

RIVER LIFE MUSEUM at RISHIPARA, MYMENSINGH

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ABSTRACT

Bangladesh, a riverine deltaic country consists of about 800 rivers. Most of the land area of the country had formed through the silt brought by the mighty rivers. The rivers overflow, causing floods on its banks during the monsoon seasons, often causing havoc. Simultaneously the floods bring in fertile land making Bangladesh a country of alluvial soil, which shapes our country into an agrarian society. Along with the floods, river erosion is another calamity. However together with the floods, erosion and all the others gifts of silt, fertile land, scope of cultivation, the rivers are highly intertwined with the lives of the people of Bangladesh. Civilizations, human settlement, trade, religion and culture all spread through out the country along these innumerable waterways. Together with the lush green shades of paddy fields , the flowing water channels form the picturesque landscape of the country.

A river life museum had been proposed not only to serve as a space of public realm, but also make the visitors realize the contributions of the rivers to human life and also often how our mis-use has hindered the river systems which eventually effects us through environmental hazards. This could act as an awareness scheme towards saving the rivers of Bangladesh.

The paper was written as an explanation of my thesis project, the river life museum. The paper includes the various process undergone for the completion of the project. The reason behind the selection of the project , its particular site, the site analysis were discussed in this paper. Literature studied for the project, case studies of similar museum projects, and the derivation of the final program were covered. This also includes the different development phase of the design process.

ACKNOWLEDGEMENT

In writing the acknowledgement for this paper, I would start off by thanking the Almighty for having let me complete my thesis and the seminar paper.

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CHAPTER 01 INTRODUCTION_____

1.1 Background of the project

Bangladesh Ministry of Cultural Affairs along with The Mymensingh Municipality has proposed the project of a River Life Museum. Rivers and the daily lives of the people of the land are deeply intertwined. Trade, commerce, spread of civilization, religion, music, literature; art and culture have all been influenced by the waterways of Bengal. Today with various other means of transport, people being less dependent on the water channels are gradually forgetting their tie with these rivers. Gradually through the misuse and negligence the riverine network has been badly affected, with many changing their courses, some dying off and others being badly polluted. This project has been initiated to make people realize of the relationship between life and rivers, thus make people aware of the adverse condition of the water network. Once aware, citizens can work toward the revival of the nearly lost assets. It is also a project celebrating and reflecting the river life of Bangladesh. Last, but not the least as a public realm for the people of Mymensingh and others coming to visit the town.

The museum would be a place exhibiting objects and artifacts from the river life and also of the experience of being within the spaces and experiencing the beautiful char, near Rishipara Gram. Bangladesh Water Development Board, an organization in charge has been dealing with the water resources have been working with the rivers to gain optimum utilization of resource, keeping the system safe and the land and people safe from floods and erosions. Their researches, maps and information about rivers would also be part of the exhibit of the museum. As a whole it would be a museum to learn experience and feel the river life both through facts and emotions. The site is within close proximity of the Mymensingh town, right opposite to the throbbing park along the river bank.

1.2 Key aspects of the project:

Key aspects of the River life Museum project includes the followings

- Celebrating rivers and river life of Bangladesh
- Enjoying nature and the natural setting of the char and surrounding areas
- Providing a platform to encourage and enhance public activities for the citizens

1.3 Objectives/aims:

The objective behind this project is to show the visitors information of various types about different rivers of Bangladesh, their contributions to human lives, their influence on art, culture and society.

- To serve as a mirror showing how mankind through his exploitation has hindered the natural system of rivers and thus ecology.
- To makes people aware of the rivers being our assets, and reminds the viewers of the need for their conservation.
- The project also hopes to serve as a scope of public realm for the lives of the citizens.

1.4 Site:

Rishipara Gram, Mymensingh, Bangladesh



Figure 1.1.1 Map showing site and Surrounding Accessed from Google Earth on 9th of January 2012 and edited by Lamia Wajeehah Hossain

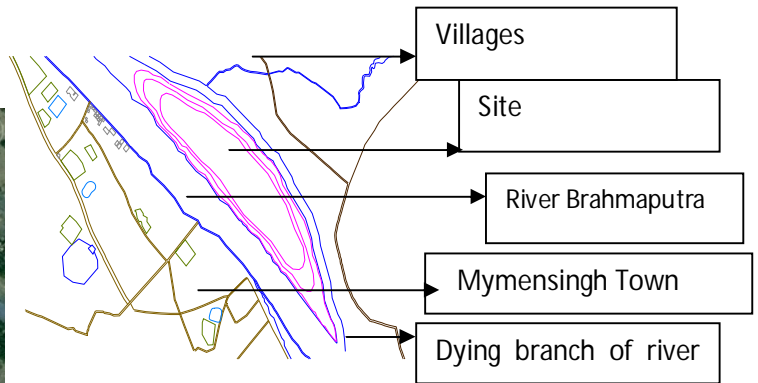


Figure 1.1.1 Map showing site and Surrounding Accessed from Google Earth on 9th of January 2012 and edited by Lamia Wajeehah Hossain

On the south eastern bank of the river along the city edge, an active and vibrant park has marked an important place in the lives of the Mymensingh city dwellers for eras. The river divides the town of Mymensingh from the village zone. Between the villages and the river a Char or land mass has risen and has become permanent one, which has been chosen as the project site.

1.5 Reason behind selection

The banks of the river Brahmaputra was proposed for certain reasons which are as follows.

- Before around the 1780s the river Brahmaputra was the most important river of Bangladesh, before it had joined the Padma River, where it is known as the present Jamuna.
- Once a mighty river, the Brahmaputra is at present a dying one, where Padma, Meghna, Jamuna overpowers the river. Flowing through the district of Mymensingh, it has the main town of
- Mymensingh along its south eastern bank. It is a unique context where even today a river and the main town coexist side by side.

1.6 Initial Program

- Administration
- Multipurpose hall
- Library
- Research & Publications
- Lobby
- Restaurant
- Boat club
- Galleries:
 - River Heritage
 - Boats
 - Riverside settlements
 - Aquatic life
 - Music
 - Art
 - Literature
 - Activity areas
 - Souvenirs shop

CHAPTER 02 SITE APPRIASAL_____

2.1 Existing site conditions:

The site selected for the River Life Museum is a vast vacant char is located right opposite to the park along the river bank. The zila head quarter is located at a distance of 125 km from Dhaka and geographically placed 23.5' and 25.5' north latitudes and 90.5' and 90.50' east longitudes. The site is located opposite to the eastern edge of the town bordered by the river Brahmaputra. At present the char has river Brahmaputra on the south west and a thin drying branch of the mighty Brahmaputra on the northwest which now acts as a drainage basin for the low lying char. Beyond the drying water channel along the katcha road on the embankment exists some villages.

The town is well connected to Dhaka, Gazipur, Tangail, Kishoregonj, Muktagacha, Netrokona, Sherpur and Jamlapur. After entering the town at the Mashkanda bus stand, from all above mentioned location and beyond, a 20 to 30 minutes rickshaw ride from the city hub would take one to the park at the river edge and then a 5 minute boat ride across Brahmaputra to the site of the museum. As a secondary route going straight from the bus stand crossing the Shombhuganj Bridge and turning left for the Shombhuganja Power Station would go along a 12 feet wide road and again cross a ferry to reach the site, however the journey time is longer, about an hour. At present, but the road is an earthen one, but a pucca road has been proposed. The location of the power station eases the prospects of providing gas and electricity to the site.



Figure 2.1.1 River Network
Google image accessed on the 9th of
January and edited by Lamia Wajeelah
Hossain



Figure 2.1.2 Hard Soft Ratio
Google image accessed on the 9th of
January and edited by Lamia Wajeelah
Hossain



Figure 2.1.3 Road Network
Google image accessed on the 9th
of January and edited by Lamia
Waieehah Hossain



Figure 2.1.4 Solid Void Ratio
Google image accessed on the 9th
of January and edited by Lamia Wajeelah
Hossain

2.2 Map of site and surrounding areas

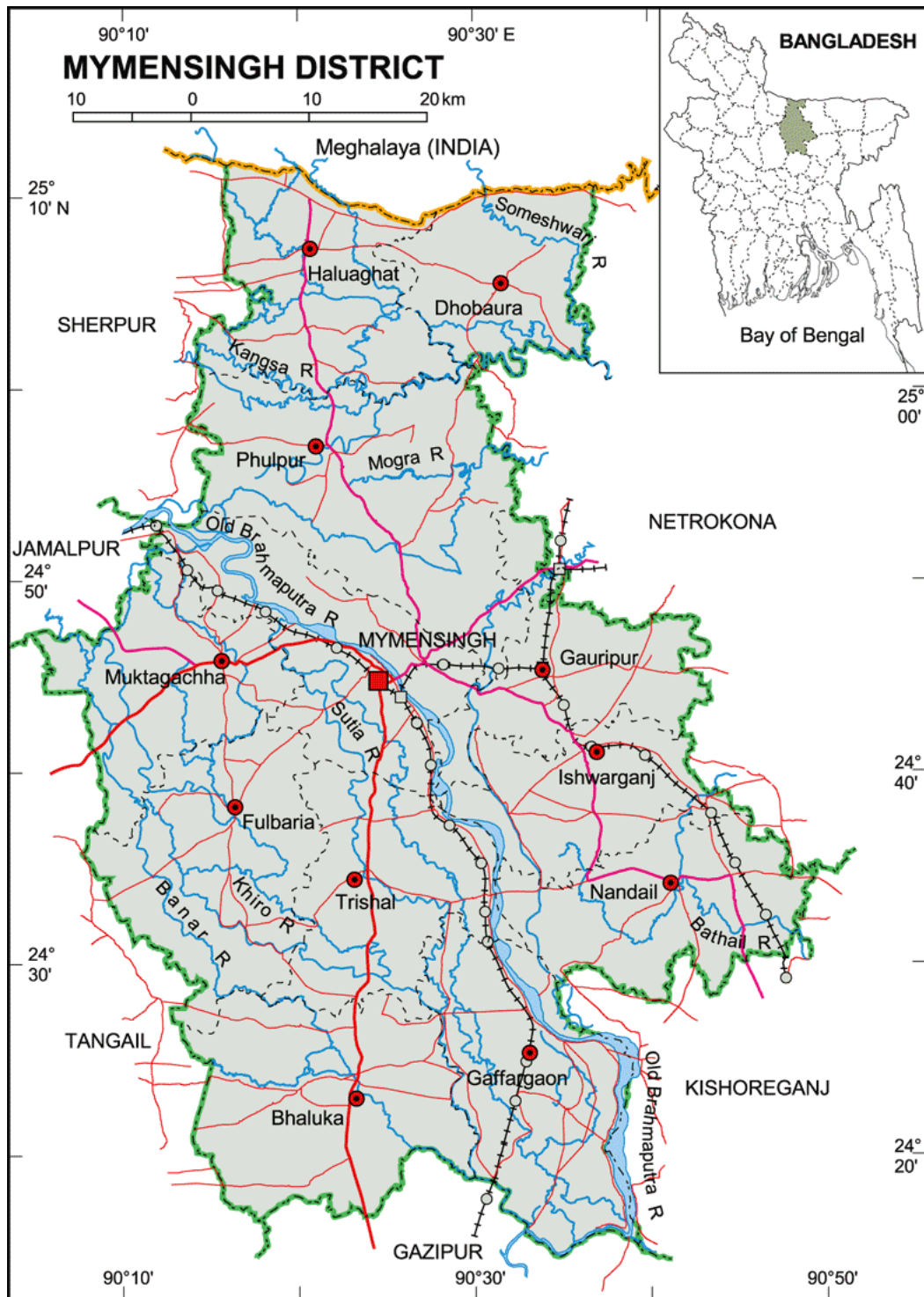


Figure 2.2.1 Map of Mymensingh
 Taken from
[mapofbangladesh.blog.com/Mymensingh map](http://mapofbangladesh.blog.com/Mymensingh%20map)
 on February 15th, 2012

2.3 Site photos



Figure 2.3.1
View on reaching the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.2
View on reaching the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.3
View on reaching the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.4
View on reaching the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.5
View on reaching the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.6
View from the peak of the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.7
View from the peak of the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.8
View from the peak of the char
Image captured and edited by Lamia Wajeehah Hossain



Figure 2.3.9
View from the peak of the char
Image captured and edited by Lamia Waieehah Hossain



Figure 2.3.10
View from the peak of the char
Image captured and edited by Lamia Waieehah Hossain



Figure 2.3.11
View from the peak of the char
Image captured and edited by Lamia Waieehah Hossain



Figure 2.3.12
View from the peak of the char
Image captured and edited by Lamia Waieehah Hossain



Figure 2.3.13
View across the river
Image captured and edited by
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Figure 2.3.14
View across the river
Image captured and edited by
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Figure 2.3.15
View across the river
Image captured and edited by
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Figure 2.3.16
View across the river
Image captured and edited by
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Figure 2.3.17
View across the river
Image captured and edited by
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Figure 2.3.18
View across the river
Image captured and edited by
Lamia Wajeehah Hossain

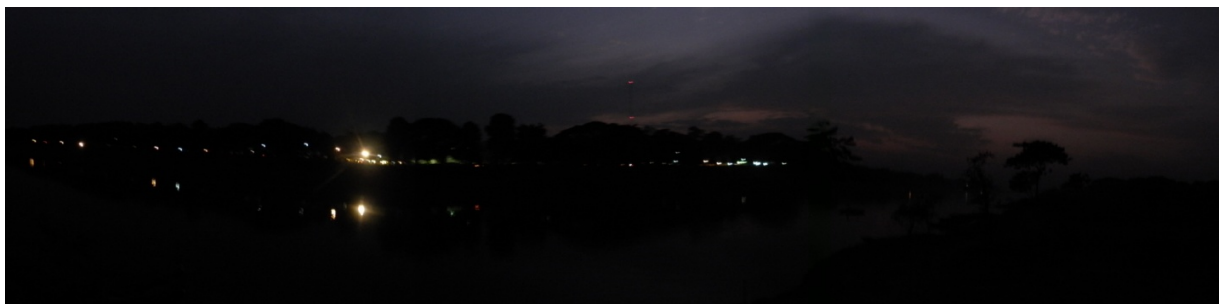


Figure 2.3.19
View across the river
Image captured and edited by
Lamia Wajeehah Hossain



Figure 2.3.20
View of Mymensingh town Image captured
and edited by Lamia Wajeehah Hossain



Figure 2.3.21
View of Mymensingh town Image captured
and edited by Lamia Wajeehah Hossain



Figure 2.3.22
View of Mymensingh town Image captured
and edited by Lamia Wajeehah Hossain



Figure 2.3.23
View of Mymensingh town Image captured
and edited by Lamia Wajeehah Hossain



Figure 2.3.24
View of Mymensingh town Image captured
and edited by Lamia Wajeehah Hossain

2.4 Environmental Considerations

The average normal maximum temperature is 26.8 degree Celsius, average normal minimum temperature is 13.6 degree Celsius. The average total rainfall is 256,8 mm and the number of normal rainy days is 30 per year. The site is within an earthquake risk zone, as it is close to the Modhupur Fault line. Tornadoes called Norwesterns are common within this region. The prevailing wind direction as of the country is from the south east.

The site is a low lying attached char, with river Brahmaputra on the northwest. It is a low lying area with three topographical layers with its highest elevation being 12.4 m from the reduced level RL and the average height is 11.7m from RL. The flood level for the area is 14.7 m from RL. The river on the northwest affect the micro climate of the site by lowering the temperatures and emphasizing further air flow.

2.5 Social and historical background

a) River Brahmaputra

Brahmaputra comes from the Sanskrit word which means Son of Brahma. It is one of the very few rivers which depict masculinity, while most rivers in the sub continent are referred as females. After originating at the Himalayas and flowing through Tibet and then India, the river enters Bangladesh. Here it joins Teesta its largest tributaries before branching out into the eastern and western arms. The western formerly the smaller branch becomes the Jamuna and the other formerly the larger one remains as the old Brahmaputra.

Until the late 18th century, the eastern arm used to be the mighty river, having a different course, flowing through Jamalpur, Sherpur, Mymensingh and then to Egaroshindur. Some say Teesta known as a wandering river often changes its course and joins different rivers, had a massive flood forcing Brahmaputra to change its course in taking a shorter and direct to the Bay of Bengal. Others say the Tibetan river Tsangpo joining Brahmaputra forced the later to change its course. Another theory states by 1830, owing to a major earthquake the old channel had been reduced to its present insignificance. Since then the branch Jamuna became the bigger one than the Brahmaputra. It was navigable by country boats throughout the year and by launches only during rains, but at the point as low as Jamalpur it was formidable throughout the cold weather. Similar was the position for two or three months just below Mymensingh also. The river Brahmaputra drains a vast area of nearly 9,36,800 sq. kms. It is a river of immense importance and navigable from the Bay of Bengal to Assam, a distance of nearly 1,280 kms. It is a splendid waterway for commerce and travel.

Enquiries showed that many of the new formations of chars were on the site of permanently settled villages which had been washed away by the changes in the course of the Jamuna and the Daokoba.

The river's three names, the Brahmaputra in India, Yarlung Zangbo in Tibet, and Jamuna or Brahmaputra in Bangladesh, reflect the social fabric of ethnic groups and international communities living along its banks. The river is considered to be a symbol of synthesis of people of all religions, castes and creeds.

In the ancient Indian tradition, two rivers are known to originate from Manasarovar Lake, in Mt. Kailas; to the east is called Brahmaputra and west is Shatadru, a tributary of the Sarasvati (joining the latter at Shatrana, Punjab) in Rigvedic times. Both these major rivers, Brahmaputra and Sarasvati are related to the God of creation, Brahma. The lower portion of the river is sacred to Hindus.

b) Mymensingh

Mymensingh consisting of marshes, jungles and flat plains with long horned buffaloes, are often used to explain the nomenclature of once the largest district in the whole Indian Sub-continent. In Bangla, the name Mymonshing often are broken up into the haor, jongol, mohisher shing, and Bengali terms for the above mentioned. Other than this colloquial explanation, another one says that it comes from the word Mimansahi, Momensahi, Momensingh during the sultanate and Muslim rule in Bengal. It also had the name of Nosratshahi or Nasirabad which is still used in certain educational establishments, when the independent sultan made a new state for the son, Sayyed Nasiruddin Shah Nosrat

Garo hill in north, forest of Bhawal and Modhupur in south, river Meghna from Brahmaputra in west and Titash, Surma and Meghna in the east make a natural barrier all around this area and so it was assumed to be an invincible area. Present history specialists agree on the fact that ancient Banga state consisted of Dhaka and Mymensingh. In the beginning Banga state consisted of the red-clay area including Modhupur Gor. The establishment of Hindu Mowrja kings and the reigns of Gupta and Paul kings surround Mymensingh. In the end because of the administrative weakness of the Sen kings the Muslim kings conquered Bangla and that effected Mymensingh. Having been ruled by Buddhist, Hindu and Muslim rulers the region has enriched itself in a vast diversity of culture. Even after the splitting up of the district, it still remains an important one. At one point after Dhaka, the next most important one was Mymensingh.

This district has notable number of educational institutions and those have given it the respect of educational center. The only training college for female teachers, National Academy for Primary Education, first Girls' Cadet College and Mymensingh medical College, Polytechnic Institute, Nasirabad college, Anondmohon College and many others. Biggest in Asia – Bangladesh Agriculture University and Molecular Agriculture Research Center and Fish Research Center is situated in Mymensingh sadar. One of the oldest towns of the country with all these institutions Mymensingh has earned itself a feature educational zone.

With its flat green plains, marshy land with fertile soil, the area is perfect for cultivation of paddy, jute and other summer crops. Being the largest district, owing to its huge land area, Mymensingh had been the producer of a major portion of agricultural goods. The fertile soil was also liable. Of all the crops jute, paddy and cotton were the most popular harvest of the region. Mymensingh in the earlier days used to be the largest producer of the paddy and jute. Jute grown here were of the best quality. The cotton fields are still seen within the district.

The people of the district played important roles in every national protest like- various strikes against the British, Pagilponthi Bidroho, Fokir Bidroho, Tonk Andolon, Tevaga Andolon, Krishok Andolon, Gono Obbhutthan of 1969, liberation war of 1971 and left their marks in history. The defensive battles of Jolsotro-Modhupur, Valuka, Fatemanagar (Kalir Bazar) and battles of Telikhali and Dhanua Kamalpur were all similarly important in the beginning stage of the liberation war. Of them all, our National poet also known as the Bidrohi Kobi or rebel poet, Kazi Nazrul Islam famous for protesting against the British rulers, hails from Trishal of Mymensingh.

Witnessing rulers of different eras, from the Palas, to the Senas, then the Sultans, Nawabs, Mughals, British and even the Pakistanis, the region embraced various cultural diversities. Ancient and magnificent pieces palaces of the Hindu Zamindars of the region exist as masterpieces of art and architecture. Adding to it the urban fabric of the town reflection of Colonial rule also dominates the townscape. Co existence of multiple water bodies and ponds within the built areas make the town even more attractive. The agriculture university with its unique architectural style has become an iconic landmark of the town. Pleasing views and open areas, has become a significant landmark for Mymensingh.

Rich in art, culture and folk lores, Mymensingh has produced many famous people achieving feats in different field like art, literature, politics and many more. The most famous of them would Shilpacharja Zainul Abedin, who was one of the pioneers in starting the Bengal school of art in this region. Abedin and Brahmaputra have been described to be inseparable, and it is the river which has had immense influence on him and his works. National poet Kazi Nazrul Islam also comes from Trishal and adjacent area to the town. Indian scientist Sir Jagadish Chandra Bose, Upendra Kishore Roy Chowdhury, Sukumar Roy, (grandfather and father of) Satyajit Ray all come from this area. Mahadev Sannal, anti British activist, Leela Mojumdar musician, Poet Nirmalendu Goon, Novelist Humayun Ahmed, Taslima Nasreen was born in Mymensingh. Indian singer Mitali Mukherjee, Ghulam Rabbani and Urdu speaking Bangladeshi are also among the famous people. President Shaahbuddin Ahmed, Syed Nazrul Islam, acting President during the liberation war are among some of those well known people from the land.

2.6 SWOT Analysis

a) Strength

1. The site is a vast vacant land.
2. No permanent structure exists on the site.
3. The site offers a pleasing and serene view all across it.
4. It is very close to Mymensingh town.
5. The site may be easily and cheaply accessed from the town by a boat.
6. It is located near an already active tourist or public spot.
7. Visitors often explore this site even in its existing conditions.

b) Weakness

1. The char is a low lying area, thus flood prone.
2. The highest level of the char is below the flood level.
3. Often packed, visitors at the park on the opposite bank spill into the site.
4. Excessive activities on the opposite bank.
5. Lack of easy road access to the site.
6. Significant amount of beggars from the nearby villages.
7. Vendors also appear to pollute the area.

c) Opportunities

1. It creates a scope of public realm and making it a tourist attraction of Mymensingh.
2. Provides a chance of connecting the site with the vibrant part along the other bank.
3. Prospect of good road network, changing the katcha roads into pucca ones.
4. Scope of revitalizing river life, boat making, fishing and others.
5. Scope of economic benefits from the museum to trickle down to poor villagers of the surrounding areas, by engaging them into museum activities.
6. Opportunity of having vendors in a systematic way can also be achieved.

d) Threats

1. Deforestation and threat to cultivatable land can be a problem.
2. Pollution in the area can occur in terms of sound, air and on the ground area.
3. Pollution of the river water may also be an issue.
4. Causing disturbance to the livelihood of the villagers is also a threat.

CHAPTER 03 LITERATURE REVIEW_____

3.1 Evolution of the Museum

The idea of a museum began as a private collection of wealthy individuals, families and institutions of art, rare and curious objects (natural) and artifacts. They were displayed in what were known as “wonder rooms” and “cabinets of curiosity”. Public access to the private art collections was often granted to the social elites, at the whimsical decisions of the owner and the staff. Public museums were often accessible by the middle and upper classes, but entry to museums was particularly difficult for the lower class members. The British Museum required these less-privileged members of society to file a written application and often wait times for tickets could be up to two weeks. During the Victorian era, museums remained open on Sunday afternoons for the working class for self improvement in England.

The Louvre Museum in Paris, which opened in 1793, was the first public museum in its truest sense. Access to the formal French royal collections was free for people of all classes - there were 3 open days in every *decade*, a decade being a 10 day unit, comparable to a week in the French calendar. Napoleon’s quest saw him conquer scores of European cities, confiscating art pieces along the way. As the collections grew, managing the pieces of art became more complex. Following his defeat in 1815, a chunk of the treasures he had accumulated were slowly restored to their previous locations. Though his scheme never fully materialized, his idea of using a museum as a carrier of nationalistic zeal made a deep impact across Europe. Eventually, American museums stood side by side with European museums as leading global centers for the production of knowledge in their fields of interest. In the late 19th and early 20th centuries (an epoch known as “the Museum Age”), there was a period of eager museum building, in both an intellectual and physical sense. Many of the art and natural history museums of America were established with the aim of directing the focus on scientific discoveries and artistic developments; whereas other museums attempted to replicate European ones in ways like development of classical collections from ancient Egypt, Greece, Mesopotamia and Rome.

3.2 Purpose

The main rationale for a museum is to create an establishment that not only collects and cares for objects that hold scientific, artistic and historical significance, but also make them available for public viewing through exhibits, both permanent and temporary. The world’s metropolises host many of the larger museums, but regional ones also exist across small towns and rural countryside, which tend to focus more on exhibiting local culture or history.

Most museums forbid physical contact with the artifacts, but there are some that allow a more interactive approach. Contemporary standards in museology have enhanced the diversity in themes and introduced newer interactive exhibits, which provides more choice and opportunities for the public to engage in. The growing phenomenon that is the internet has facilitated the spread of virtual exhibits, which show images with recorded sound.

Today, museums are typically open to public viewing, of which some charge an entrance admission fee and some (which are financed by the state) that provide free entry, either permanently or on selected days of the year.

In contrast to private galleries that are active in selling objects, museums are mostly not-for-profit organizations whose main purposes are to display objects, records and information of historical, artistic, scientific and cultural importance and are therefore, know to have a reputation for being a reliable source of information about history and culture.

3.3 Types

Museums can be of different magnitudes, ranging from enormous collections of the big-city museums to the much smaller museums that focus on more specific topics. Categories include, but are not limited to, fine arts, archaeology, anthropology, history, natural history, science, maps, philately and zoological parks/botanical gardens. These categories can be classified into even narrower themes, such as modern art, aviation history or geology. A museum generally accommodates a core collection of noteworthy objects under its specialized field. Objects are first officially accessioned by getting registered into the existing collection with an artifact number and details recorded about their origins. The persons appointed to manage the collection and the exhibits are known as curators. Among the numerous types of museums, some noteworthy mentions are listed below:

Archaeology museums

Art museums

Encyclopaedic museums

History museums

Maritime museums

Military and war museums

Mobile museum

Natural history museum

Open-air museum

Science museum

Specialized museum

Virtual museum

Zoological parks and botanical gardens

The relevant category of museum for this purpose of this thesis is the specialized ones, which are there to manifest a variety of subjects. Music museums, like the Rock and Roll Hall of Fame in Cleveland, Ohio, celebrate the life and works of composers or musicians; some even have live music recitals. The Beads Museum in Glendale, Arizona, which attempts to instill in the general public, a sense of appreciation and awareness of the historical, cultural and artistic significance of beads and related relics. The UK is home to one particularly specialized museum in the field of horology, the Cuckooland Museum, which houses the world's largest, and arguably the finest, collection of antique cuckoo clocks. Children's museums and toy museums target the youth in an effort to educate them on a wide assortment of topics with their interactive learning material. There are some museums devoted to sports; some are devoted to one particular sport. There is a museum that illustrates the art, history and science of glass; another that portrays American social history on a diminutive scale; and one that explores the methods and techniques of solving crimes.

3.4 Museum Planning

Conception of a museum starts with a museum plan, which is an outcome of the museum planning process. The first step of the process is to agree on the museum's vision and to determine what resources, organization and experiences are required to accomplish this vision. This is followed by a feasibility study, a review of comparable facilities and an interpretive plan are all assembled as part of the planning process.

A handful of museums are exceptional in the sense that they have few or no artifacts and do not necessarily categorize themselves as museums. The National Constitution Centre in Philadelphia is an example of such a museum – the lack of artifacts is compromised by a narration of memorable anecdotes and conveyance of new information. On the contrary, the US Holocaust Memorial Museum in Washington DC makes use of numerous objects in their evocative displays. Interestingly, both these museums were designed by Ralph Appelbaum Associates.

3.5 Etymology

The English word 'museum' is derived from Latin. This, in turn, can be traced back to the Greek word *Μουσείον* (Mouseion), which refers to a place or temple dedicated to the Muses. In Greek mythology, Muses are the goddesses of poetry, literature and the arts. Consequently, the abodes of the Muses are rightly considered to be the institutions for study and the arts. The first museum/library is believed to be the one of Plato in Athens, but other sources allege that a small hill called Museum in Classical Athens was the first of its kind. The hill was called Mouseion, after Mousaios, a man who used to sing on the slopes of the hill until he died there and was buried there too.

3.6 River system of Bangladesh

A network of about 800 rivers and waterways weaves through Bangladesh, creating a drainage basin that provides sustenance for millions of people. Bangladesh, a riverine country with its innumerable rivers and their tributaries flowing through the country constitutes a waterway of a length of about 24,140 km. Most of the country has been formed through silt brought by the river.

Of the many rivers of Bangladesh Padma, Meghna, Jamuna, Ganges, Brahmaputra, Surma, Karnaphuli are the major ones. Following them would be rivers like Buriganga, Dhaleshwari, Shitalokhha, Balu, Turag, Kirtonkhola, Dhanshiri, Teesta, Titas, Modhumoti, Ichamoti, Kushiara, and Gorai.

Topographically, five main river systems have been identified, four of which are interconnected - the Jamuna-Brahmaputra, the Padma-Ganges, the Surma-Meghna and the Padma-Meghna, while the Karnaphuli river system flows separately.

The district of Mymensingh is bounded by Jamuna on the west and Meghna on the east. They are connected by the old channel of Brahmaputra running through the centre of the district in a south easterly route from Bhadurabad to Bhairab Bazaar. The Bogra district has river Karotoya as its central water dividing channel, while the rest are the eastern and western tributaries. River Mona, Charkadaha, Tulsigangam, Atrai, Jamuna, Banglaee, Nagar are rivers flowing through that district.

Jamuna lying on the eastern side is actually a new channel of the Brahmaputra. Earlier a small channel called Tarai used to flow along its present location. Back then the Brahmaputra used to

flow to the east along the Garo foot hills. Around 1770 the river changed its course and started to flow by the Modhupur jungle, while after the 1880s it changed its course once again and took the present location where the Brahmaputra flows today at less significant form. Some cite the excessive volume of water in the Brahmaputra as one cause, while others say diversion of the Teesta was also responsible and another was the river itself choosing a shorter route to the Bay of Bengal.

3.7 History of Brahmaputra

The Jamuna-Brahmaputra is a segment of the mighty Brahmaputra that originates as Yarlung Tsangpo in Tibet. After entering Arunachal Pradesh in India, the river is known as the Brahmaputra, where it accepts water from five major tributaries. Where it meets the Teesta River in Bangladesh, it becomes the Jamuna. The Jamuna has a reputation of constantly shifting sub channels and forming fertile silt islands in its trail, deeming any permanent settlements along its banks impossible. Below the Teesta, the Brahmaputra diverges into two channels. The western branch contains the majority of the water volume and continues due south as the Jamuna. The eastern offshoot, once the dominant channel of the Brahmaputra, is now a much smaller waterway that is known as the old Brahmaputra. There have been doubts about when and why the Brahmaputra changed its course. Around the 1776 it changed its course flowing by the Modhupur jungle. At that time the Brahmaputra used to flow to the east round the foot of the Garo Hills. The earliest evidence of the Brahmaputra River consists of a group of large Brahmaputra-size river scars which extend into the Sylhet basin flanking the southern edge of the Shillong plateau. The main river apparently extended east beyond this locality and then swung south into the Bay of Bengal. By the time of Rennell's mapping, this course had been abandoned in favour of a shorter route down what is still called the old Brahmaputra river past Mymensingh.

By the early 1770s the major diversion of the Brahmaputra into its present channel, west of the Modhupur jungle, had occurred. There is no complete agreement as to when this diversion down the Jenai river of Rennell occurred. Apparently by 1830 the diversion of low-river flow down the new channel was complete.

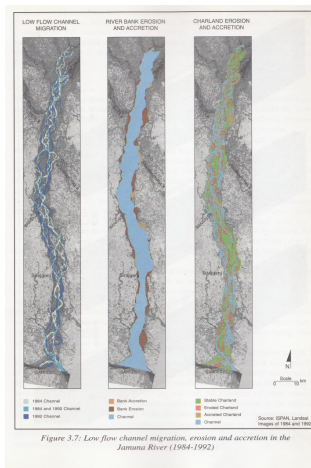


Figure 3.7.2
Image showing deviation of river Brahmaputra in context of Bangladesh
Image taken from. *Riverine Chars in Bangladesh, 2012.*

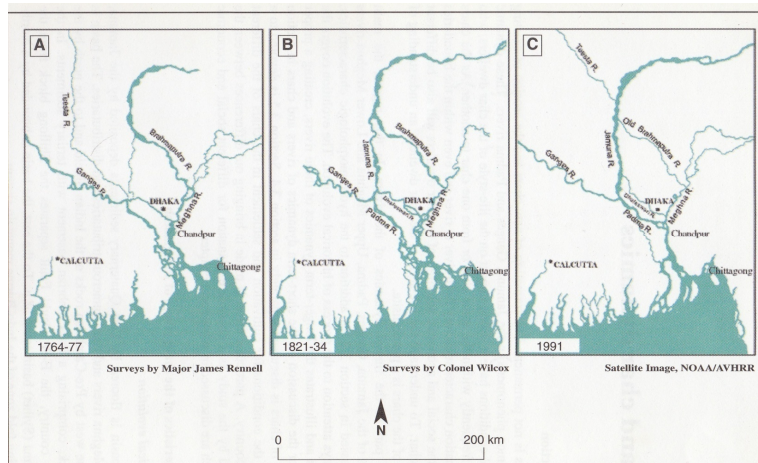


Figure 3.7.1
Image showing deviation of river Jamuna
Image taken from. *Riverine Chars in Bangladesh, 2012.*

CHAPTER 04 CASE STUDIES_____

In order to understand the requirements for the project, several case studies were done. Through the case studies, the type of master plans, form, functions, spaces and other aesthetical qualities were studied. Among the various projects at home and abroad, five will be discussed in the following sections. The projects studied are as follows:

1. River and rowing museum, London, David Chipper field
2. Craft Museum, New Delhi, Charles Correa
3. American Aviation Museum, London, Norman Foster
4. Guggenheim Museum, New York, Frank Lloyd Wright

4.1 Case Study 01: River and Rowing Museum



Figure 4.1.1
Image of the River and Rowing Museum
Web.
<<http://www.mimoo.eu/projects/United Kingdom/Henley-on-thames/River and Rowing Museum>>.



Figure 4.1.2
Image of the River and Rowing Museum
Web.
<<http://www.mimoo.eu/projects/United Kingdom/Henley-on-thames/River and Rowing Museum>>.



Figure 4.1.3
Image of the River and Rowing Museum
Web.
<<http://www.mimoo.eu/projects/United Kingdom/Henley-on-thames/River and Rowing Museum>>.

The River and rowing museum by David Chipperfield stands on Henley on Thames, which has long been the sacred in the world of rowing. The design is a modernist interpretation of the traditional wooden sheds on the river banks. The project containing three exhibition spaces dedicated for the sport of rowing, river Thames and town of Henley. It also contains special galleries, café, gift shops, education centre, library and a multipurpose room. The programme was divided into two volumes, houses within two pitched roofed double storied box type blocks. The first contains the education centre on the lower level, while a gallery and the library was on the floor above. The larger box houses the two other permanent galleries on the upper floor of the long gabled gallery block. Below are the lobby administration block, gift shop and café which open onto a wooden deck overlooking the river. Both the sheds, raised on shallow concrete columns, have been finished with a subtle elegant palette of expanded concrete, glass and naturally withered oak batten and covered with steel roofs.

The rowing gallery has a narrow day lit interior holds streamlined boats and oars on the floor, walls and ceiling. The design creates a cool soothing mood, reflecting that of a calm river. The Thames gallery too has been designed as a linear space with vaulted roof to bring daylight. A little difference is seen in the third, Henley gallery which is connected to the other two galleries with a long glass enclosed bridge at the upper level. Having a windowed wall instead of roof lighting for illumination this one holds a traditional look. Having individual version of a traditional virtue of an old Oxfordshire barn look with the timber clad roof and floor to ceiling glass make them get a floating feel.

4.2 Case Study 02: Craft Museum

The craft museum at New Delhi designed by Charles Correa is another great work of the architect, where like many of his other works, the plan is a derivation from the nine square or manadapa a dominant form in the Hindu mythology. The plan is a reflection of rural India with open courtyards, green spaces, and water bodies within the museum block. Despite being located in an urban area, the designer has maintained a good balance of hard and soft ratio, as he has done of the solid void proportion in the master plan. A modern museum with all advanced amenities inside holds a look a typically rural village of India, as crafts originates from the country sides. Another feature about the design has been the influence of the narrow and connected alleys of the city. The street pattern of Delhi has been the main concept behind the project.

As commonly done in all of Correa's work, climatic issues have effectively been solved in this project too. To sustain the hot dry weather pattern of Delhi, large areas have been kept open to allow air flow. Water body within the complex also helps keeping the interiors cool and the air less dry. Mud walls to attain thermal mass for passive cooling are also seen.

Trying to relate to the river life museum project with a vast site, meant having a sprawling master plan, the Delhi Craft museum plan seemed to be suitable. Climatic issues being similar to that of the hot climate in Bangladesh, also was another reason behind the selection of this as a case study.

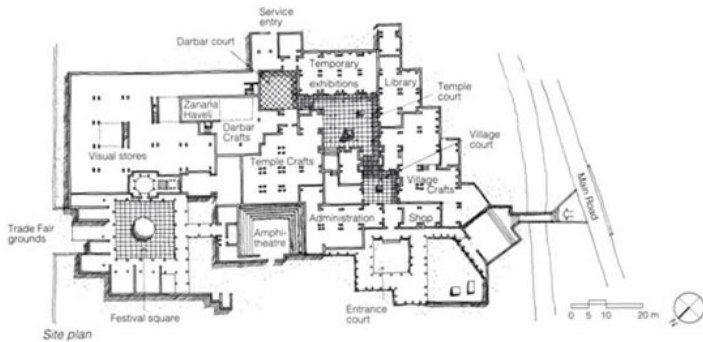


Figure 4.2.1
Image of the Craft Museum
Taken from <http://nationalcraftsmuseum.nic.in/>

Figure 4.2.2
Image of the Craft Museum
Taken from <http://nationalcraftsmuseum.nic.in/>



Figure 4.2.3
Image of the Craft Museum
Taken from <http://nationalcraftsmuseum.nic.in/>

Figure 4.2.4
Image of the Craft Museum
Taken from <http://nationalcraftsmuseum.nic.in/>

4.3 Case Study 03: Guggenheim Museum

The Guggenheim Museum of New York by Frank Lloyd Wright is an iconic museum of that era, during the later part of his career. Inspired by the form of a snail the museum consists of ramps winding up an 8 storied atrium within the museum block. The wall of the domical form contained the exhibits which were enjoyed while walking up the ramps. The ramps not only acted as means of vertical circulation for all but also provided the visitors a unique way of exploring the space and the form of the museum. The ramp also defines the massing and fenestration of the extraordinary shaped museum. The services and other functions like offices, library and shops are placed in the lower flatter block holding the coiled snail in the cityscape.

This has been a relevant project as the ramps were being considered as means of circulation in the river life museum. Since the museum has been spread over a large area and within single storey the program could be arranged, scope of using ramp for movement of visitors was a probable option. Ramps, the display wall, atrium holding the multi layered ramps were studied to be used into the river life museum project.

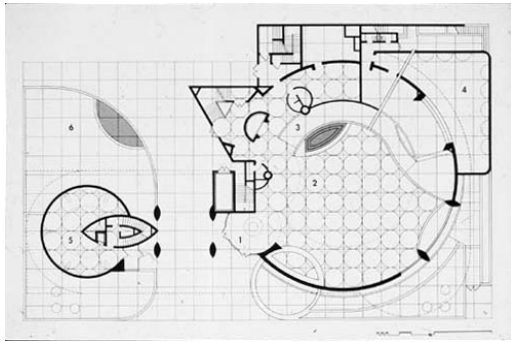


Figure 4.3.1
Image of the Guggenheim Museum
taken from [Web.http://greatbuildingsonline](http://greatbuildingsonline)

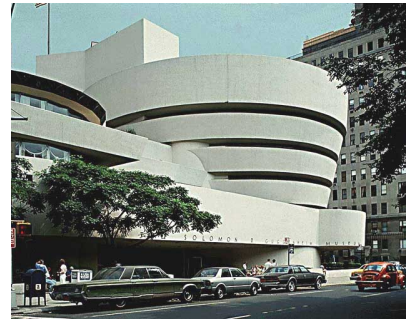


Figure 4.3.2
Image of the Guggenheim Museum
[Web.http://greatbuildingsonline](http://greatbuildingsonline)
Museum

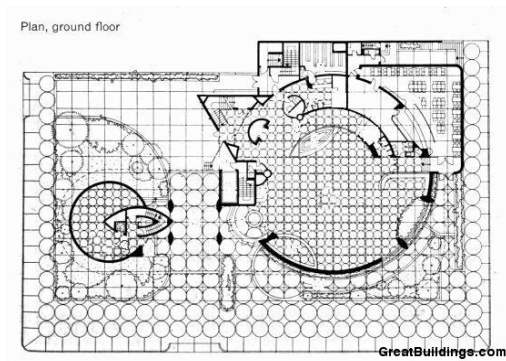


Figure 4.3.3
Image of the Guggenheim Museum
[Web.http://greatbuildingsonline](http://greatbuildingsonline)

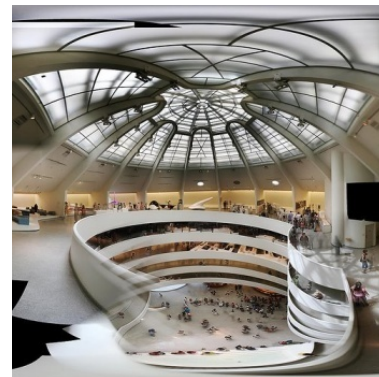


Figure 4.3.4
Image of the Guggenheim
[Web.http://greatbuildingsonline](http://greatbuildingsonline)

4.4 Case Study 04 : American Air Museum

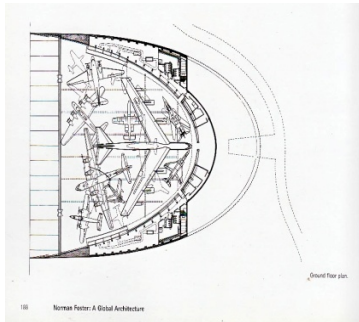


Figure 4.4.1
Image of the American Air Museum
Web. <<http://www.hughpearman.com/articles/cwa23.htm>>.

Figure 4.4.2
Image of the American Air Museum
Web. <<http://www.hughpearman.com/articles/cwa23.htm>>.

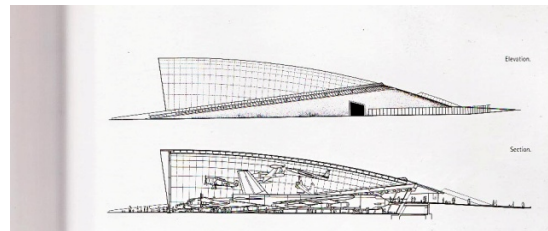


Figure 4.4.3
Image of the American Air Museum
Web. <<http://www.hughpearman.com/articles/cwa23.htm>>.

Figure 4.4.4
Image of the American Air Museum
Web. <<http://www.hughpearman.com/articles/cwa23.htm>>.

The American Air Museum at the Imperial War Museum in Duxfordshire, England is a unique one. Housing a moving object as a stationary component and yet giving it a feel of motion could only be done because of the architecture achieved by Foster in the design of the museum building. The museum at Duxford, tiny in comparison, offers more: the appreciation of the aeroplane as an art object, in an architecture informed by the experience of flight.

The museum building, partly blister-shaped structure of distinctly aeronautical shape except its full height glass in the front façade. The building slightly elliptical in shape houses a single large exhibition space with services at the back. Aeroplanes are parked on the floor of the gallery, while some are suspended from the concrete ceiling at altitudes depicting the aircrafts on flight. The largest display includes a Boeing B-52 bomber of height 16 metres and wingspan of 80 metres, determining the size, shape and free span of the museum which is of width 100 metres and depth 91 metres. The complex structure of the streamline roof of the museum involving long spanning concrete arches at the widest points with a shallow dome roof at the back helped casting bit in site in only five segments. The undecorated finishing of the interior roof enhances the military feel.

CHAPTER 5 PROGRAMME AND AREA DEVELOPMENT: area/sft_____

5.1 Given Program

1. Administration	3500sft
2. Multipurpose hall	8000sft
3. Library	6000sft
4. Research & Publications	5000sft
5. Lobby	2000sft
6. Restaurant	8000sft
7. Boat club	16000sft
8. Galleries:	32000sft
River Heritage	
Boats	
Riverside settlements	
Aquatic life	
Music	
Art	
Literature	
9. Activity areas	2000sft
10. Souvenirs shop	1000sft
TOTAL	1,15,000sft

5.2 Detailed Progm(tentative)

River life museum & research centre
 Brahmaputra, Mymensingh
 Revised Program

Functions	Area/sft	
ADMINISTRATION		3500
reception lobby	200	
director's room	100	
assistant director	100	
art director	100	
general office	400	
Conference	600	
Tea	150	
security & supervision	250	
mechanical department	400	
toilet	200	
Circulation 30%		

MULTIPURPOSE HALL		8000
Lobby	800	
Hall	4200	
Services	600	
Toilets	400	
circulation 30%		
LIBRARY		6000
Lobby	200	
Reading	1500	
book collection	1000	
Librarian	100	
Achieve	400	
audio visual	400	
Store	200	
Toilet	400	
circulation 30%		
RESEARCH		5000
lobby & lounge	300	
lecture room	1500	
doc. Room	200	
researcher's room(1000	
Store	200	
tea room	100	
Toilets	200	
circulation 30%		
LOBBY		2000
ticketing counter	150	
cloak room	200	
information desk	150	
RESTAURANT		8000
kitchen/pantry	800	
Store	500	
Counter	200	
indoor seating	2500	
outdoor seating	1200	
Toilets	400	
circulation 30%		
BOAT CLUB		40,000

boat display	18,000	
Boat riding deck	2000	
ticketing counter	100	
boat making	4000	
Storage	4000	
Toilets	400	
circulation 30%		
GALLERIES		
BOATS:		10,000
miniature models	6000	
Photos	1000	
write up	800	
Elements	1000	
Paintings	800	
FISHING		4000
fishing devices	1000	
marine life	1000	
Photos	600	
write up	600	
Paintings	600	
RIVER HERITAGE		5000
Geographical	800	
Historical	800	
Social	800	
Photos	1000	
Paintings	1000	
write ups	600	
CHAR LIFE		4000
People	1000	
Activities	1000	
Homesteads	800	
Agricultural	800	
Bazaars	600	
MUSIC		1000
audio visual	400	
Instruments	600	
LITERATURE & CULTURE		1000

Temporary gallery		1000
OTHERS		1000
Toilets	400	
Stores	400	
curator's room	200	
circulation 30%		
ACTIVITY AREA		20000
vendor space	500	
performance	18000	
display	1500	
GRAND TOTAL		1,16,000

After studying the program for an ideal museum complex in the Time Savers Standard, the given program needed revision in terms of smaller functions and also the area for the specific functions. The program with area distribution in such similar projects were also studied. In addition to the above mentioned program the client had said to include a picnic spot and some cottages for tourists in the complex.

However, owing to the feasibility and the suitability of the project, the above mentioned functions could not be incorporated. A picnic spot and tourist cottages are functions, very different from that of a museum. In addition to that providing a picnic spot or cottage would mean providing ancillary services to support the latter, which would conflict with the basic function of a museum. However the main purpose of bringing in tourist even through picnics can still be arranged once the museum is complete. The site is a vast stretch of undisturbed beauty, and even in the existing state people from the other bank situated in Mymensingh town cross the river Brahmaputra to enjoy nature and wander about. Thus even without a designated picnic spot, the museum area can still be used for picnics. Visitors may easily choose a spot on the sprawling char, where to serve them washroom, eating places, food vendors, seaters and of course a pleasant atmosphere is always readily available. Thus it may be justified that a set of separate functions for a picnic spot was not needed.

The proposal for the tourist cottages could not be addressed, since the function could not be merged with that of a museum area. Despite this, an arrangement for tourist willing to reside would be the river cruises and a few boat houses provided. Visitors may go on river cruise along the river Brahmaputra or beyond or may stay overnight at the boat house resting at the boating deck of the complex.

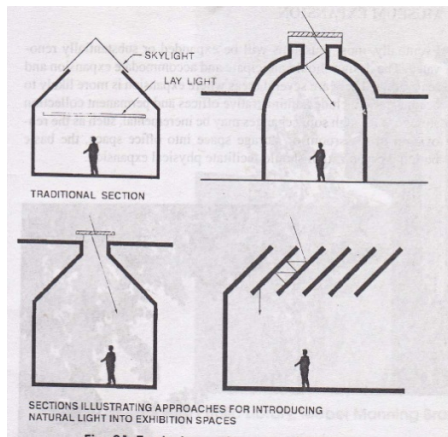


Figure 5.2.1
Image showing detail of roof Lighting

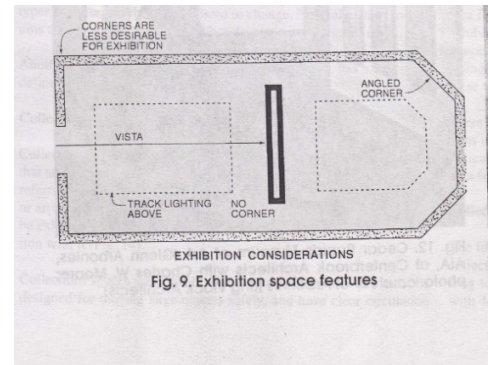


Figure 5.2.2
Image showing plan of galleries

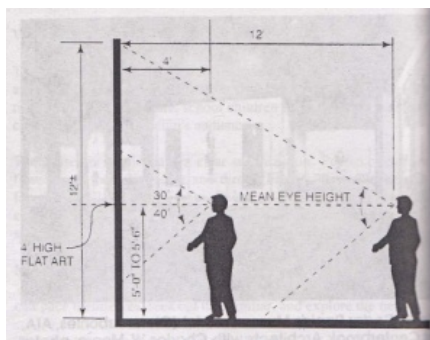


Figure 5.2.3
Image showing angle of human vision

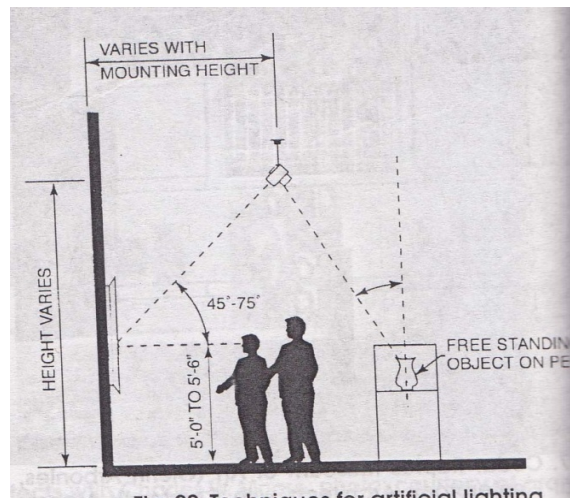


Figure 5.2.4
Image showing angle of artificial Lighting

CHAPTER 06 DEVELOPMENT PHASE_____

6.1 Concept

In forming the concept for the project, a River life museum, a few dimensions were considered as a part of the site study. This included the island 'char' of the river Brahmaputra, the char para gram and the town of Mymensingh. Elements significantly contributing to the char and the town's own expression were selected. These features were combined to form a broad concept for the project and are detailed in the following sections of this chapter.

6.1.1. Undisturbed horizons

The char along the river Brahmaputra is a low lying land mass which rises in the winter due to the recessed water level. In contrast it sinks into the river bed during the heavy monsoon in the rainy season. The flat plain is used as a cultivable land by nearby villagers to cultivate crops around the year. This gives it a dynamic landscape from lush green to yellow fields owing to the mustard seeds and other crops. The variation in the vegetation thus changes the color and the texture of the plain, giving it a dynamic look. Different birds and cattle add to its scenic beauty. The lush green shade of the flat plain, against some thick green trees bordering the char forms a picturesque backdrop against the mighty Brahmaputra. The concept was been conceived keeping this image as undisturbed as possible.

6.1.2. Boats

In gathering inspiration to form a concept for this project, the riverine system and perceptions of rivers were studied. From these the most prominent three dimensional image along the river appeared to be boats. Thus it was chosen as key aspect of the concept and to develop this, associated spaces, forms, structures and the elevations were studied.

6.1.3. Floating mass

As it is obviously known, the water level of rivers changes during the year, in addition to the changes over the day and night. The dynamic water levels of a river can be broadly divided in three categories: winter, monsoon and flood levels. In order to address this changing water level, a floating structure was considered as an option. Raising the mass on stilts would allow the building to maintain a height above the elevated water level even during the monsoon. This would lend a floating image to the museum during the museum at other times during the winter. Thus combining the winter and monsoon section incorporates a floating mass for the museum.

6.1.4. Arches façade and colonnade spaces

In studying the site at a greater frame, the town of Mymensingh was studied. Of several important issues, the colonial influence in the architecture of the town was a significant aspect. For the entire grammar of the architectural style, the most prominent aspects noted seemed to be the arched façade of the buildings and the colonnade spaces of the long corridors. These features were incorporated in the design of the museum.

6.1.5. Pond in urban setting

Another prominent feature of the town has been several water bodies seen in the urban setting in the town of Mymensingh. This coexistence of the water bodies alongside urban forms were an attractive feature. This aspect was condensed as an inspiration in the master plan of the museum.

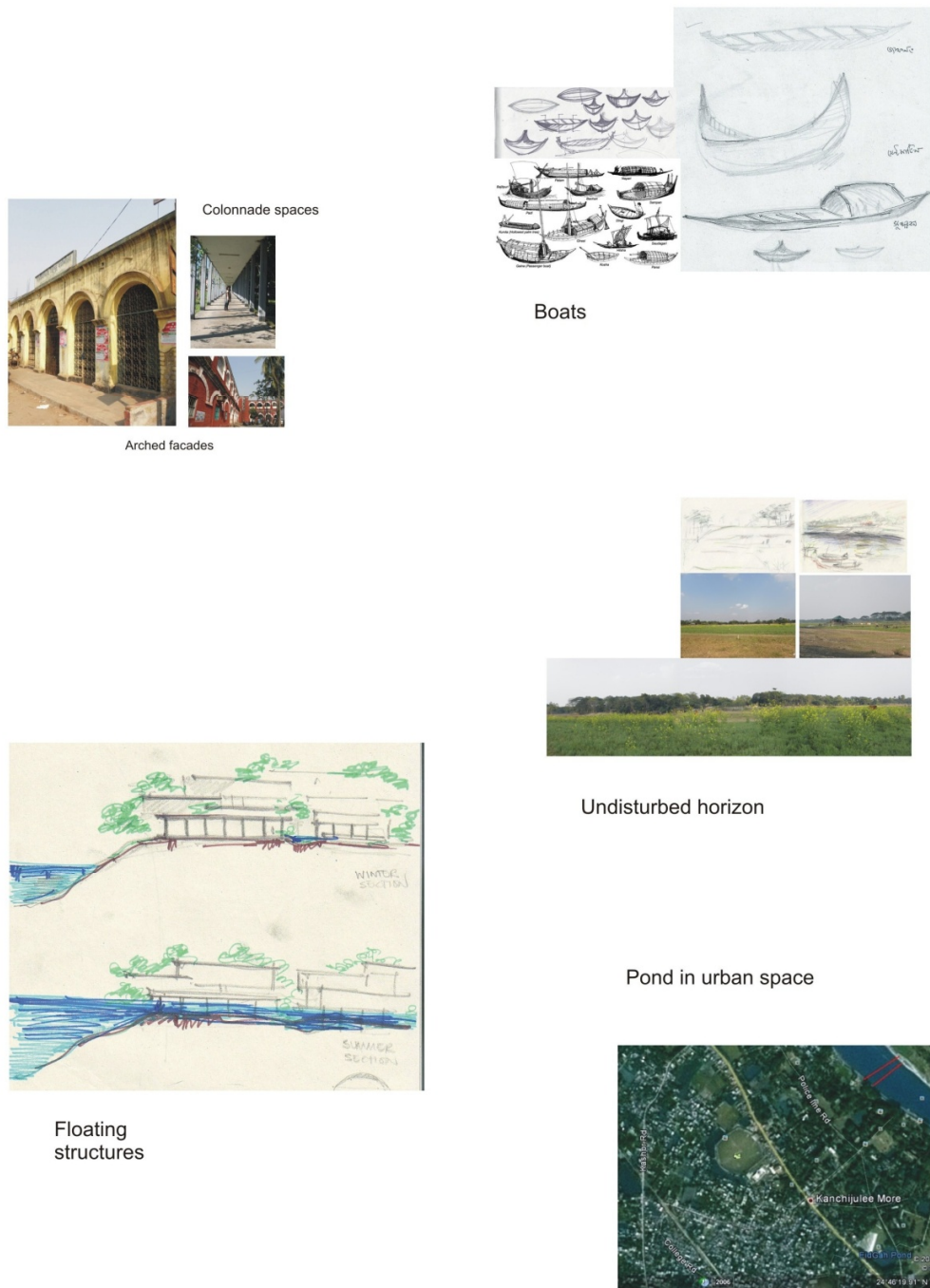


Figure 6.1.1
Image captured and edited and composed by Lamia Wajeehah Hossain

6.2 Bubble Diagram

The bubble diagram shows the functional flow and approximate distribution of area to each function.

The flow of function starts at the entrance to the museum through the entry deck for this complex. This directs the visitors to the lobby of the museum which then distributes them to the various other function spaces. The lobby leads to the multipurpose halls, which is also connected to the green room, a service entry and the restaurant. A kitchen is connected to the restaurant. The multi plan room and the restaurant are arranged in close proximity. The lobby also takes people to the library, connected to the research area and the administration sector of the complex. The gallery or the main exhibition area can also be reached via the lobby. An open fair ground and a service block workers living quarters and other services are also connected to the lobby.

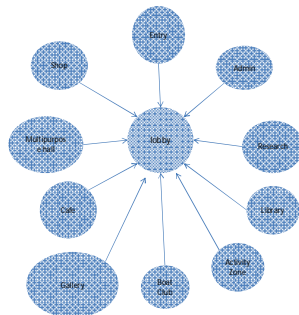


Figure 6.2.1
Bubble diagram of museum complex
Image created by Lamia Wajeehah Hossain



Figure 6.2.2
Bubble diagram of administration
Image created by Lamia Wajeehah Hossain

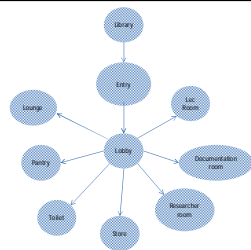


Figure 6.2.3
Bubble diagram of Research
Image created by Lamia Wajeehah Hossain

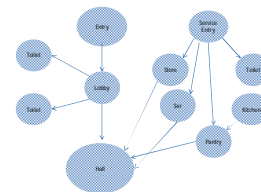


Figure 6.2.4
Bubble diagram of Multipurpose
Image created by Lamia Wajeehah Hossain

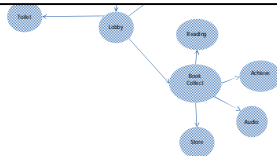


Figure 6.2.5
Bubble diagram of library
Image created by Lamia Wajeehah Hossain

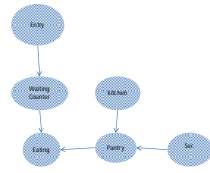


Figure 6.2.6
Bubble diagram of Restuarant
Image created by Lamia Wajeehah Hossain

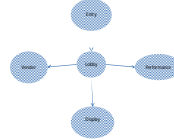


Figure 6.2.7
Bubble diagram of boat club
Image created by Lamia Wajeehah Hossain

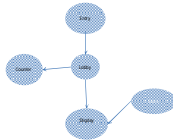


Figure 6.2.8
Bubble diagram of Shop
Image created by Lamia Wajeehah Hossain

6.3 Zoning

The museum complex may be divided into two types of zones: public and semi public. These would include both served and services areas. The major portion of the complex contains public spaces, and a very small very small portion is semi public. The galleries, library, lobby, multipurpose, fair ground and restaurant are all in the public area. The research section and the administrative areas have a little more private edge. The areas which come with the semi public zone are semi blocked containing workers living quarters, transformers, a janitor's room. The store and service spaces are for the public functions.

The other separation is through zone include the served and service areas. The served would include the galleries, library, café, multipurpose hall, research and administration section, the fair ground and the boating deck. The entry deck, service block, service entry, kitchen, stored, washrooms, workshops and all such would fall under the service zone placed in hidden or areas which are less visible to the visitors.



Figure 6.3.1
Conceptual sketch showing the zoning
Sketched by Lamia Wajeehah Hossain

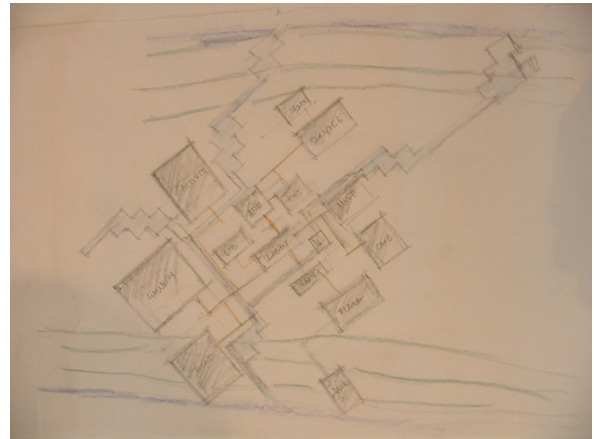


Figure 6.3.2
Conceptual sketch showing the zoning
Sketched by Lamia Wajeehah Hossain



Figure 6.3.3
Preliminary model photos
by Lamia Wajeehah Hossain

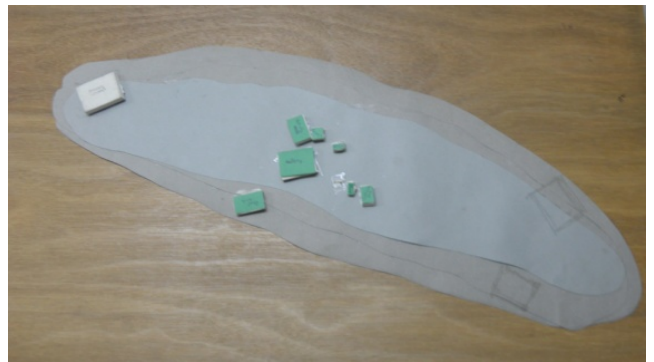


Figure 6.3.4
Preliminary model photos
by Lamia Wajeehah Hossain

6.4 Form

The basic inspiration for the form has been a boat. The shape, form, floating principles, its side profile, details, sections and plan views have been studied. Structural basics of boats had also been part of the study. The roofing of the boats, called the 'choi' has been covered. The aerial view of multiple boats tied along a river bank has also been used as a part of the study.

From these elaborate studies of boats, the plan of a boat has been adapted, adjusted and used as the basic form of the plan for the museum building. In elevation, the outer look of the boat and the 'choi' had been considered as curved walls and domical roof for the building.

Separating the individual functions into separate masses meant connecting the building. The connections were proposed by the shaded passages or walkways, reminiscing the colonial corridors and arched facades of the building of Mymensingh from the colonial era. The passages include curved roofs as shading which has been derived from the 'choi'.

The plans of these pathways have taken its shape from graphics of river connections. Curved lines forming the shaded walkways were interpretations or derivations of the lines along which the river channels connect to each other.

The boat floor or the 'pataton' has been studied. This inspiration for the roof lighting, discrete and fragmented lighting, has been used in walls and ceilings in galleries and other areas. Through the development process of the form, certain issues had been changed as needed. For some cases the curved roof or curved walls had not been addressed as desired in the beginning of the process.

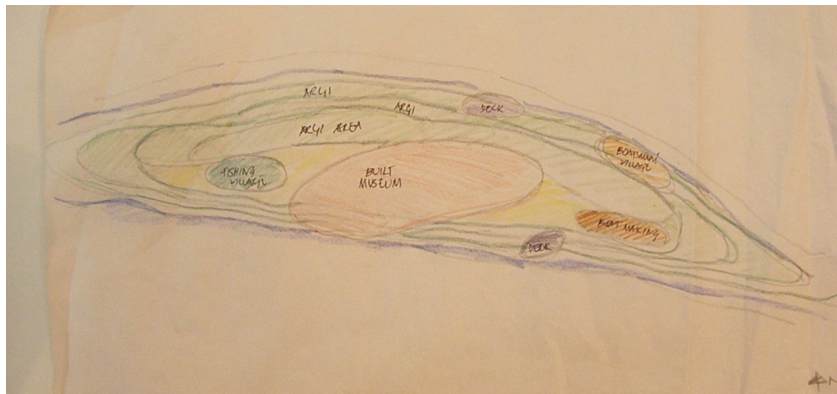


Figure 6.4.1
Preliminary model photos
by Lamia Wajeehah Hossain



Figure 6.4.2
Preliminary model photos
by Lamia Wajeehah Hossain

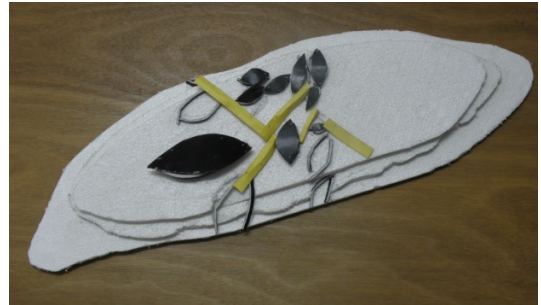


Figure 6.4.3
Preliminary model photos
by Lamia Wajeehah Hossain



Figure 6.4.4
Preliminary model photos
by Lamia Wajeehah Hossain



Figure 6.4.5
Preliminary model photos
by Lamia Wajeehah Hossain

6.5 Plan Development

The basic idea behind forming the master plan for the complex has been including each function in separate building masses and then connecting them through passages. This has been so that while going one building to another, the visitor can appreciate the vast and beautiful sight containing the complex. This was also done so that the spread away forms kept the landscape comparatively undisturbed compared to a huge big block of building.

The arrangement of form was done in order to avoid visual blockage of the flat, pleasing horizon across the river. To keeping the overall look of a boat, each building design had been solved according to its functions. Some have radial interior divisions, while others include orthodox rectilinear sections. A few forms contain open to sky or multiple height atriums with them.

The blocks have been arranged depending on the functional requirements and sequence in the functional flow. All are connected from the main lobby; each block contains its separate space for storage, service entry and washrooms making it self sufficient.

The curved walkways have been designed in such that each emerges from the walls holding the building adjacent to it. Within some passages are some resting open areas.

In planning the complex the first issue addressed has been studying the water level of the river through a year, and the topographical level of the char, surrounding villages and Mymensingh town. From this study, three important levels have been derived: winter, monsoon and flood levels. This shows the top most level of the char to be below the flood line. Thus to keep the area of the museum flood free the ground level of the complex had to be raised.

In order to do so the top most level of the char had been raised by 10' with the soil collected for dredging the dead branch of northeast river Brahmaputra. The dead arm had been acting drainage channel for the area. Prospering dredging and revitalizing this would allow it to be a navigatable channel and making the landmass and island char.

Hence the raised char area had risen above the flood line and can contain the museum complex safely. Other than the boating and entry deck, all the functional masses have been raised to a flood free level. Each mass has a part cantilevered from the flood free level, such that in a case flooding, a part of the building would be floating on water.

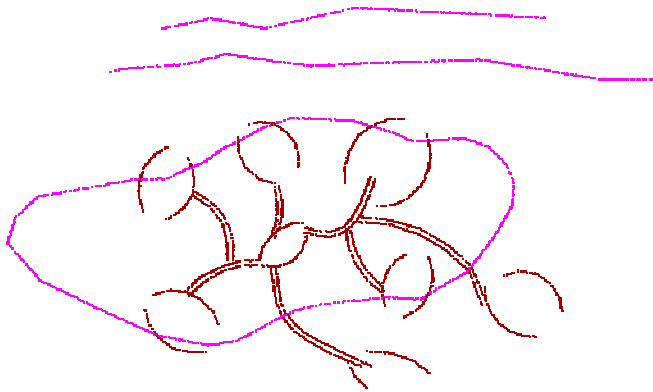


Figure 6.5.1
Drawing showing site with functional blocks
Drawn by Lamia Wajeehah Hossain

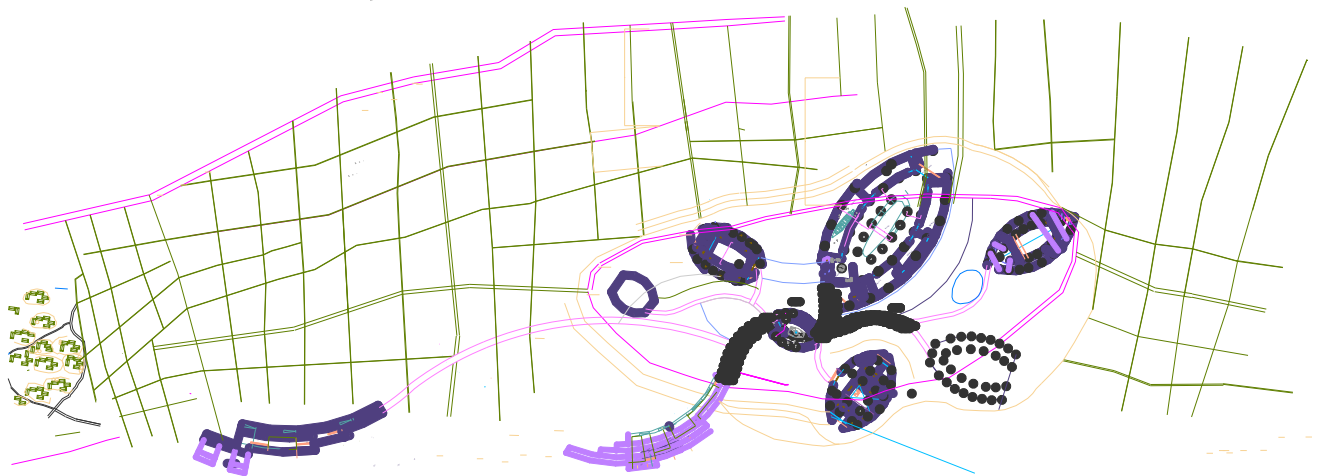


Figure 6.5.2
Drawing showing site with final master plan
Drawn by Lamia Wajeehah Hossain

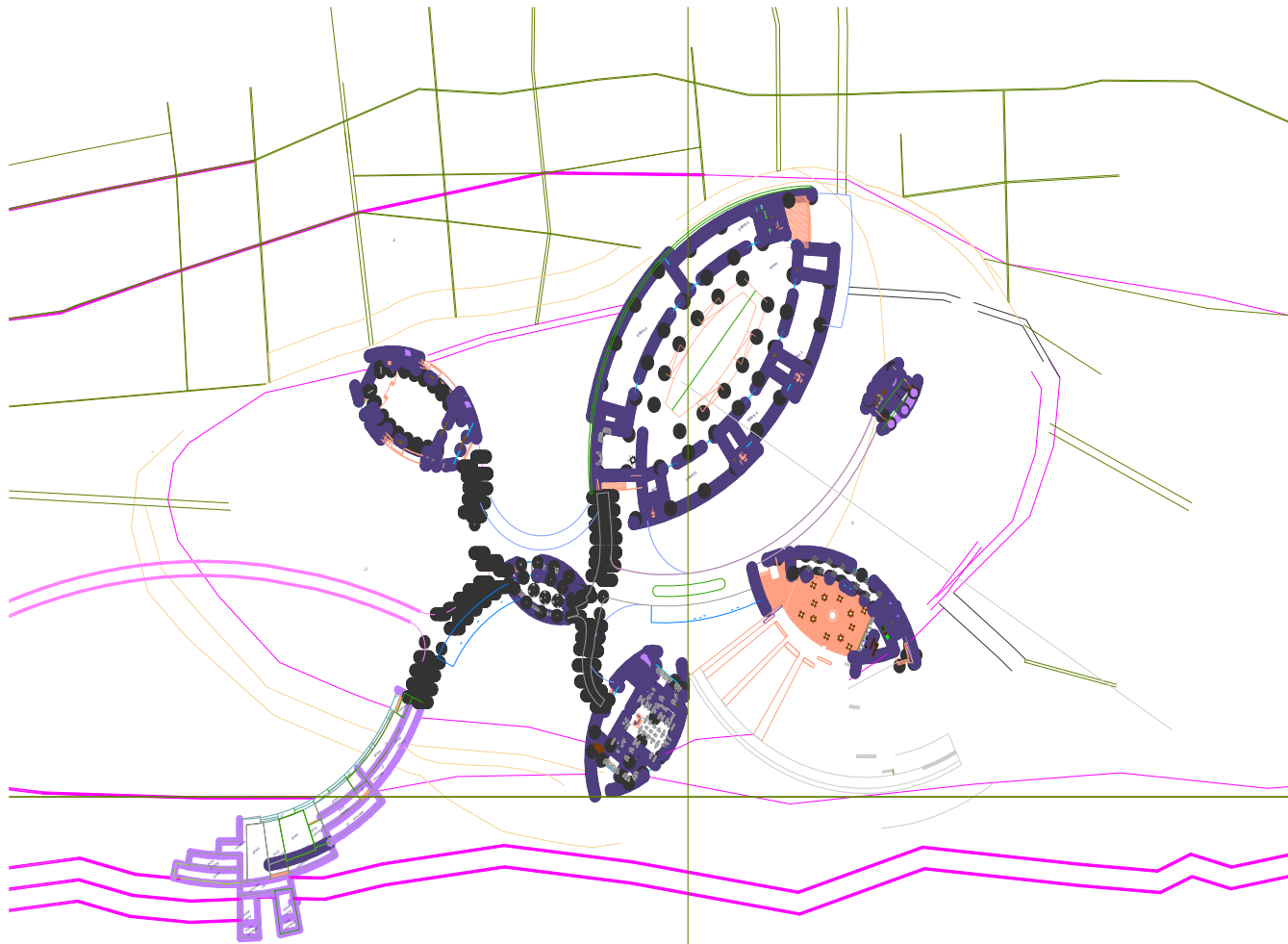


Figure 6.5.3
Drawing showing blow up of master plan
Drawn by Lamia Wajeehah Hossain

CONCLUSION

River forming a major part of our country, highly influence and shape the live of the people, yet today they have become a neglected aspect. In designing a River Life Museum on a River Char, it was aimed to make the visitor travel and explore the char, view exhibits within the built museum and also explore the interior and outdoor spaces of the museum often influenced by element of boats. Through these activities and exploration of space , it is expected that visitor would realize the connection between man and river, also the adverse conditions of the water bodies, which would help create awareness and action towards the revival and revitalizations of our rivers. Also the project promises to create scope for public realm on char with a pleasing view well connect to the city edge of Mymensingh.

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