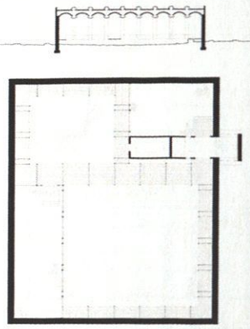
- A Master Plan/s of links between sites.
- Monument preservation design for either a specific monument or an overall framework idea that could be implemented throughout the Kush trail.
- Support facilities Design for each site that includes viewing room, toilets, seating area, ticketing office and archeological office.
- Symbols and signage

Meroe Royal Baths Protective Shelter

Kéré Architecture design for a Protective Shelter for Meroe Royal Baths in Sudan precedent was examined primary because it's one of the sites of the Kush trail. The work conducted shows how they preserved the site heritage and how the design integrated with the community general theme of building materials and shapes.
Along with the usage of the building an analysis was made for circulation, size, symmetry and balance of the shapes used.







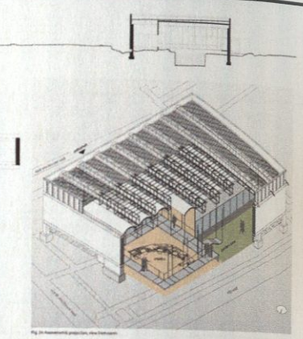




Fig. 29: Elevation from west

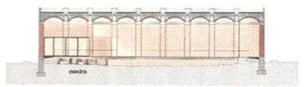


Fig. 30: Longitudinal section



Fig. 31: Elevation from south

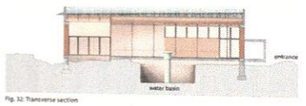


Fig. 32: Transverse section

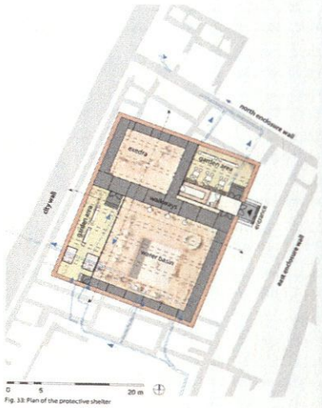


Fig. 33: Plan of the protective shelter

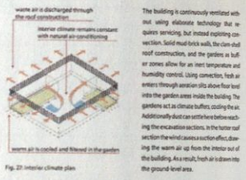


Fig. 27: Interior climate plan

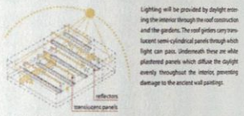


Fig. 28: Lighting plan

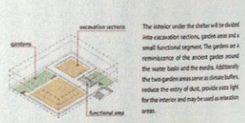


Fig. 29: Zoning of the interior

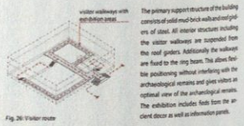


Fig. 26: Visitor route

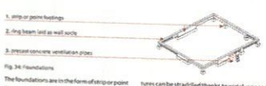


Fig. 34: Foundations

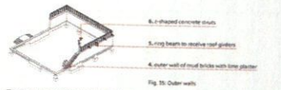


Fig. 35: Outer walls

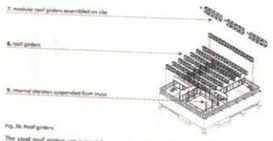


Fig. 36: Roof girders

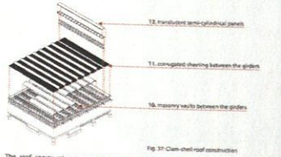
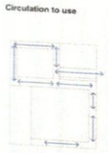


Fig. 37: Clam-shell roof construction



Circulation to use

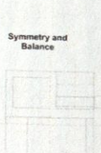
Unit to whole



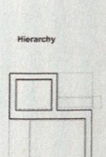
Additive and Subtractive



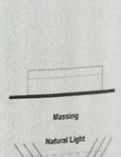
Repetitive to Unique



Symmetry and Balance



Hierarchy

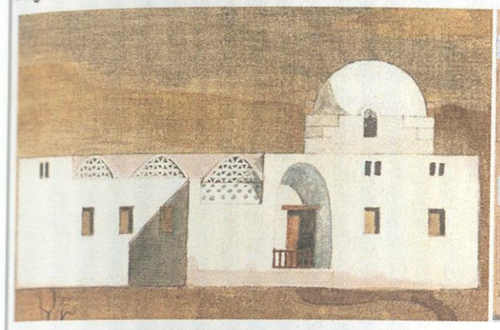


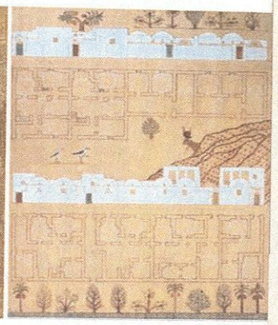
Massing

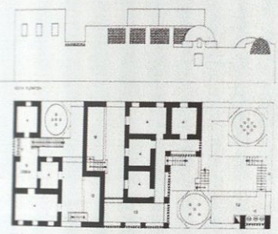
Natural Light

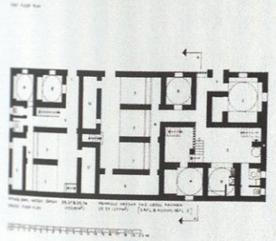
Hassan Fathy New Gourna

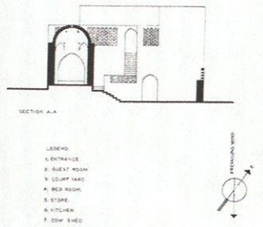
Hassan Fathy in his famous project of New Gourna missed the cultural value of the project and how without the proper additives and support to the life of the Bedouins, the housing was never enough for them. An analysis was made for this design and how Hassan was able to construct this village on a module basis.

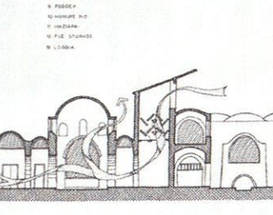


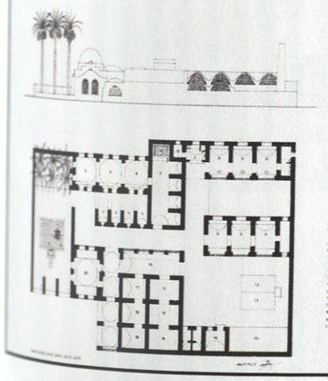


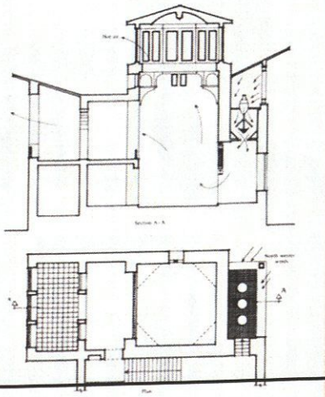


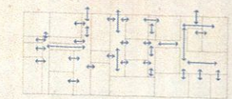










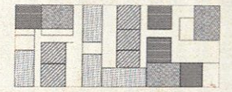


Circulation to use



Unit to whole

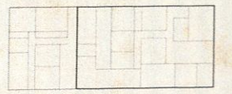
Additive and Subtractive



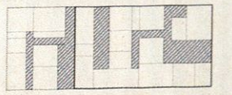
Repetitive to Unique



Symmetry and Balance



Hierarchy

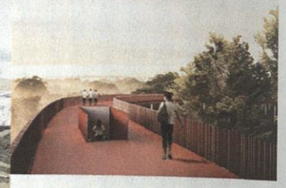
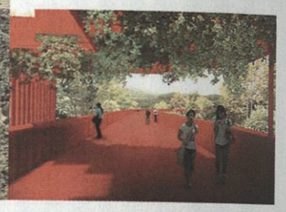


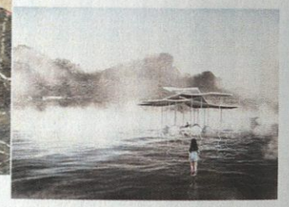
Circulation

"Romantic" Forest Trail for Forgotten Sports

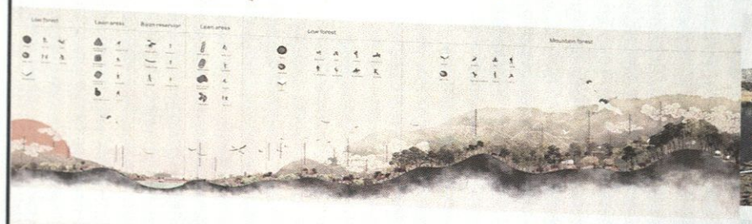
This Project represents how a large footprint of design can be presented architecturally with frames of renders and vignettes, that illustrates the different transitions between treatments along the Trail.

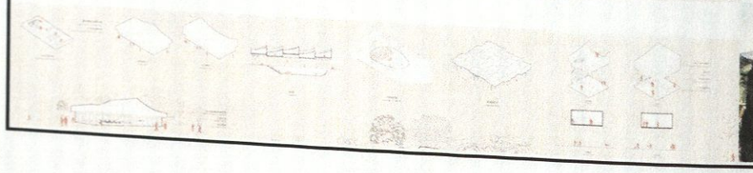
LOLA, L+CC, and Taller Architects







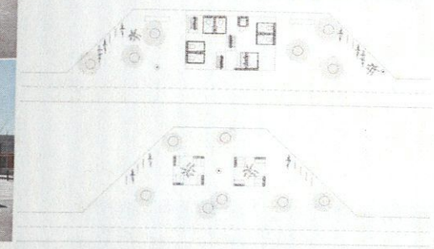
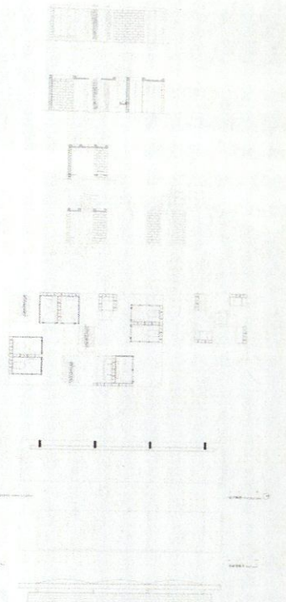

Public Toilets and Facilities

Facilities is a big part of the designing the supporting system of the tourism industry. It was evident to see how small projects can have such an impact on the design. Different designs were examined to see how kiosk and public toilets connect with the general location they are built within.



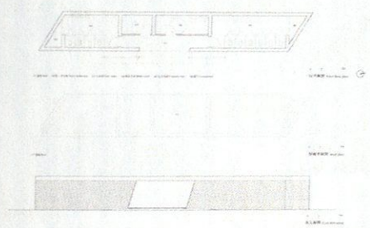
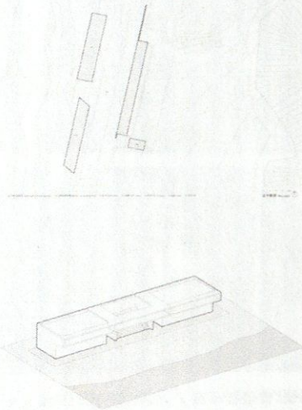


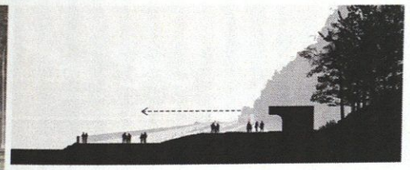
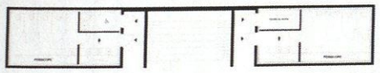
Kiosks and Public Toilets / LANZA Atelier



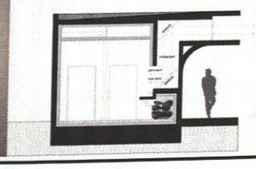
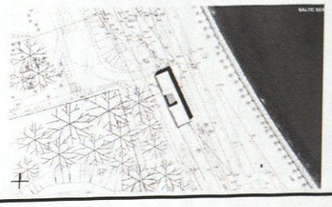
Abstract Gallery / Yin Peiru Architecture Studio

Adam Wiercinski Architekt



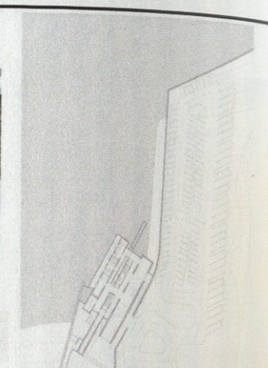
Public Toilets and Facilities

Not only that public toilets serve their function but the precedents below show how public facilities can be integrated to accommodate more functions like observation cubicles and rooms to overlook the tourist locations and attractions.

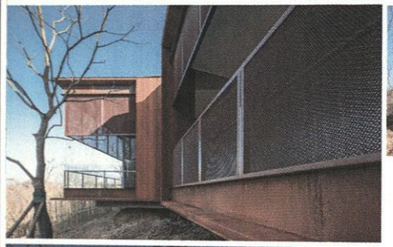
Tibet Namchabawa Visitor Centre / standardarchitecture







'View' Public Toilet / LiZhu

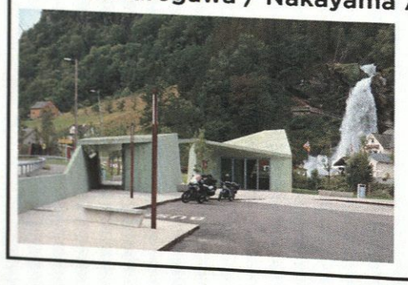







Kitsuregawa / Nakayama Architects

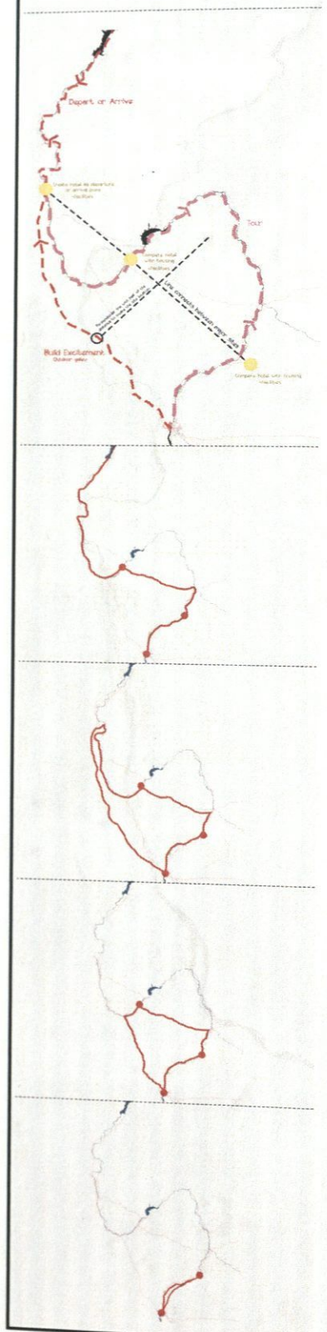




At this point it was evident to identify the locations on the map and see the scales of the monuments that will be integrated in the design. The map illustrates the location of the monuments that will be within the design process and their shapes. Two things were identified at this process. the final monuments I will be working with the design process, and I was able to start creating an interactive map that will engage people in creating their own customized tours around the Kush trail.

Tours



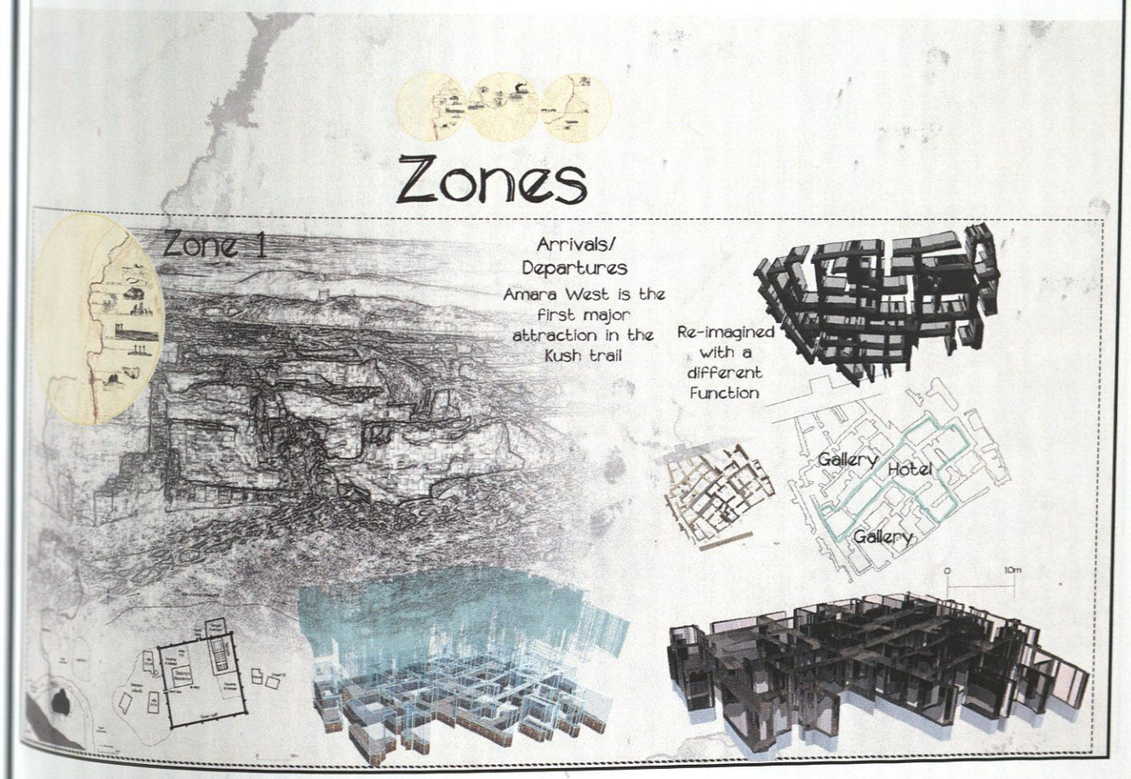
In order to start designing I started by analyzing the tour that already exist and I had found that the tours are mainly concentrated around the facilities that exist. Along the Nile river of that portion, only two guest houses exist, and they are in Merowe and Karima "ancient Napata". Both Guest houses are owned by an Italian couple who run a tourist agency. All other tours which are managed by other tourist agencies, use those amenities to facilitate their tours.
My concept of tour is the final product on the top and consists of three parts :

1.Build excitement and knowledge: This part takes place in the desert and I consider this portion of the tour, as the part where the tourists are coming from, which is Khartoum, the capital. Till now they have not seen any monument. The Desert camp will function as an enthusiastic experience that provides excitement and knowledge to the tourist about the next destinations they will be visiting.

2.Monuments visiting: This part is where the physical tour take place and tourists visit monuments.

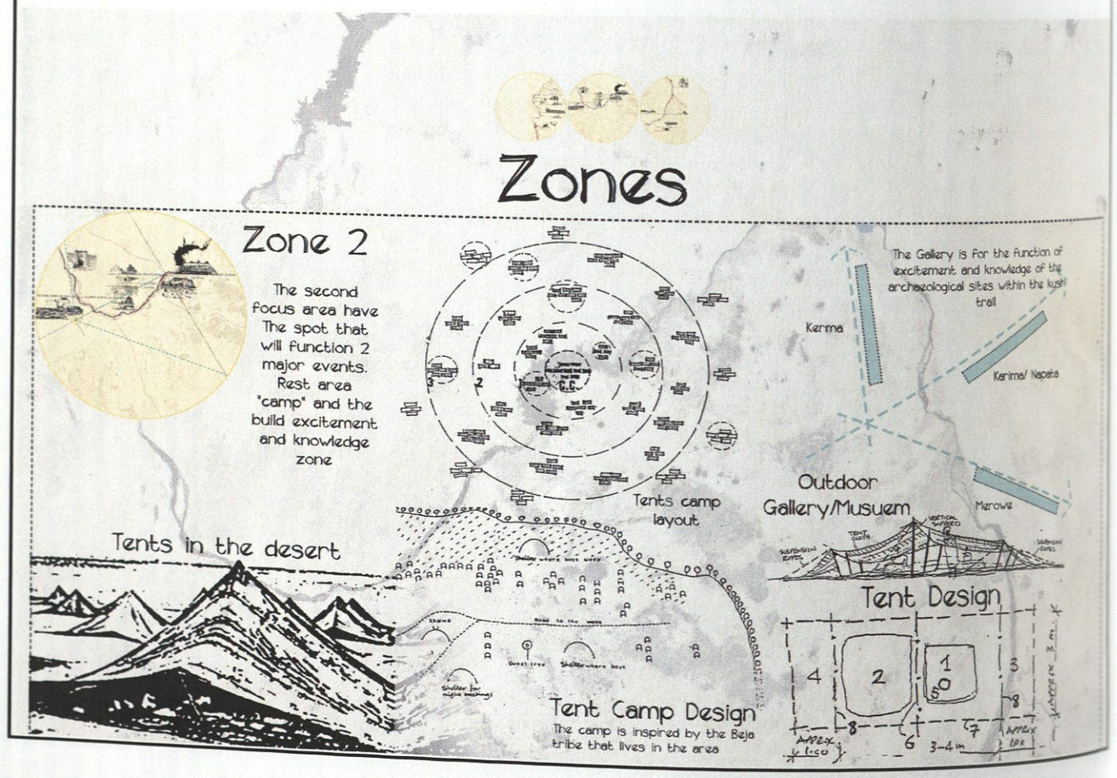
3.The Departure or arrival points: this point is assumed the first location that people who are continuing their journey from Egypt get to see, or the last attraction that tourists from the Kush trail visit before they continue their journey to Egypt. At this point also, the third Capital of the Kush kingdom, Kerma, is located. That point is in-need for a departure or arrival point that drives the tourist to feel engaged in the experience.

From the design exploration process, monuments clustered around three zones and those three zones are the three capitals of the Kush kingdom. Efforts of design will be concentrated around those three zones. Zone 1 is the first area that tourists who will be visiting the Trail from the north will see. This zone as mentioned earlier will act like a departure or arrival point to the tourist. The first Monument tourist will visit, is the Amara West. Amara West still have traces and under exploration for the town that was there. Right now, my concept is to restore Amara West with a new function and new construction techniques that blends contemporary with historical. Amara west restoration project concept, is to establish an education base and pride for the historical background this kingdom holds. My efforts concentrated on tracing the actual town in order to see what kind of restoration projects this can achieve based on the site scale, design and typography.



Zone 2 is the zone that the tourist who is approaching the Kush trail from the capital city of Khartoum will first encounter with. This zone has two characteristics: one is the desert area that people will settle down in for a night or two before they move to the trail tour itself. The desert zone will build excitement and knowledge to the tourist. This idea will work as a desert tent camp. The reason behind this approach is that the only tribe that lives in the desert is a tribe called Beja and in order to imitate the Bedouin lifestyle that the Beja practice there. The group lives in tent camps that are centered around the most important family member, and then radius of tent group scatter around that center. The concept of the tourist tent camp is imitating the same concept but by replacing the center of the camp with the main facilities and then for tour agencies to scatter radial around that focal point. Native and modified tents designed will be designed to accommodate different type of tourist who may look for native and authentic experience while contemporary for more modern tourists.

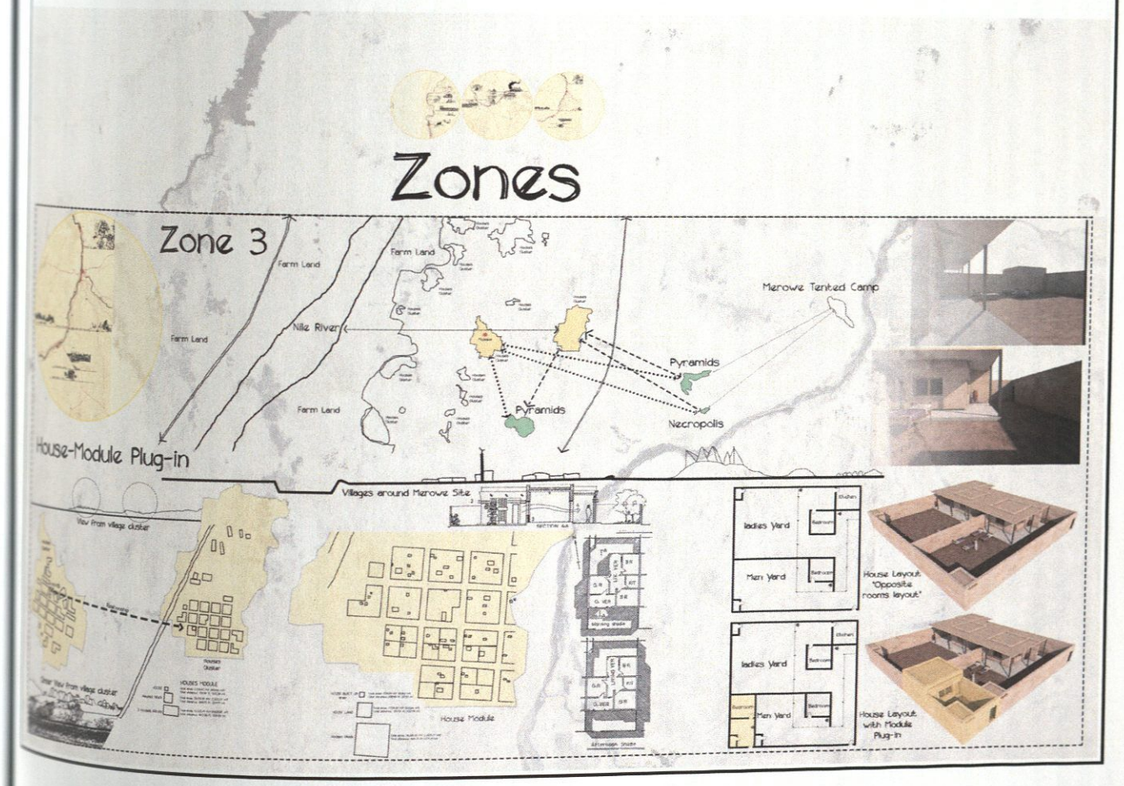
The other design I will be focusing in within that region is to establish an outdoor gallery that overlook and combine the knowledge of the three capital kingdoms.



Zone 3 is an example of how a design module can be plugged to residents' houses in order to facilitate premises for tourists to stay at. An extensive research was made at one of the villages next to pyramids cluster at Merowe. This village could be considered a typology for villages around the river banks that progress from water to farm land to residential units of farmers.

The research worked to identify the shapes and sizes of the building pattern used in the villages. All sizes are an average of what is built in the village but the main concept of the built area is to have opposite directional rooms for genders that guarantees complete privacy for both. The Villagers normally have all their functions in the outdoor yard and the room is only for the purpose of keeping belongings. The large thermal math of the thick mud brick walls provides a thermal lag that keeps the room at a reasonable thermal condition within day, but by the time night comes, the heat would have made it to the room, therefore, villagers practice night ventilation, and they sleep outside in the private yard.

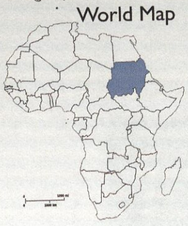
The concept of the module is to recreate a micro experience for the tourist of the same three concepts of a yard, room and outdoor bathroom that ensures privacy for both the owner of the house and tourist.



Kush Trail Analysis



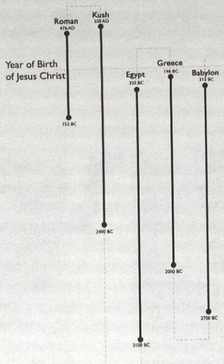
World Map



Africa Map

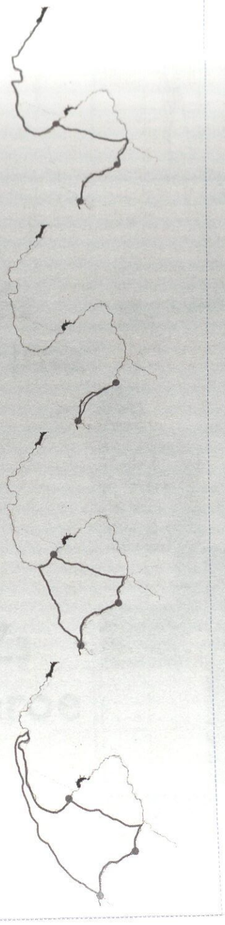


Sudan Map



Ancient kingdoms Timelines

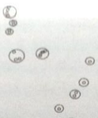
Comparative Study of Existing Drive Tourism Route near Kush Archeological Sites



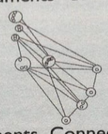
Concept Development for linking the Archaeological Sites with the existing Nile River



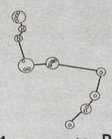
Monuments Identification



Monuments Grouping



Monuments Connection



Monuments Route

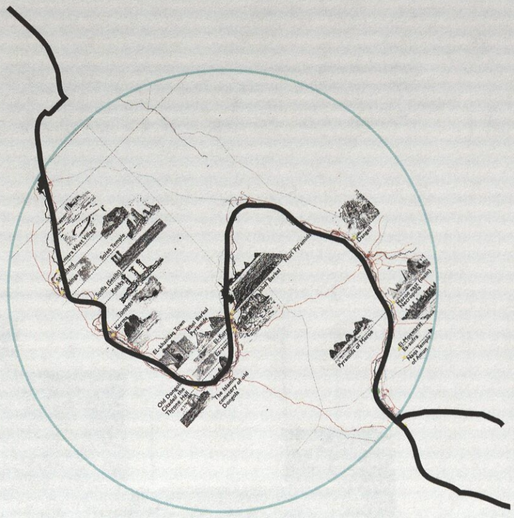


Monuments Nile River Physical Connection



Monuments Nile River Physical Connection with zones

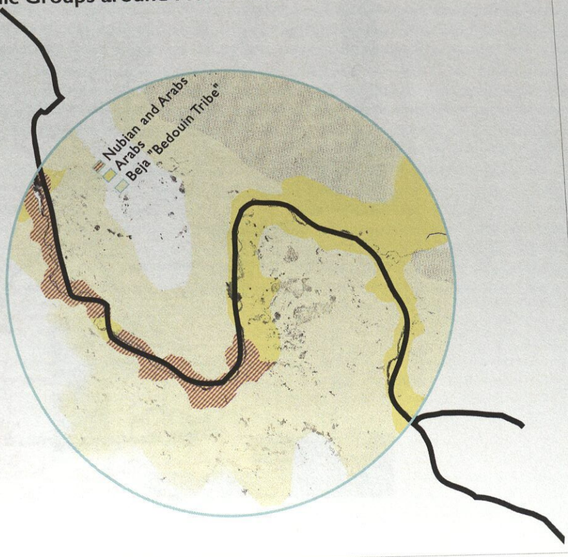
Monuments Location



Anticipated Movement from Tourism



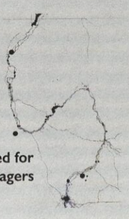
Ethnic Groups around Monuments

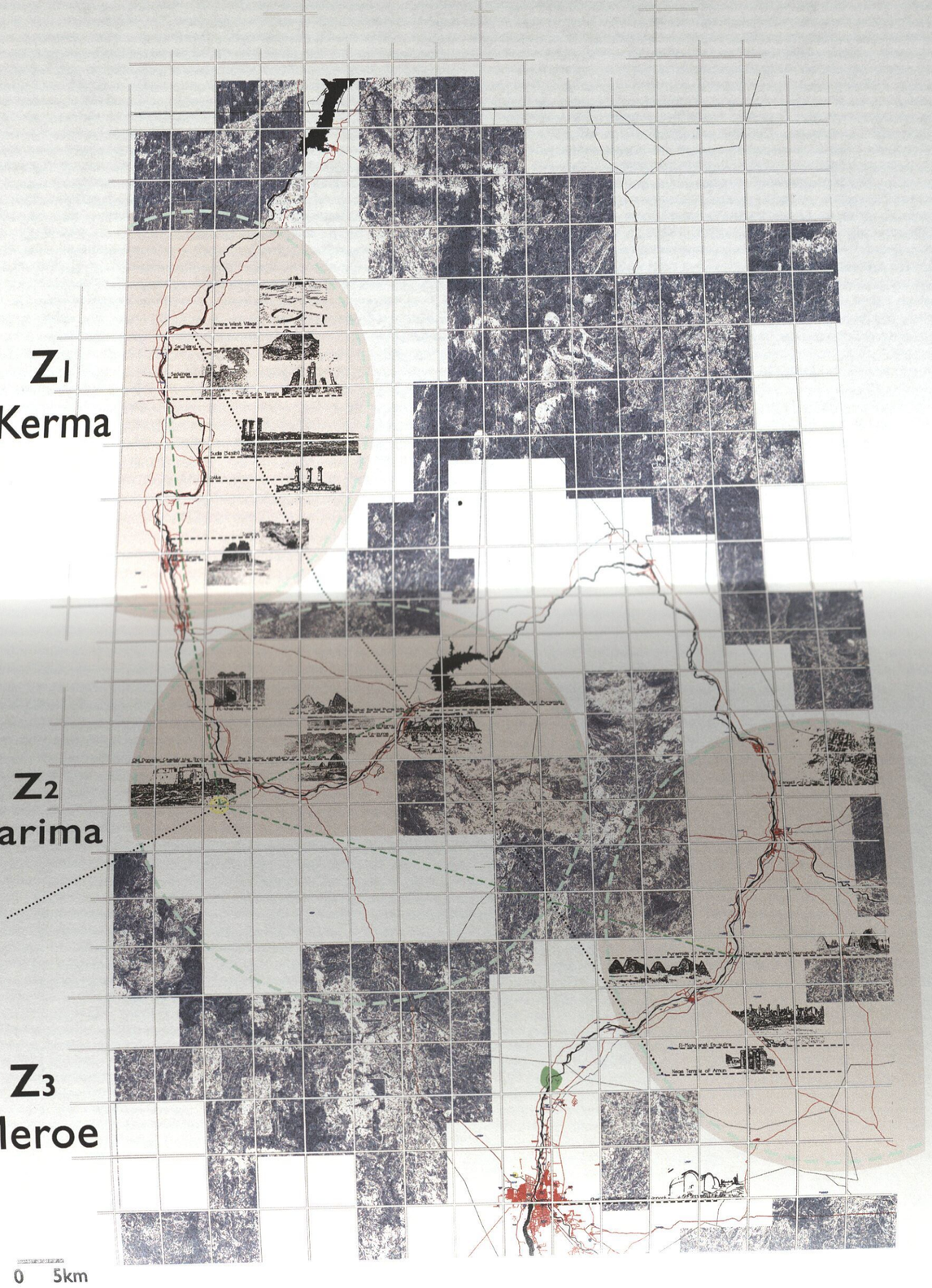


Kush Trail Analysis

Design Concept

The Kush trail is a virtual trail that is connected through monuments of an ancient African kingdom that once existed. The Trail is to be the new artistic hub where Designers regenerate and reintroduce a new era of how history will affect our future. The idea began with identifying the monuments that can actually be introduced for the tour that can take place through the Nile River and facilitating them with the utilities and activities a tourist can be interested in. The idea is to combine the villagers around the monuments in the activities, construction and profit from the arising tourism movement to mitigate the sense of belonging and to create a sustainable economic viability in the region

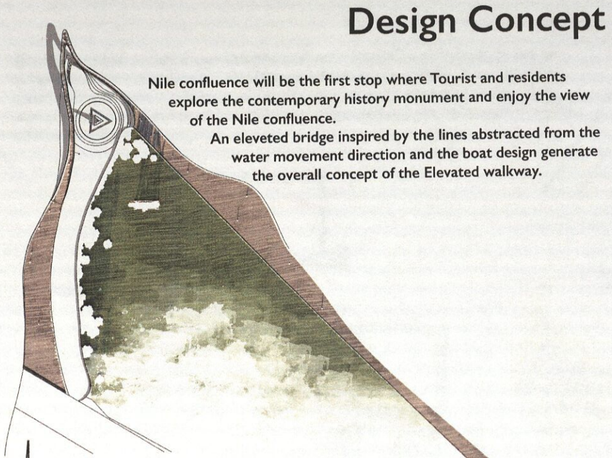




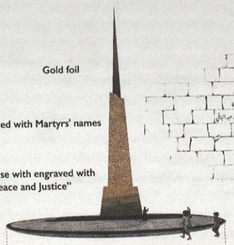
Nile Confluence Elevated Walkway

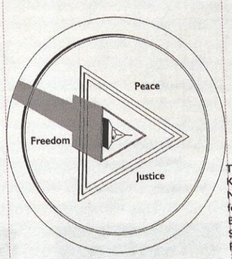
Design Concept

Nile confluence will be the first stop where Tourist and residents explore the contemporary history monument and enjoy the view of the Nile confluence.
An eleveted bridge inspired by the lines abstracted from the water movement direction and the boat design generate the overall concept of the Elevated walkway.









Traingle represents the three cities of Khartoum State: "Khartoum + Khartoum North + Omdurman" , and the three faces form the base for the new country Sudan is Becoming, and the main Values for the Sudanese democratic movement "Freedom + Peace + Justice"

Overall Site plan for Elevated walkway



Railing

Elevated walkway

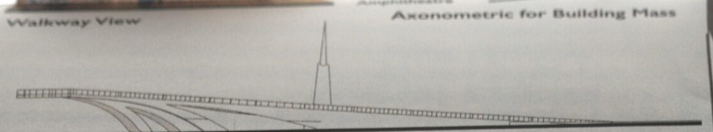
Podium for Elevated Walkway

Contemporary Revolution Monument

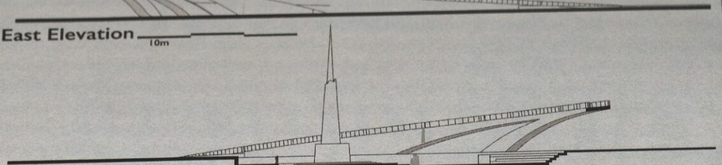
Amphitheatre

Walkway View

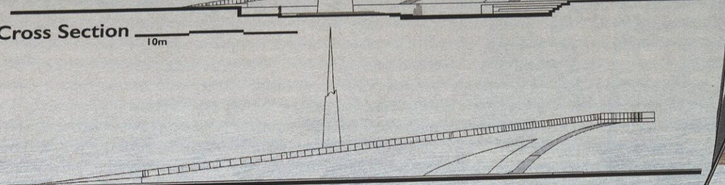
Axonometric for Building Mass



East Elevation 10m

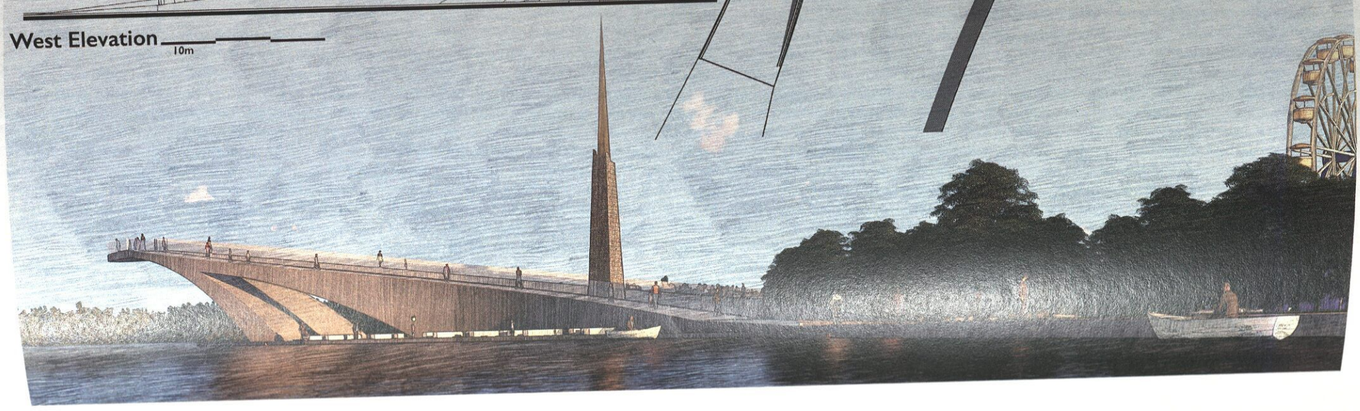


Cross Section 10m



West Elevation 10m

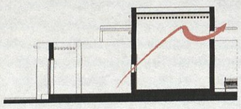
Site Plan
0 7m



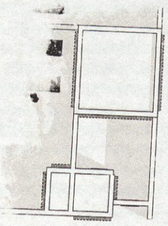
House Plug-in Module

Design Concept

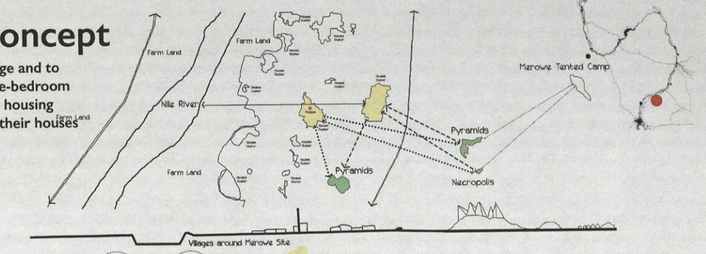
The house Plug-in design is a sustainable approach to avoid Tourism Leakage and to increase the sense of belonging of the Tourist attraction. The Module is one-bedroom Apartment within the premises of an existing house hold by improving the housing strategy with a physical Airbnb that engages tourists to spend the night in their houses for an authentic trip.

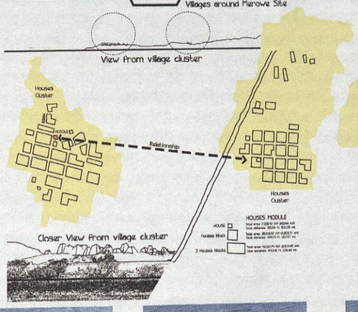


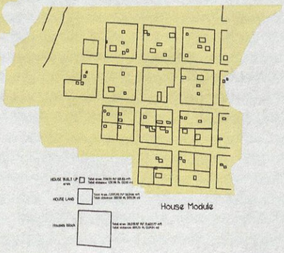
Section 0 3m

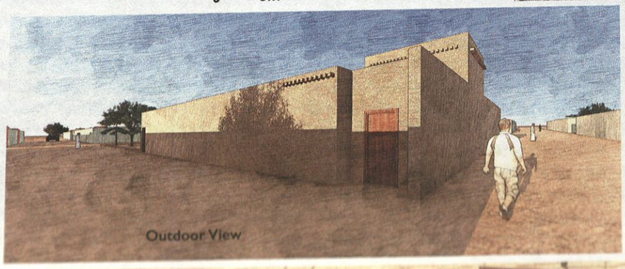


Site Plan 0 3m





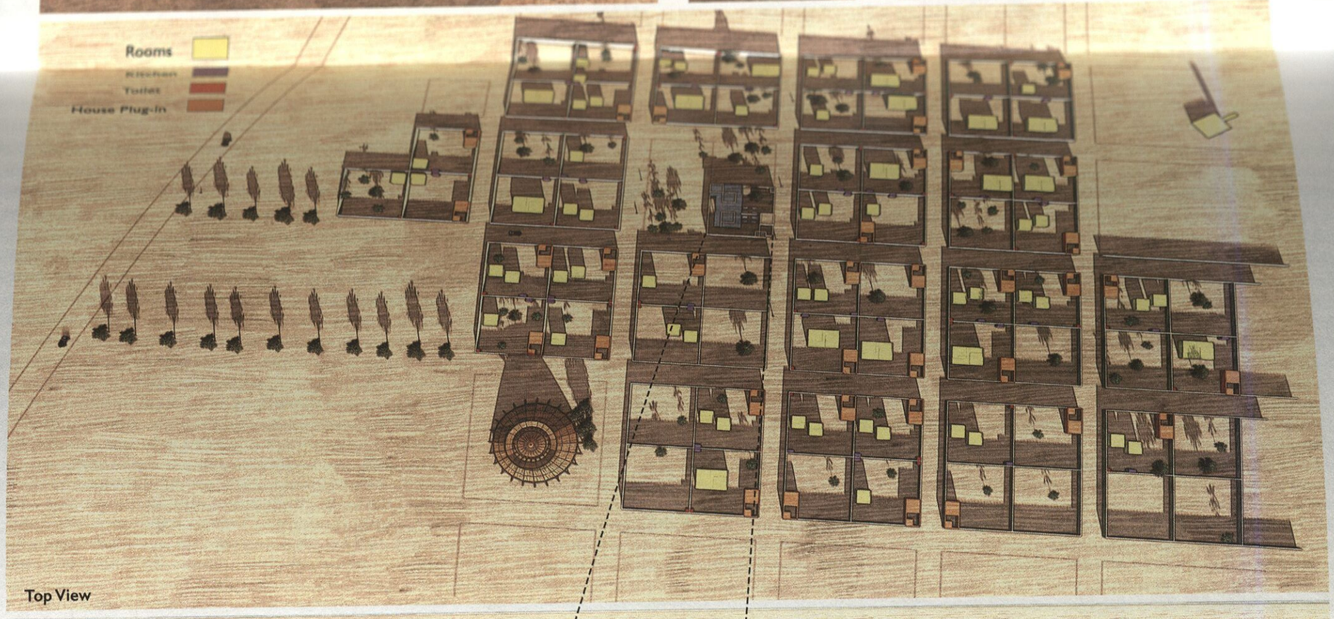




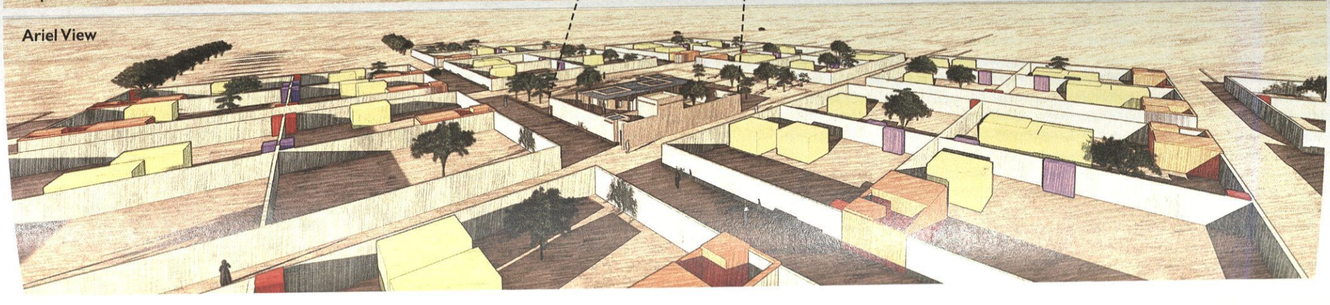








Top View

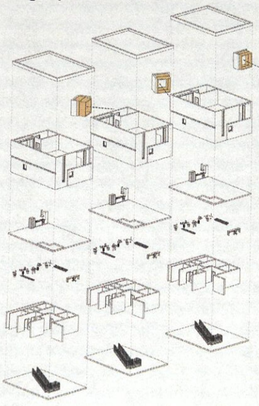


Ariel View

Utilities Design Prototype

Design Concept

The utilities design prototype is a modular design, that will be introduced within a 2-mile radius from the boundaries of the monument area to help the Tourist to relax, rest, have a snack and observe the monument from a distinguish spacious distance
The design has two sizes which will be implemented based on the need of the specific monument location. It includes Male and female toilets+ reception that is provided with ticketing office and an upper floor that is serve as the observing and dinning space. The design is oriented North and depending on the specific location a rotating viewing frame will move to provide the specific view. The design is meant to spring from the earth.
The ruins resemble the villagers personal influence and how they facilitate and maintain this building as part of a larger sustainable economy cycle



Parapet

Rotating Window depending on line of sight to the monument

Openings

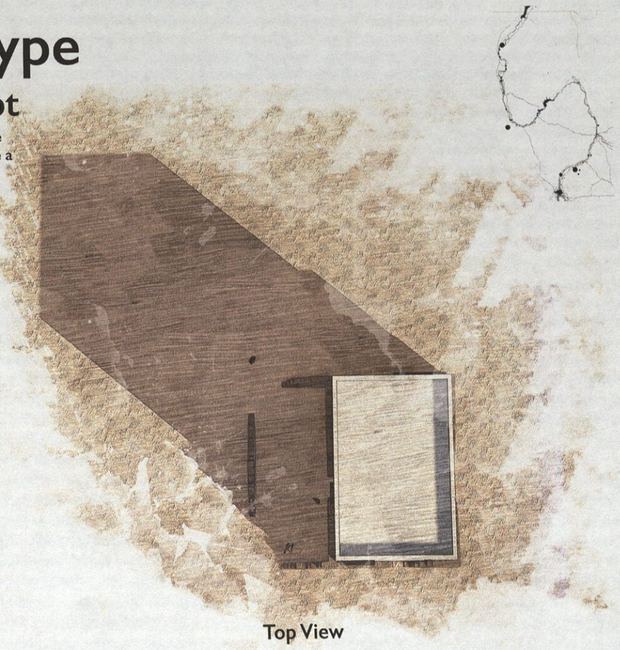
First Floor Slab

Furniture

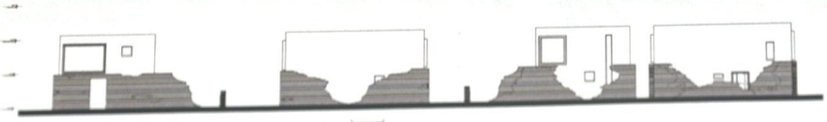
Wall division Ground Floor

Ground Floor Slab

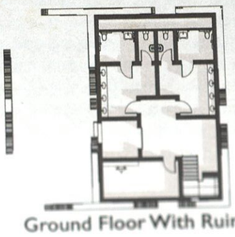
Axonometric



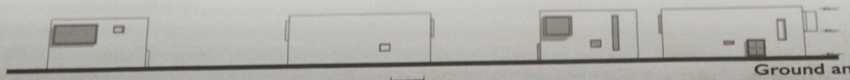
Top View



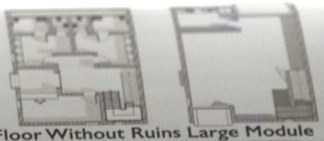
Elevation With Ruins Large Module 0 3



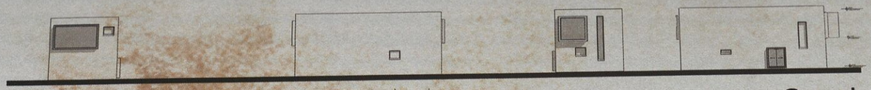
Ground Floor With Ruins Large Module



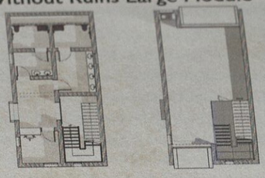
Elevations Without Ruins Large Module 0 3



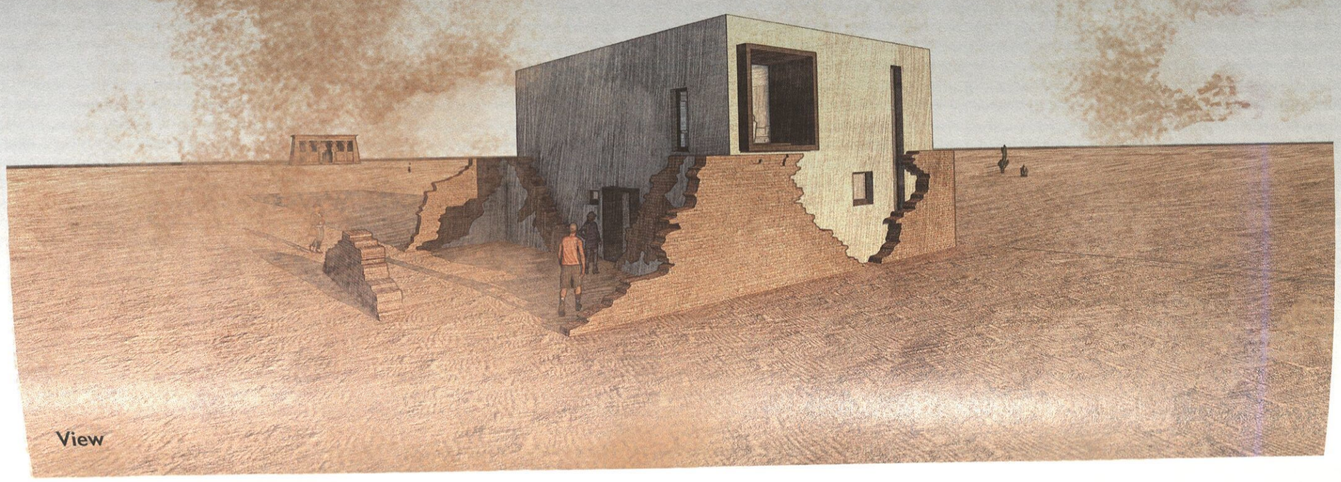
Ground and First Floor Without Ruins Large Module



Elevations Without Ruins Small Module 0 3



Ground and First Floor Without Ruins Small Module



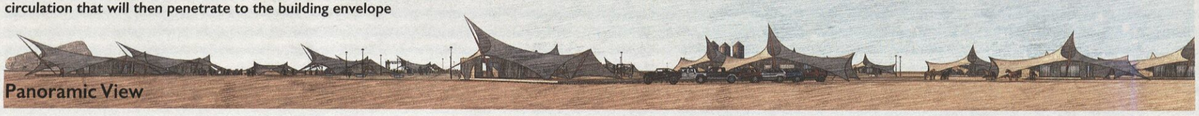
View

Tent Camp

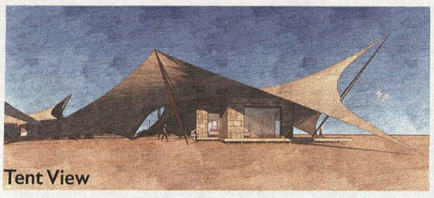
Design Concept

The tent camp Design is inspired by the Beja Tribe that lives and the area . The Beja are part of the bigger tribe of Bedouins. The traditional Bedouins formulate their urban fabric by grouping tents. Those tent groups are radially scattered around a specific point. The original camp center point Is mainly the head of the family household but in this design, it's the main gathering space for food and activities. The modular tent design is studied to optimized daylight, ventilation views and to optimize shade for the openings, that contains three narratives. The tents are raised on a platform to provide a cool air circulation that will then penetrate to the building envelope

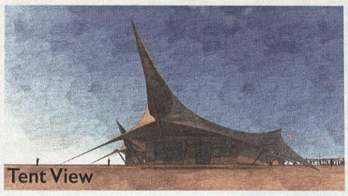




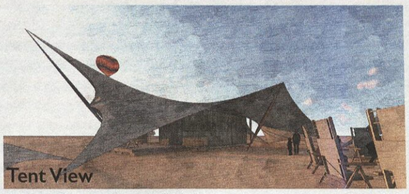
Panoramic View



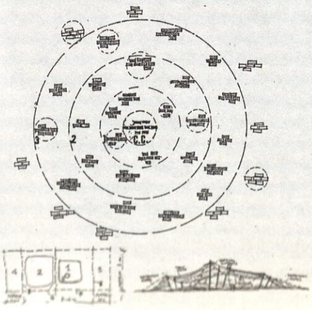
Tent View



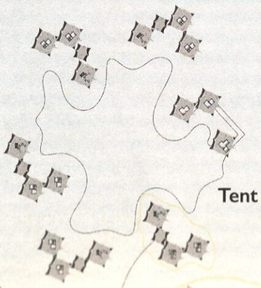
Tent View



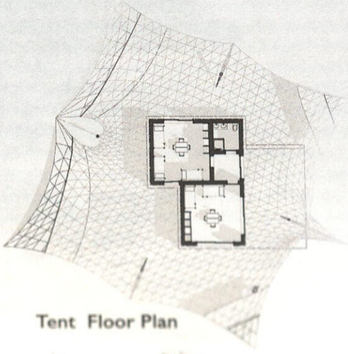
Tent View



Design Concept



Tent camp overall floor plan



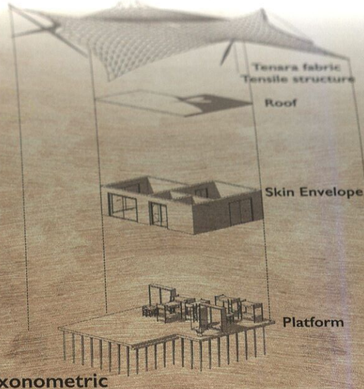
Tent Floor Plan



Services Area



Tent Group Floor Plan



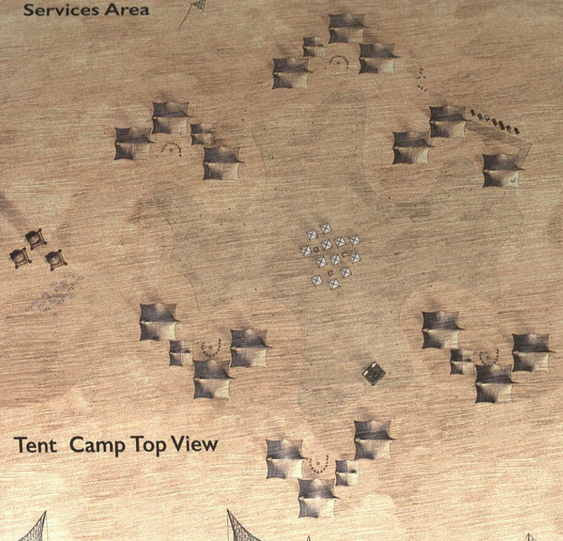
Axonometric



Section



Section



Tent Camp Top View



Tent Elevations

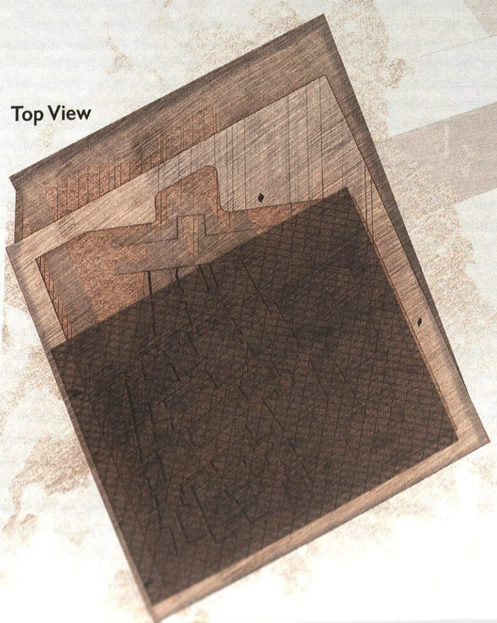
Amara West Monument Restoration

Design Concept

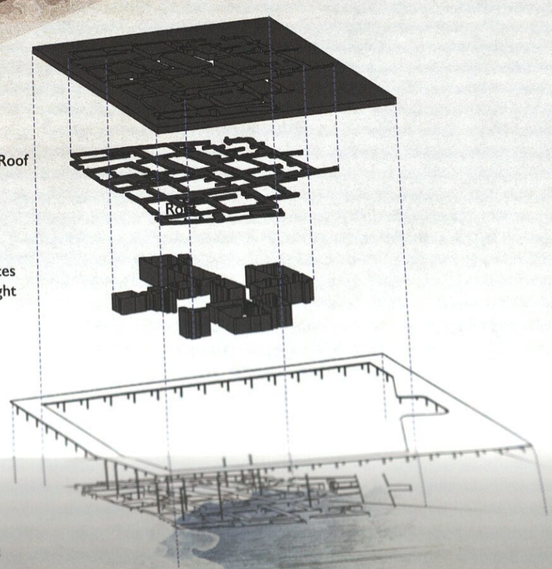
Amara West Monument Restoration is the first or the last departure point tourist who are interested in the Kush kingdom will experience. It will depend on either they are coming from the previous monument stop in Kush Trail or they are outbounds from Egypt.
The design of Monument restoration allows the tourist to engage in a fictional story that once existed and how our history shapes our reality of today. The canopy mesh has the minimum interaction with the monument's ruins. it only touches the ground with steel members that are designed to carry the overall mesh load. Around the Monument there is a platform that carries the observer around the monument and make them engaged in overlooking the reflected traces that is projected from the roof.



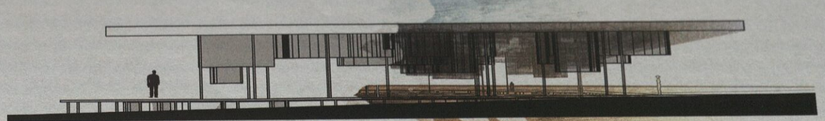
Top View



Side View



Axonometric



Section

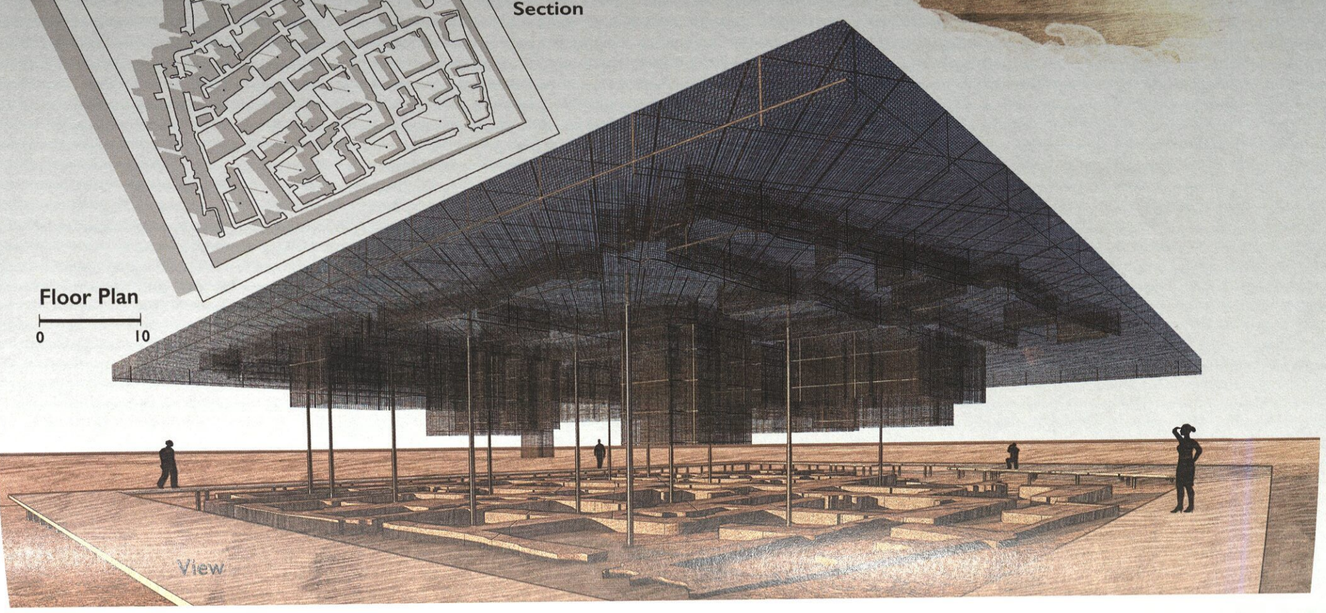
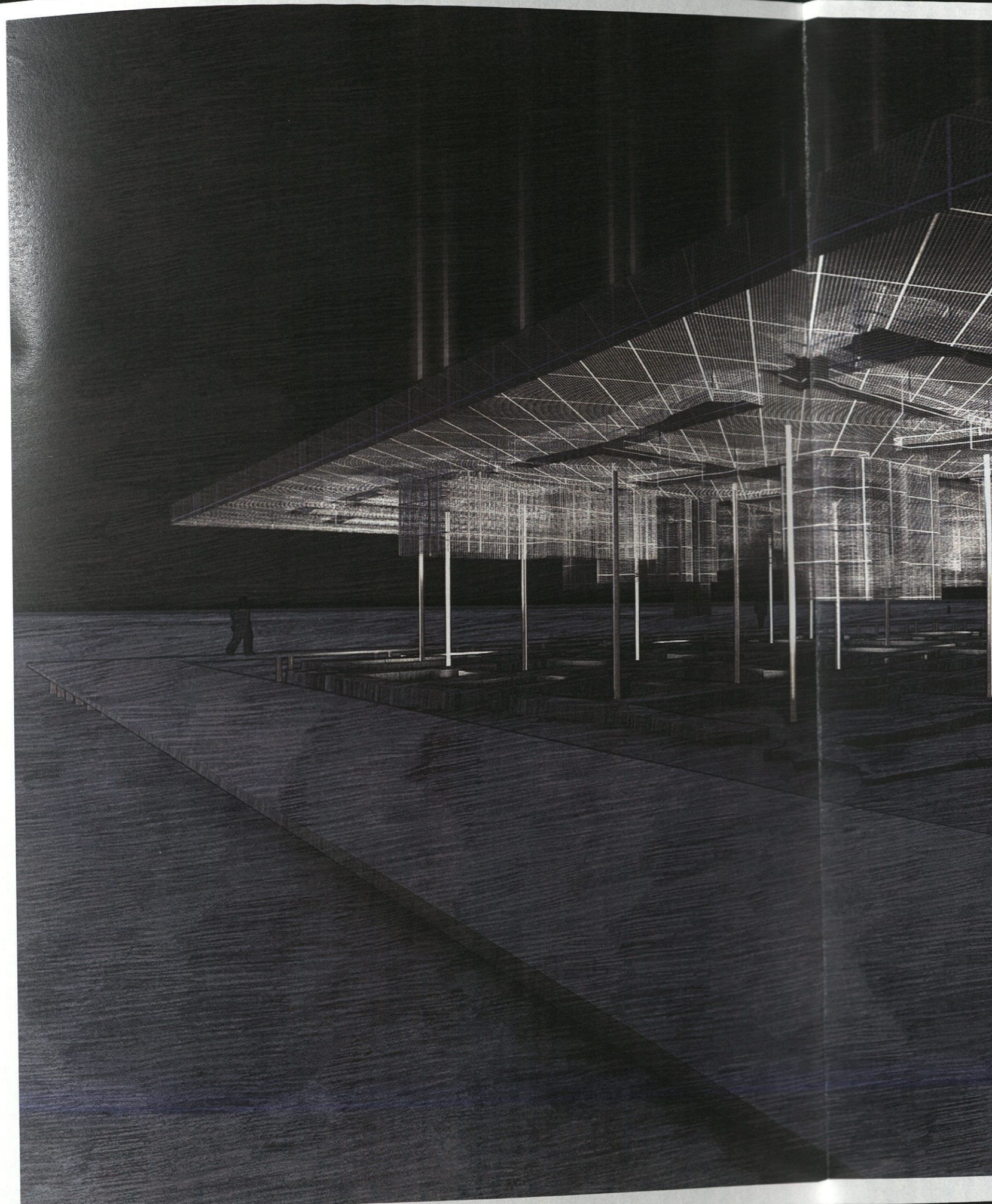


Diagram of Functions



Floor Plan

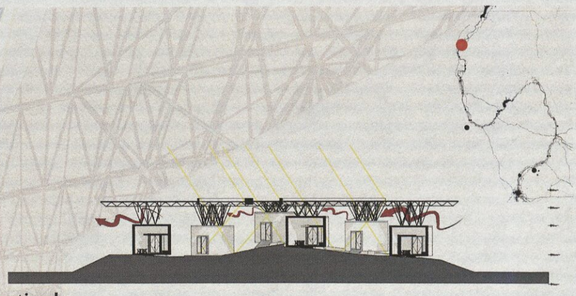
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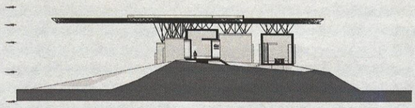
Amara Crafts Village

Design Concept

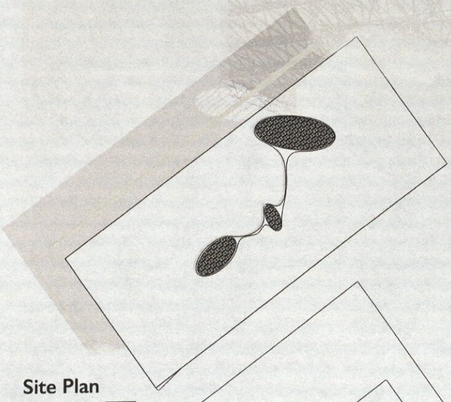
Amara Crafts Village is designed to inspire the tourists that will be visiting Amara monument restoration project, to try the different craftsmanship that the villagers of Amara practice, and to be able to design their own souvenirs. The design is a simple Modular design which is 5*5*5 Meter that will allow adequate space to create craftsmanship and another small mezzanine for storage that is provided above 3-meter level and connected with ladder. All the workshops are elevated from gradually rising Sand dunes. The workshop sits on singular column that carries the platform which carries the walls and the roof that carries the spaceframe shading on top.
The village have 8 workshops: Metal, clay, jewelry, Painting and Drawing, Fashion, Music instruments, Sculpture and Ceramics



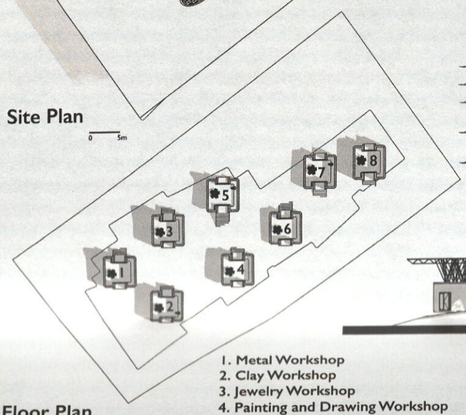
Section1



Section2

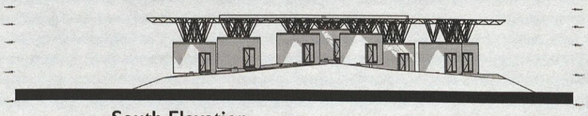


Site Plan

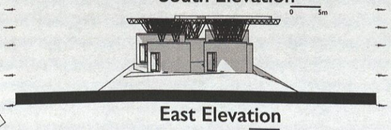


Floor Plan

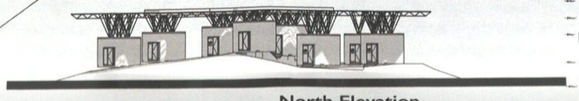
1. Metal Workshop
2. Clay Workshop
3. Jewelry Workshop
4. Painting and Drawing Workshop
5. Fashion Workshop
6. Music instruments Workshop
7. Sculpture Workshop
8. Ceramics Workshop



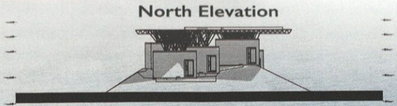
South Elevation



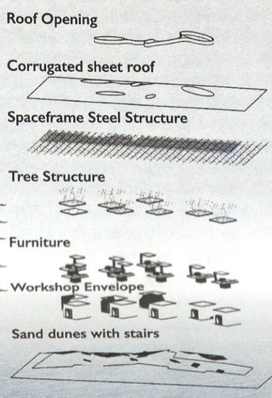
East Elevation



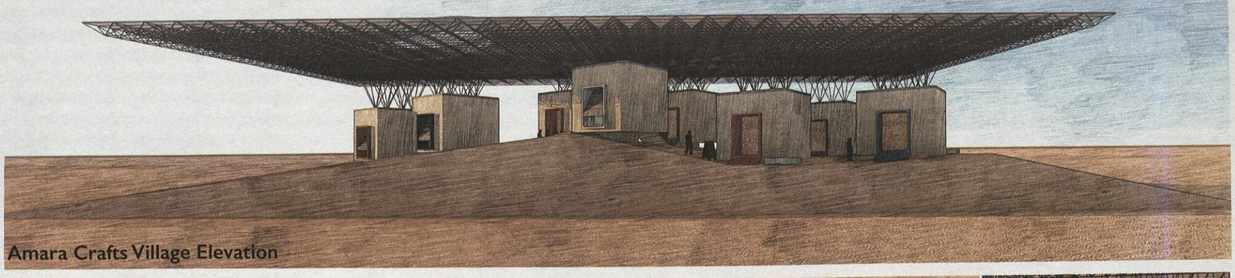
North Elevation



West Elevation



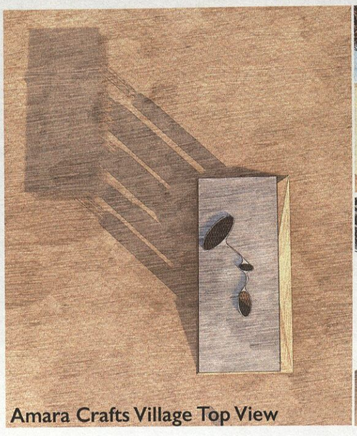
Axonometric



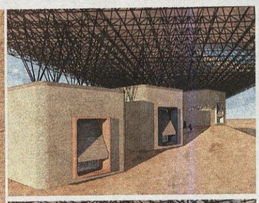
Amara Crafts Village Elevation

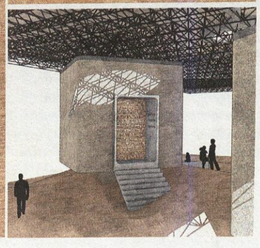


Amara Crafts Village Ariel View



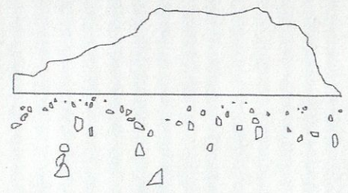
Amara Crafts Village Top View



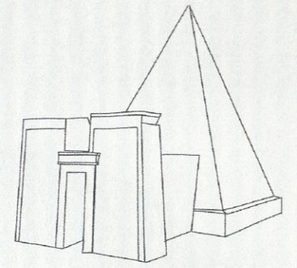


Kush Trail Coloring Book Samples

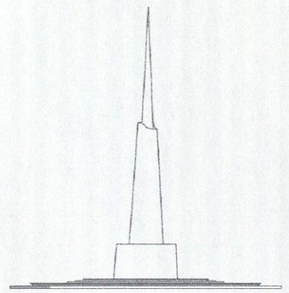
JEBEL EL-BARKAL



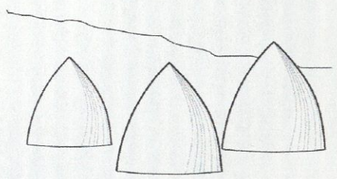
MEROE PYRAMIDS



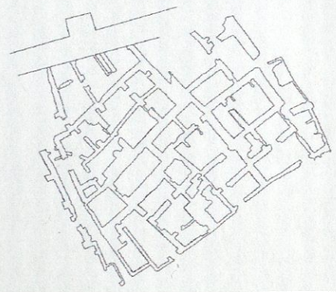
REVOLUTION



NURI PYRAMIDS



AMARA WEST



TEMPLE

