IDENTIFICATION AND CONSERVATION OF HERITAGE SITES
FROM LAND USE PLANNING PERSPECTIVE

By

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ABSTRACT

Every community has its unique history of culture and inheritance. City, town or country has its structures and places which bears distinctive identity and stages of revolution. This study presents a contextual analysis of criteria for heritage identification and land use planning provisions in the vicinity of heritage site in Chittagong, the second largest and port city in Bangladesh with rich cultural, social, religious, natural and other heritages.

UNESCO in its Convention Concerning the Protection of the World Cultural and Natural Heritage acknowledges heritage to be identified, documented and properly conserved. The provision of heritage conservation is considered as national sense of duty evoked by the Constitution of Bangladesh. Structure Plan, Detailed Area Plan (DAP) and Chattagram Mohanagar Imarat Nirman Bidhimala, 2008 of Chittagong recommend heritage buildings and monuments to be properly identified and listed. Moreover, the Bidhimala, 2008 states that within 250 meter buffer area of heritage sites will be specially considered and controlled by “Special Project Permit for Large and Specialized Projects”. But there is no research to develop the methodology for identification of heritage sites and finding out the compatible and incompatible land uses in the vicinity of heritage sites.

The study has analyzed the criteria for identification of heritage sites and land use provisions in the vicinity of heritage sites through literature review for theoretical and empirical evidences; statistical data analysis; experts’ questionnaire interviews; focus group discussion and local people’s questionnaire interview. Four study areas were selected from the heritage list of DAP based on period of construction. Total 24 experts were interviewed who have been working with this aspect for long time. Total 60 local dwellers were interviewed randomly from the study areas who are residing these areas more than 10 years.

This study concludes that heritage identification process and land use plans in the vicinity of heritage sites is not standard enough to protect the heritage sites in Bangladesh. Finally, recommendations following experts’ opinion and initiatives from different countries are provided.
Chapter One: Introduction

1.1 Background of the Study

Heritage conservation means all the processes of looking after a heritage site so as to retain its cultural significance including maintenance, preservation, restoration, reconstruction and adaptation according to circumstance and will be commonly a combination of more than one of these (ASB, 1993). Heritage conservation is an integral part of civil society. Conservation shapes the society in which it is situated, and in turn, it is shaped by the needs and dynamics of that society (Avrami, E., et al., 2009). Over recent decades, urban conservation has become an important strategy to improve urban competitiveness in the global economy (Su, X., 2009).

The importance of urban conservation thus: “a city without old buildings is like a man without memory” (Su, X., 2009). A civilized people or society must know about its origin and root in local, regional and in world context to be able to understand and appreciate his being and be able to charter his course into the future (ASB, 1993). To protect and conserve heritages until recently, urban heritage conservation was mainly limited to the preservation of buildings and monuments of historic importance. But at the present time it becomes the most effective way of protecting the future of our prosperity (Hossain, 1997).

In the Convention Concerning the Protection of the World Cultural and Natural Heritage adopted by the General Conference at its seventeenth Session in Paris; it is stated that “Each State Party to this Convention recognizes that the duty of ensuring the identification, protection, conservation, presentation and transmission to future generations of the cultural and natural heritage on its territory, belongs primarily to that State” (UNESCO, 1972). In Bangladesh, the provision of heritage conservation is considered as national sense of duty evoked by the Government. In section 24 of the Constitution of the People’s Republic of Bangladesh, it is stated that “The State shall adopt measures for the protection against disfigurement, damage or removal of all monuments, objects or places of special artistic or historic importance or interest (GoB, 1972)".
In fact the Structure Plan of Chittagong Metropolitan Master Plan (CMMP), has policy (code no PRS: 02) to Conserve Buildings and Monuments of Cultural, Architectural, and Historical Interest. In this policy it is stated that “The Authority will arrange for such buildings and monuments to be identified and listed. Following this, it will be necessary to draw up a program for their conservation. This program will need to consider the scope for enhancing the settings of the building and monuments, as well as ensuring preservation for their fabric” (CDA, 1995). Detailed Area Plan (DAP) of CMMP proposes that CDA will coordinate with the CCC, relevant government, institutions and societies to collate relevant information and make a formal listing (CDA, 2008). DAP has arbitrarily marked 54 sites as heritage sites. Moreover, in Chattagram Mohanagar Imarat Bidhimala, 2008, section 8(cha); it is stated that within 250 meter buffer area of heritage sites, all types of building constructions and development would be certified by “Special Project Permit for Large and Specialized Projects”. In this rule, section 61 also states that authority (CDA) will prepare the list of heritage sites consulting with Archaeological Department, Institute of Architects of Bangladesh (IAB), and other experts. All type of development and change within 250 meter buffer area of the heritage site should be controlled by this special committee (GoB, 2008).

Moreover, every community and nation try to protect, conserve and develop heritage as an asset, particularly to make them important tourist sites by developing better infrastructure and facilities, which offer a rich cultural experience to tourists and ensure cultural and natural heritage of the destination to be preserved and conserved. City governments have recently adopted entrepreneurial governance strategies to improve their competitiveness, attract external capital investment and tourist flows, and secure endogenous forms of capital accumulation within their territories (Su, X., 2009).

A development of tourist facilities is in harmony with the local eco-system and heritage architecture, and regulates sensitivity of design in architectural style of construction of any new tourist facilities. The backward and forward effect of tourism is community development of tourist receiving destination, socio-economic growth of the receiving community, preservation and conservation of cultural and natural heritage sites, and income generation (Intach, 1984). The essential qualities of all towns require sensitive conservation of the building fabric and relationships which give positive character.” Unlike urban regeneration that redevelops an older inner-city neighbourhood through
massive land re-use and demographic displacement (Güzey, 2009; Ley, 2000), successful urban conservation retains the aesthetic, cultural, and historical values embedded in the local built environment, and maintains economic viability and community coherence (Larkham, 1996; Orbasli, 2000).

Chittagong had a long tradition of being the most important trade and business centre as well as a first class sea port in Eastern Indo-Pakistan. Chittagong’s importance as an international port was highlighted when the Arab merchants had established themselves in the town as business community in the 9th century. Ibn Batuta visited Chittagong in about 1345 A.D. and mentioned it as an important centre of trade, describing it as a great place situated on shore of the “Great Sea”. From time to time, Chittagong was conquered by Arkanese, Tripura king and Mughals consequently. Chittagong got different shapes and administrators by the rulers as their technique to establish the civil administration.

Among the Europeans, the Portuguese were the first to come to Chittagong on their eastward trade expansion with Headquarters at Goa. Chittagong became very famous as a port and business centre during the 16th and the 17th centuries when it was virtually under the Portuguese. In 1517 John de Silveria recorded first story of Portuguese communication with Chittagong when Chittagong became a nest of pirates. Owing largely to the Portuguese trade, Chittagong had become a commercial centre by the end of the 16th century and had acquired from Portuguese the name of Porto Granda or the great port as distinguished from Satgaon which was known Porto Grande or the little port, the two ports being regarded as situated on the eastern and western branched of Ganges. This importance it owed to its easy access, its safe anchorage and its position near the mouth of the Meghna which was the principal route to the Royal Capital. The Arakanese had found it necessary to enlist the Portuguese in their navy and had given then extensive grants of land on the mainland and in the adjacent island. This was the first settlement of portuguese in Chittagong at Dianga. after this time, Portuguese pirates of Dianga came in direct clash with Arkanese and later with Mughals. After the defeat, some Portuguese (Firingees) escaped to their homeland. The Firingee shelters and pirates of Chittagong who had backed were abandoned to the city in fear of the Magh King’s vengeance. Most of them migrated to the Portuguese possession and a few came over to the Mughals with their families and boats; in course of time, most of the latter embraced Islam and became merged in the local population. (Bangladesh District Gazetteers,
In the district of Chittagong boat building was the only industry of importance, which developed under the patronage of the Arabs and the Portuguese traders. The Portuguese themselves were good artisans and war material, such as wood and timber of very high quality were available here in abundance. Labour was cheap and the local people soon acquired the technique and later on became masters in the art. (Bangladesh District Gazetteers, Chittagong, 1975)

Agha Muhammad Nizam, Naib Faujdar of Chittagong from 1757, handed over Chittagong to Mr. Marry Verelst, a representative of the East India Company on 5th January, 1761 as the district was ceded to east India Company by Mawab Mir Quasim, the new governor (Nazim) who had replaced Mir zafar as Governor in Murshidabad. Towards the close of the 19th century, British trade interests in tea, cotton, jute and other raw materials from Assam and East Bengal forced the hands of the Government to lay railway lines in 1895 connecting those places with Chittagong and developing the port itself. With the formation of the province of East Bengal and Assam in 1905, Chittagong became the only sea-port of the new province and a bright future loomed large in the horizon. (Bangladesh District Gazetteers, Chittagong, 1975)

In 1947 the former India of the Britishers became independent and two states emerged out of it. Bengal was divided; East Bengal became a part of Pakistan and Chittagong again became the principal port of East Pakistan (Bangladesh District Gazetteers, Chittagong, 1975). After the liberation of Bangladesh, Chittagong was emerged as the main port of the city and at recent time, it stands as the 2nd largest city and most prominent commercial city in Bangladesh.

Within short span of time, Chittagong has developed tremendously in trade, commerce and more particularly in industry (CDA, 2008). As a result, urbanization process has been prompted in the core area with backward and forward effects in the vicinity of the town. At present, total population of the city is around 4 million and every year it adds around 0.1 million to the total population (CDA, 2008).

The architectural features of Chittagong can be found in mosques, shrines, HYPERLINK
http://en.wikipedia.org/wiki/Dargah Dargah, buildings and other masonry. The buildings, mosques, and shrines bear witness to its history from the ancient times to the present. Most of the old and new buildings of the city are built on top of low hills and hillocks and also along the valleys and plains.

1.2 Objectives

Aims:
The aim of this study is to find out the heritage sites and thereby to scrutinize the land use planning principles in the vicinity of heritage sites.

Specific objectives of this study can be specified as below:

1. To set criteria for identification and conservation of the heritage sites.
2. To check the compatibility and/or incompatibility of surrounding land uses of some selected heritage sites in CMMP area and provide necessary guidelines to conserve the entire heritage sites and their adjacent areas.

1.3 Rationale of the Study

John Marshall in 1904 developed a law for the protection of the historic structures of the country. In 1968, that law was cancelled and another law was developed for conservation, known as “Antiquities Act, 1968” during Pakistan period. After Liberation of Bangladesh, this Act was amended in 1976 without any fundamental changes. In this Act the definition of ancient products or objects was replaced by “the preceding hundred years” in lieu of “any period prior to May 1857”. The part II of the constitution of Bangladesh deals with the fundamental principles of state policy. The article 23 and 24 of the constitution prioritize the need for adaptation measures to conserve the cultural traditions and heritages. In article 1.5, 1.16 and 3.8 of Bangladesh National Building Code, 2006 states that buildings and places of historical or architectural value have to be conserved. In this code, it is also stated that a building is to be identified, must have been in existence for at least 20 years from the date of its completion. Hence, alongside the stated act, the East Bengal Conservation Act (EEBC) of 1952, The Pourashave Ordinance 2008, Structure Plan of CMMP, Detailed Area Plan for CMMP, Building Construction Rule is the foremost legal instruments to conserve the heritages. All this
legal instruments is not enough for identification of heritage sites and fixation of compatible and incompatible land uses in the vicinity of the heritage sites.

Moreover, for conservation of the heritage sites in a developed city, there should be a conservation management plan that provides a guide to the future care and use of heritage places including any new development (Avrami, E., et al., 2009). Municipalities and approval authorities can now incorporate more detailed conservation objectives and policies reflecting local heritage resources, heritage attributes, and any limitations on development for land adjacent to protected heritage property into their Official Plans, land use planning documents, and their related development approval procedures or processes (PPS, Ontario, 2006). Compared to such advanced practice, there is no special land use guideline to be applied in the vicinity of the heritage sites. Nevertheless it is a matter of fact that there is no research to develop the methodology for identification of heritage sites and finding out the compatible and incompatible land uses in the vicinity of heritage sites.

1.4 Scope and limitations of the Study

Very few studies have been done on heritage site conservation in Chittagong. This study will contribute to the existing knowledge of heritage site conservation of the city. DAP of Chittagong has identified 54 heritage sites with future obligation to protect these sites from incompatible land uses. This study will analyze the present land use status of the site along with the compatibility from heritage site conservation perspective.

The study will assist the policy makers to develop the existing rules regarding identification of heritage sites and heritage management plan. The controlling authority can have ideas and some guidelines to make decision about land use suitability in the vicinity area of the heritage sites as a tool of heritage conservation from international perspective.

Like any other, this research is not an exception and subject to few limitations that barred this study to be conducted effectively within the stipulated time period. Some of these limitations are stated as below:
1. Finding compatible and incompatible land uses in the vicinity of heritage sites need a lot of data on different social, economical, aesthetical, archaeological, historical, demographical and environmental aspects. But it was quite impossible to collect all of these data both from primary and secondary sources. Even some of the data are not recorded by any government or non-government institutions.

2. Due to both time and resource limitation it was not possible to conduct an extensive data collection process for 54 (fifty four) heritage sites listed in Detailed Area Plan (DAP) that could enable the study to be much more authentic. Four heritage sites were selected to conduct the study that may reflect the overall condition of other sites listed in DAP.

3. This study tried to go through all the literatures and experts opinion on criteria for identification of heritage sites and compatible, incompatible land uses in the vicinity of heritage sites. But, there was no study done in this perspective in Bangladesh. So, this study was bound to depend on literatures of developed countries, which were also not easily accessible.

1.5 Organization of the Thesis

Organization of the thesis is arranged by the following chapters:

Chapter one represents the background of the study. It also includes objectives of the study, rationale of the study and scopes and limitations of the study.

Chapter two includes extensive literature review related to the study. Different terms of heritage conservation and land uses are described here. Policies and rules regarding heritage conservation in Bangladesh and in other foreign countries are illustrated here in extensive approach.

Chapter three is the methodology of this study. This chapter elaborately demonstrates the way through this study is conducted.

Chapter four provides the study area profile. Existing hill, road, structure type, structure use, land use and proposed land use and roads of the study area are represented here with necessary maps, data, information and photographs.

Chapter five reveals the analysis and findings of the questionnaires by Delphi Method. It represents the rank of criteria for heritage identification and provisions for compatible/incompatible land uses in the vicinity of the heritage sites. Existing land uses and
proposed land uses by DAP in the vicinity of the selected heritage sites are also described here to find out the policies regarding compatible land uses of these areas.

Chapter six consists of some observations and recommendations. It also tells about policy guidelines for heritage identification procedure and land use suitability in the buffer area of heritage sites.

Chapter seven narrates conclusion of the research.
Chapter Two: Literature Review

2.1 Introduction

Literature review on Heritage Identification Process in Bangladesh and Land Use Compatibility in the Vicinity of Heritage Sites was focused on some related studies and articles. United Nations Educational, Scientific and Cultural Organisation (UNESCO)’s “Convention Concerning The Protection of The World Cultural and Natural Heritage” was the steering of this study. Following this convention, operational guidelines of the convention; policy statements and heritage acts/ rules of different countries; policies of different organizations like International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM), International Council on Monuments and Sites (ICOMOS), World Conservation Union (formerly the International Union for Conservation of Nature and Natural Resources (IUCN); acts in Bangladesh; components of Chittagong Metropolitan Master Plan (CMMP) were reviewed. This chapter also describes explanation of some terms and theories related with heritage identification process and land use planning provisions in the vicinity of heritage sites.

2.2 Definition of Related Terms

Heritage
Heritage means property that is or can be inherited; an inheritance. Something it is passed down from preceding generations and called as a tradition (Heritage Convention, Paris, 1972).

Degrees of intervention
The minimum degree of intervention necessary and the techniques used depend upon the conditions of climate to which cultural property is likely to be subjected. Atmospheric pollution and traffic vibration must be considered, and earthquake and flood hazards should be assessed.

Interventions practically always involve some loss of a 'value' in cultural property, but are justified in order to preserve the objects for the future. Conservation involves making interventions at various scales and levels of intensity which are determined by the
physical condition, causes of deterioration and anticipated future environment of the cultural property under treatment. Each case must be considered as a whole, and individually, taking all factors into account.

Always bearing in mind the final aim and the principles and rules of conservation, particularly that the minimum effective intervention is always the best, seven ascending degrees of intervention can be identified. In any major conservation project, several of these degrees may take place simultaneously in various parts of the 'whole'. The seven degrees are: (1) prevention of deterioration; (2) preservation of the existing state; (3) consolidation of the fabric; (4) restoration; (5) rehabilitation; (6) reproduction; (7) reconstruction. (Feilden, 1994) These degrees of intervention are dealt with below.

**Prevention of deterioration (or indirect conservation)**

Prevention entails protecting cultural property by controlling its environment, thus preventing agents of decay and damage from becoming active. Neglect must also be prevented by sound maintenance procedures based on regular inspections. Therefore, prevention includes control of internal humidity, temperature and light, as well as measures to prevent fire, arson, theft and vandalism, and to provide for cleaning and good overall housekeeping. In an industrial environment, prevention includes measures to reduce both atmospheric pollution and traffic vibrations. Ground subsidence must also be controlled; it is due to many causes, particularly abstraction of water. (Feilden B.M., 1994)

**Preservation of the existing state**

Preservation means aiming to halt further deterioration, decay or a state of dilapidation and providing structural safety and well being but does not contemplate significant rebuilding and includes (The National Heritage Act, Malaysia, 2005): (a) techniques of arresting or slowing the process of deterioration, decay or state of dilapidation of an item or structure; (b) improvement of structural conditions to make a structure safe, habitable, or otherwise useful; and (c) normal maintenance and minor repairs that do not change or adversely affect the fabric or historic appearance of a structure.
Consolidation
Consolidation is the physical addition or application of adhesive or supportive materials into the actual fabric of cultural property, in order to ensure it continued durability or structural integrity. In the case of immovable cultural property, consolidation may for example entail the injection of adhesives to secure a detached mural painting to the wall and likewise grouting of the structure. (Feilden, 1994)

Restoration
Restoration means the process of accurately recovering the form and details of a structure or part of a structure and its setting, as it appeared at some period in time, by removing the latter work and replacing the missing original work, and includes (The National Heritage Act, Malaysia, 2005).

(a) full restoration which involves both exterior and interior; (b) partial restoration which involves the exterior, interior, or any partial combination and is adopted when only parts of a structure are important in illustrating cultural values at its level of historic significance, or contribute to the values for which the area was designated; and (c) adaptive restoration which involves all or a portion of the exterior restoration with the interior adapted to a modern functional use.

Rehabilitation
Rehabilitation means the process of returning a property to a state of utility through repair or alteration, which makes possible an efficient contemporary use while preserving those portions and features of the property which are significant to its historic architecture.

Reproduction
Reproduction entails copying an extant artefact, often in order to replace some missing or decayed parts, generally decorative, to maintain its aesthetic harmony. If valuable cultural property is being damaged irretrievably or is threatened by its environment, it may have to be moved to a more suitable environment and a reproduction substituted in order to maintain the unity of a site or building. (Feilden, 1994)
Reconstruction
Reconstruction means returning of a place as nearly as possible to a known earlier state and its distinguished by the introduction of new materials (new and old) in to the fabric (ASB, 1993).

Conservation
Conservation refers to any direct or indirect intervention, which by one way or the other, prolongs the life of the art object (Avrami, E., et al., 2009). It has broad meaning, signifying the entire field or realm of cultural heritage preservation, from academic inquiry and historical research to policy making to planning to technical intervention. In broader scale, conservation as a complex, diverse, and even divergent social practice. Conservation includes prevention of deterioration; preservation of the existing state; consolidation of the fabric; restoration; rehabilitation; reproduction; reconstruction and adaptation or any combination (The National Heritage Act, Malaysia, 2005 & Feilden, 1994).

2.3 Types of Heritage
United Nations Educational, Scientific and Cultural Organization (UNESCO) in Convention Concerning the Protection of the World Cultural and Natural Heritage acknowledge heritage in three types such as: a) Cultural Heritage, b) Natural Heritage, and c) Mixed Cultural and Natural Heritage.

The World Heritage Committee has identified and defined several specific types of cultural and natural properties and has adopted specific guidelines to facilitate the evaluation of such properties when nominated for inscription on the World Heritage List. To date, these cover the following categories, although it is likely that others may be added in due course: a) Cultural Landscapes, b) Historic Towns and Town Centers, c) Heritage Canals, and d) Heritage Routes. (UNESCO, 2008)

The Indian National Trust for Art and Cultural Heritage (INTACH) has classified heritage in to four categories. These are: a) Architectural Heritage, b) Natural Heritage, c) Material Heritage, and d) Intangible Cultural Heritage.
2.3.1 Cultural Heritage

Operational Guidelines adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO), World Heritage Committee in 1992, states that cultural landscapes are cultural properties and represent the "combined works of nature and of man" designated in the Convention. They are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.

Cultural landscapes fall into three main categories, namely:

(i) The most easily identifiable is the clearly defined landscape designed and created intentionally by man. This embraces garden and parkland landscapes constructed for aesthetic reasons which are often (but not always) associated with religious or other monumental buildings and ensembles.

(ii) The second category is the organically evolved landscape. This results from an initial social, economic, administrative, and/or religious imperative and has developed its present form by association with and in response to its natural environment. Such landscapes reflect that process of evolution in their form and component features. They fall into two sub-categories:

- a relict (or fossil) landscape is one in which an evolutionary process came to an end at some time in the past, either abruptly or over a period. Its significant distinguishing features are, however, still visible in material form.

- a continuing landscape is one which retains an active social role in contemporary society closely associated with the traditional way of life, and in which the evolutionary process is still in progress. At the same time it exhibits significant material evidence of its evolution over time.

(iii) The final category is the associative cultural landscape. The inscription of such landscapes on the World Heritage List is justifiable by virtue of the powerful religious, artistic or cultural associations of the natural element rather than material cultural evidence, which may be insignificant or even absent.
UNESCO (1972) also identify “Cultural Heritage” as

- **monuments**: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;

- **groups of buildings**: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;

- **sites**: works of man or the combined works of nature and of man, and areas including archaeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological points of view.

The Indian National Trust for Art and Cultural Heritage (INTACH) has done more on the identification of cultural heritage and buildings. Such as:

**Listing Criteria for Cultural Heritage**

Following INTACH, the following three key concepts need to be understood to determine whether a property is worthy of listing.

- Historic significance
- Historic integrity
- Historic context

One or more of these concepts need to be applicable to a building to make it worthy of listing.

**Historic Significance**

Historic significance is the importance of a property to the history, architecture, archaeology, engineering or culture of a community, region or nation.

**In selecting a building, particular attention should be paid to the following:**

- Association with events, activities or patterns
- Association with important persons
- Distinctive physical characteristics of design, construction or form, representing work of a master
- Potential to yield important information such as illustrating social, economic history, such as railway stations, town halls, clubs, markets, water works, etc.
- Technological innovations such as dams, bridges, etc.
• Distinct town planning features like squares, streets, avenues, e.g. Rajpath in Lutyen's New Delhi

**Historic Integrity**

Historic integrity is the authenticity of a property's historic identity', evidenced by the survival of physical characteristics that existed during the property's historic period. Historic integrity enables a property to illustrate significant aspects of its past. Not only must a property resemble the historic appearance but it must also retain physical materials, design features and aspects of construction dating from the period when it attained significance.

**Historic Context**

Historic context is information about historic trends and properties grouped by an important theme in the history of a community, region or nation during a particular period of time. A knowledge of historic context enables listers to understand a historic property as a product of its time.

**Banding of Heritage Building**

The buildings have been classified according to the primary or dominant use or according to the original purpose for which it was built which might have determined the style of the building. Some categories of buildings are as follows:

a. Offices of the Government, Army, Railways and Government Undertakings
b. Institutional Buildings and Associated Facilities
c. Offices, Warehouses, Manufacturing and retailing Facilities, Markets and buildings of the Press
d. Residences, Apartment Housing and hostels
e. Religious buildings, Burial Grounds and cremation grounds
f. Congregational Buildings, Theatre Halls, Cinema Halls, Clubs and Hotels
g. Waterfront Structures, Parks, Memorials and Gateways

**Grading of Heritage Building**

The buildings have been assigned values or stars on the basis of three criteria as follows:

**Criteria 1: Age or Archaeological Significance**
3 Stars  Before 1800
2 Stars  Between 1800 and 1850
1 Star   Between 1850 and 1900

Criteria 2: Historic or Social Merit/ Significance
3 Stars  Associated with event or person of national significant
2 Stars  Associated with event, person or social situation or regional or local
significance
1 Star   Associated with event, person or social situation or lifestyle of purely
local significance. Similarly to the above category but of reduced
significance

Criteria 3: Architectural Merit/ Significance
3 Stars  Unique, special, distinctive, one-of-a-kind
2 Stars  Distinctive of a particular style or period, noteworthy examples
1 Star   Interesting architectural elements. Similarly to the above category but
of reduced significance

The total number of stars allocated to a building in turn gives rise to the grading:
Grade A  7-9 Stars
Grade B  4-6 Stars
Grade C  1-3 Stars

In a few exceptional cases a building may have been designated as Grade A although the
number of stars allocated to the building may be less than the minimum required for such
a grading.

2.3.2 Natural Heritage
Operational Guidelines adopted by the United Nations Educational, Scientific and
Cultural Organization (UNESCO) World Heritage Committee in 1992, and are widely
accepted as the three primary landscape types:
• Designed landscapes: those which have been intentionally designed e.g. a planned
garden or in a more urban setting, a downtown square.
• **Evolved landscapes:** those which have evolved through the use by people and whose activities have directly shaped the landscape or area. This can include a ‘continuing’ landscape where human activities and uses are still on-going or evolving e.g. residential neighbourhood or mainstreet; or in a ‘relict’ landscape, where even though an evolutionary process may have come to an end, the landscape remains historically significant e.g. an abandoned mine site or settlement area.

• **Associative landscapes:** those with powerful religious, artistic or cultural associations of the natural element, as well as with material cultural evidence e.g. a sacred site within a natural environment or a historic battlefield.

UNESCO also considered "natural heritage" as:
- natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
- geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
- natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

The Indian National Trust for Art and Cultural Heritage (INTACH) has done more on the identification of natural heritage. Such as:

**Listing Criteria for Natural Heritage**

Natural Heritage includes all components of our surroundings which have not been created by man and which are of cultural, aesthetic, spiritual, biotic or ecological value and which could also be of directly usable resource value. It is important to understand the implication of the term "Natural Heritage". It should have one or all of the following attributes:

1. Ecological and Biological Significance implying inter alia:
   - Important areas of biodiversity consisting of diverse species of both fauna and flora
   - Natural vegetation
- Important breeding and nesting sites
- Habitats of gravely endangered species of both fauna and flora including fish fauna
- Habitats of species of fauna and flora which are endemic and restricted in their range to a particular area
- Important migration routes and corridors between habitats of gravely endangered species
- Fossils
- Unique geological and rock formations of geomorphologic significance, rock shelters
- Headwaters of important watersheds
- Shola forests
- Important natural grasslands
- Wetlands, marshes, seasonal wetlands used by migratory avifauna or by local farmers, natural lakes, lagoons, creeks, streams, water channels, etc.
- Uncultivated riverine islands, natural riverine stretches
- Unique desert patches
- Unique coastal landforms
- Stretches having mangrove vegetation
- Offshore coral reefs

2. Areas having natural vegetation of cultural significance, such as sacred groves, water bodies, hill tops, etc. and similar areas associated with cultural and religious beliefs and practices.

3. Natural landscapes of aesthetic and recreational value.

2.3.3 Mixed Cultural and Natural Heritage
Operational Guidelines adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Committee in 1992, stated that properties shall be considered as "mixed cultural and natural heritage" if they satisfy a part or the whole of the definitions of both cultural and natural heritage laid out in the Convention.
2.3.4 Historic Towns and Town Centers

Operational Guidelines adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Committee in 1992, stated that Groups of urban buildings eligible for inscription on the World Heritage List fall into three main categories, namely:

**Towns which are no longer inhabited** but which provide unchanged archaeological evidence of the past; these generally satisfy the criterion of authenticity and their state of conservation can be relatively easily controlled;

**Historic towns which are still inhabited** and which, by their very nature, have developed and will continue to develop under the influence of socio-economic and cultural change, a situation that renders the assessment of their authenticity more difficult and any conservation policy more problematic;

Four categories can be distinguished:

a) Towns which are typical of a specific period or culture, which have been almost wholly preserved and which have remained largely unaffected by subsequent developments. Here the property to be listed is the entire town together with its surroundings, which must also be protected;

b) Towns that have evolved along characteristic lines and have preserved, sometimes in the midst of exceptional natural surroundings, spatial arrangements and structures that are typical of the successive stages in their history. Here the clearly defined historic part takes precedence over the contemporary environment;

c) "Historic centers" that cover exactly the same area as ancient towns and are now enclosed within modern cities. Here it is necessary to determine the precise limits of the property in its widest historical dimensions and to make appropriate provision for its immediate surroundings;

d) Sectors, areas or isolated units which, even in the residual state in which they have survived, provide coherent evidence of the character of a historic town which has disappeared. In such cases surviving areas and buildings should bear sufficient testimony to the former whole.
**New towns of the twentieth century** which paradoxically have something in common with both the aforementioned categories: while their original urban organization is clearly recognizable and their authenticity is undeniable, their future is unclear because their development is largely uncontrollable.

### 2.3.5 Heritage Canals
Operational Guidelines adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Committee in 1992, states that a canal is a human-engineered waterway. It may be of outstanding universal value from the point of view of history or technology, either intrinsically or as an exceptional example representative of this category of cultural property. The canal may be a monumental work, the defining feature of a linear cultural landscape, or an integral component of a complex cultural landscape.

### 2.3.6 Heritage Routes
Operational Guidelines adopted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Committee in 1992, states that The concept of heritage routes is shown to be a rich and fertile one, offering a privileged framework in which mutual understanding, a plural approach to history and a culture of peace can all operate. A heritage route is composed of tangible elements of which the cultural significance comes from exchanges and a multi-dimensional dialogue across countries or regions, and that illustrate the interaction of movement, along the route, in space and time.

### 2.3.7 Material Heritage
The Indian National Trust for Art and Cultural Heritage (INTACH) has classified heritage as Material Heritage for the conservation of art and materialistic heritages.

### 2.3.8 Intangible Heritage
The Indian National Trust For Art and Cultural Heritage (INTACH) states that the intangible heritage encompasses the following:

- Forms of popular and traditional expression - such as languages, oral literature, music, dance, games, mythology, rituals, costumes, craftwork, know-how, architecture.
Conflict and evolution of the cultural and modern expressions of art, culture and indigenous knowledge.

Cultural spaces - places where popular and traditional cultural activities take place in -a concentrated manner (sites for storytelling, rituals, marketplaces, festivals, etc.) or on a regular basis (daily rituals, annual processions).

2.4 Rules and Regulation Concerning Heritage Conservation and Land Use Planning In Bangladesh

2.4.1 Constitution of Peoples’ Republic of Bangladesh

The provision of heritage conservation is considered as national sense of duty evoked by the Government in article 24 of the Constitution of the People’s Republic of Bangladesh as “The State shall adopt measures for the protection against disfigurement, damage or removal of all monuments, objects or places of special artistic or historic importance or interest”.

2.4.2 Antiquities Ordinance (Amendment), 1976 (Antiquities Act’ 1968)

Heritage conservation was put into effect in 1968 by Antique Act, 1968 for the Government of the former Pakistan. After liberation of Bangladesh, this act was modified in 1976 without fundamental changes. In the former Antiquities Act’ 1968, it was depicted that ancient product or object would be meant belonging or relating to any period prior to May 1857. In this Act, antiquity was meant:

- Any ancient product of human activity, movable or immovable, illustrative of art, architecture, craft, custom, literature, morals, politics, religion, warfare, science or of any aspect of civilization or culture.
- Any ancient object or site of historical, ethnographical, anthropological, military or scientific interest, and
- Any other ancient object or class of such objects declared by the central government, by notification of the official gazette, to be an antiquity for the purpose of this act.

Here immovable was meant an antiquity of any of the following descriptions, namely:-
- Any archaeological deposits on land or under water
- Any archaeological mound, tumulus, burial place or place of interment, or any ancient garden, structure, building erection or other work of historical, archaeological, military or scientific interest,

- Any rock, cave or other natural object of historical, archaeological, artistic or scientific interest or containing sculpture, engraving, inscription or painting of such interest, and included

- Any gate, door, window, paneling dados, ceiling, inscription, wall painting, wood work, iron work or sculpture or other thing which is attached or fastened to any immovable antiquity;

The remains of an immovable antiquity;

1. the site of an immovable antiquity;
2. such portions of land or water adjoining the site of an immovable antiquity as are reasonably required for fencing or covering or otherwise preserving such antiquity;
3. the reasonable means of access to, and convenient inspection of, an immovable antiquity; and
4. any urban site, street, group of buildings or public square of special value which the central government, being of the opinion that its preservation is a matter of public interest by reasons of its arrangement, architecture or materials of construction, by notification in the official gazette, declares to be an immovable antiquity for the purpose of this act.

After liberation of Bangladesh, the definition of an ancient products or objects was replaced by “the preceding hundred years” in lieu of “any period prior to May 1857”.

2.4.3 Bangladesh National Building Code, 2006
Historic and architecturally valuable buildings
A building or structure which has been designated by official action as having special historical or archaeological interest, or a building or structure identified by a legally constituted authority as being architecturally valuable, may be undertaken for repairs, alterations and additions necessary for its preservation, restoration, rehabilitation or continued use provided.
I. The proposed repair, alteration or addition to buildings of historical or archaeological significance is approved by the legally constituted authority, such as Department of Archaeology;

II. The proposed repair, alteration or addition to buildings of architectural value does not impair the aesthetic quality and architectural character of such buildings; and

III. The restored building or structure will be no more hazardous, if any, based on life safety, fire safety and sanitation than the existing building.

**Buildings and places of historical or architectural value**

All historical buildings and places identified, listed and classified so by the appropriate agency of the government under the Act of Antiquity shall be deemed to be protected. Any change of use, repair, alteration or extension of such buildings shall be in compliance with the requirements of this section and those of the Department of Archaeology of the Government.

Similarly, buildings and works under the jurisdiction of and identified by the authority as having architectural value shall be exempted from satisfying some of the provisions of this code as specified below. The owner of any such building may also apply to the building official for enlistment of a building with architectural value. **To be so identified, a building shall have been in existence for at least 20 years from the date of its completion.** To determine whether the building or work is architecturally valuable, the authority shall appoint a standing committee comprising noted experts from the field of Architecture, Planning, Engineering, History, Art, Literature or any other discipline which may be deemed relevant. The committee shall identify a building as architecturally valuable if, in their judgment, the building possesses distinctive architectural features, has cultural or symbolic value, has become part of their heritage, or bears testimony of some historic event. In additional to satisfying the requirements of section below, any proposed repair, alteration or addition to such buildings must also have the approval of the standing committee who shall have to be satisfied that the proposed changes will not impair the aesthetic quality and architectural character of the building.

Repairs, alterations and additions necessary for the preservation, restoration, rehabilitation, continued use or adaptive reuse of such historic buildings and structures,
and of buildings and works of architectural value may be exempted by the authority from having to be in full compliance with all the requirements of this code, provided that the restored building or structure will be no more hazardous, if any, than the existing conditions in terms of life safety, fire protection and sanitation.

**Architectural and Environmental Control**

Besides enforcing the provisions of this code for normal buildings and structures, the building official shall, for special structures such as those listed in below, also examine the aesthetics and environmental issues vis-a-vis the existing structures and the characteristics of the area, and exercise architectural and environmental control in accordance with the provision of this section.

Special structures for which architectural and environmental control shall be exercised by the building official shall include:

(a) major public building complexes,
(b) building in the vicinity of monuments and major sculptures,
(c) building and structures near existing structures identified to be architecturally valuable
(d) building and structures near historic buildings or in an area of historical or archaeological significance,
(e) buildings near any structure that represents the special characteristics of an area,
(f) any proposed building or structure that represents the special characteristics or forms part of a larger master plan of an area, and
(g) any development that may have an effect on or mar the environment or characteristics of an area,

The authority shall, for the purpose of existing the architectural and environmental control and for identifying existing structures having architectural value, appoint a standing committee comprising noted experts from the fields of Architecture, Planning, Engineering, History, Art, Literature or any other discipline which may be deemed relevant. The committee shall examine the aesthetic quality of the proposed building, structure or development and the effect it may have on the characteristics and environment of the area in order to ensure aesthetic blending of the new structure with the existing ones and continuance of the new structures with the existing
surroundings. The committee may require additional drawings and information to those specified for a detailed study of the proposed work. The committee, for the purpose of arriving at their decision, may at their direction depending on the magnitude of the project and the impact it may have on public life, hear the architect of the proposed work who may wish to explain the various features of the project, note comments of other experts in the relevant disciplines, or in exceptional circumstances, institute a public hearing to assess public reaction to the project.

The committee may approve the proposed work, recommend changes in the scheme, or disapprove the scheme, for reasons of aesthetics and environmental control.

The building official shall not issue permit for undertaking the proposed work until obtaining a report from the standing committee stating that the intended work is acceptable in respect of its effect on the environment, landscape, architectural characteristics, historical feature or any other aesthetic quality of the locality, area or landscape concerned.

2.4.4 Pourashava Ordinance, 2008

In article 59 (ja), it is stated that municipal authority can take necessary steps to conserve the historically important places within municipal boundary.

2.4.5 Structure Plan of Chittagong Metropolitan Master Plan

The structure Plan set out a long term strategy covering twenty years from 1995-2015 for urban development and use of land in the metropolitan area of Chittagong as a whole. This document sets a series of policies to be pursued. This document had identified 8 (eight) development objectives for Chittagong Metropolitan City. To carry out the broad objectives for the development of Chittagong, policies were sorted in 12 sectors. A total of 76 Strategies and guidelines in the following sectors were described here. In Prestige Projects sector, it was depicted as “PRS. 02: Conserve buildings and monuments of cultural, architectural and historic interest”.

It is stated that the Authority will arrange for such buildings and monuments to be identified and listed. Following this it will be necessary to draw up a program for their
conservation. This program will need to consider the scope for enhancing the settings of the buildings and monuments, as well as ensuring preservation of their fabric.

2.4.6 Detailed Area Plan of Chittagong Metropolitan Master Plan (CMMP)

The Structure Plan recognizes the need for listing and conserving such buildings, monuments and enhancing their settings. Development of high profile projects for enhancing the prestige of the city had been advocated in the policy. DAP has only arbitrarily marked 54 sites as heritage sites.

In Detailed Area Plan, it has been stated that a preliminary schedule of areas and buildings requiring preservation and conservation for historical, architectural environmental or ecological point of view. It has arbitrarily marked 54 sites as heritage sites. In this notion, it also narrate Chittagong City Corporation (CCC), Bangladesh Parjatan Corporation and other concern govt. departments to step up to acquire and protect archeological and historical resources, unique sites as heritage and cultural conservation is an integral part of the planning and development control process. In this perspective DAP has provided two special guidelines.

2.4.7 Chittagong Mohanagor Imarat (Nirman, Unnayan, Sangrakkhan o Oposaron) Bidhimala’ 2008

Building Construction Rule’ 2008 has replaced the former Building Construction Rule, 1996 to promote the development trends adjusted with modern city structure. In this rule, it has made compulsory take No Objection Certificate (NOC) from Special Permission Committee to build any structure within 250 meter buffer of any archaeological, historical, architectural and natural aesthetical beautiful area. The said committee will be formed as follows:

1. Chief Town Planner, CDA                      Chairman
2. Superintendent Engineer, PWD, Cicle-1, Chittagong    Member
3. Town Planner, CDA                               Member
4. Executive Engineer, CDA                          Member
5. General Secretary, IAB, Chittagong Branch        Member
6. General Secretary, IEB, Chittagong Branch        Member
7. General Secretary, BIP, Chittagong Branch        Member
8. Senior Architect, CDA                            Member Secretary
In Article No. 61 (concerning conservation and preservation) of this rule, it is stated that, to protect historical building and important places authority can enact the following regulations:

a) Authority will preserve a list of buildings to be conserved.
b) To prepare this list, authority may consult with Archaeological Department, IAB or experts on historic, scenic, scientific, social, spiritual buildings.
c) After preparation the list of building, Authority has to notify the concern owners of the buildings.
d) After preparation of the list of buildings, Authority has to demonstrate the list for general public.
e) For any change, extension, addition, destruction of this buildings, one has to obtain written permission from Nagor Unnayan Committee.
f) Authority can permit (fully or partially) applications to change, extent, adjoin or destruct the listed buildings and can impose reasonable condition also.
g) The permission from the authority will be valid up to 3 (three) years.
h) If any person do change, extent, adjoin or destruct of the listed buildings, authority will order the occupier or owner to impede the tasks.
i) If it seems that there is lack of superintending of the listed buildings, authority can acquire the listed buildings.
j) Authority can list special scenic, historic, scientific, social, spiritual or naturally remarkable area as conservation site.
k) Authority will take steps to upgrade and conserve the areas from time to time.

2.5 Convention and International Institution Concerning Heritage

Conservation

2.5.1 Convention Concerning the Protection of the World Cultural and Natural Heritage

The General Conference of the United Nations Educational, Scientific and Cultural Organization (UNESCO) meeting in Paris from 17 October to 21 November 1972, at its seventeenth session, adopted this convention. Bangladesh has ratified this convention in 03 August 1983. The convention was adopted Considering that it is essential for this purpose to adopt new provisions in the form of a convention establishing an effective system of collective protection of the cultural and natural heritage of outstanding
universal value, organized on a permanent basis and in accordance with modern scientific methods. The convention has 38 articles with the following broad themes:

1. Definition of The Cultural And Natural Heritage
2. National Protection and International Protection of The Cultural and Natural Heritage
3. Intergovernmental Committee For The Protection of The World Cultural and Natural Heritage
4. Fund For The Protection of The World Cultural and Natural Heritage
5. Conditions and Arrangements For International Assistance
6. Educational Programs
7. Reports
8. Final Clauses

2.5.2 International Council on Monuments and Sites (ICOMOS)

In the Charter of Venice (1964) “It is essential that the principles guiding the preservation and restoration of ancient buildings should be agreed and be laid down on an international basis, with each country being responsible for applying the plan within the framework of its own culture and traditions.” Subsequent ICOMOS charters have taken up that mission, establishing professional guidelines for specific conservation challenges and encouraging effective communication about the importance of heritage conservation in every region of the world.

From the vast range of surviving material remains and intangible values of past communities and civilizations, the choice of what to preserve, how to preserve it, and how it is to be presented to the public are all elements of site interpretation.

ICOMOS currently has over 110 National Committees. Each National Committee adopts its own rules of procedure and elaborates its own program according to the goals and aims of ICOMOS. Each National Committee adopts its own rules of procedure and elaborates its own program according to the goals and aims of ICOMOS. In Bangladesh, ICOMOS National Committees has been formed.
2.5.3 International Centre for the Study of the Preservation and Restoration of Cultural Property (ICCROM)

ICCROM is an intergovernmental organization dedicated to the conservation of cultural heritage. Its members are individual states which have declared their adhesion to it. It exists to serve the international community as represented by its Member States, which currently number 129. It is the only institution of its kind with a worldwide mandate to promote the conservation of all types of cultural heritage, both movable and immovable. ICCROM aims at improving the quality of conservation practice as well as raising awareness about the importance of preserving cultural heritage. ICCROM contributes to preserving cultural heritage in the world today and for the future through five main areas of activity: Training, Information, Research, Cooperation and Advocacy. Bangladesh has cohesion in October 18, 2010.

2.5.4 International Union for Conservation of Nature and Natural Resources (IUCN)

IUCN was founded in October 1948 as the International Union for the Protection of Nature (or IUPN) following an international conference in Fontainebleau, France. IUCN’s mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable. IUCN is the world’s oldest and largest global environmental network - a democratic membership union with more than 1,000 government and NGO member organizations, and almost 11,000 volunteer scientists in more than 160 countries. Ministry of Environment and Forest of GoB is a member of this organization. Beside this, 16 national NGOs of Bangladesh are also member of this union.

2.6 Heritage Act of Foreign Countries

2.6.1 National Heritage Act 2005, Malaysia

The National Heritage Act 2005 is an Act to provide for the conservation and preservation of National Heritage, natural heritage, tangible and intangible cultural heritage, underwater cultural heritage, treasure trove and for related matters. It received Royal Assent on 30 December 2005 and was published in the Gazette on 31 December 2005. The National Heritage Act 2005 came into effect on 1 March 2006. In this act
"antiquity" means

(a) any moveable object which is or is reasonably believed to be at least fifty years old;
(b) any part of any such object which has at any later date been added or re-constructed or restored; and
(c) any human, plant or animal remains which is or is reasonably believed to be at least one hundred years old;

Procedure for identification of heritage sites

The Minister shall be responsible for providing or issuing policies, statements or directives in respect of any matter, business, strategy or conduct on the conservation and preservation of heritage. There shall be appointed by the Minister, an officer to be known as the "Commissioner of Heritage" for the purpose of carrying out the powers and functions assigned to the Commissioner under this Act.

Establishment of National Heritage Council

There shall be established a National Heritage Council.

Membership of Council

The Council shall consist of the following members:

(a) a Chairman, to be appointed by the Minister;
(b) the Secretary General of the Ministry of Culture, Arts and Heritage or his representative;
(c) the Secretary General of the Ministry of Tourism or his representative;
(d) the Director General of Town and Country Planning or his representative;
(e) the Director General of the Museums and Antiquity Department or his representative;
(f) the Commissioner; and
(g) not more than six other members, at least one of whom shall be a public officer who possess experience or expertise in relation to the management, conservation or preservation of sites and objects of natural or cultural heritage significance, to be appointed by the Minister.

The Council shall meet as often as may be necessary in a year for the performance of its functions.
National Heritage Register
The Commissioner shall establish and maintain a register known as the National Heritage Register as may be prescribed containing the lists of heritage items registered under this Act.

Designation of heritage site
The Commissioner may designate any site which has natural heritage or cultural heritage significance to be a heritage site.

Adjacent and nearby site
Where a site has no natural heritage or cultural heritage significance but the Commissioner is satisfied that it should be designated as a heritage site because of its proximity to and for the protection and enhancement of another site designated as a heritage site, the Commissioner may so designate such site as a heritage site. Then the commissioner have to follow some sequences of actions such as Inspection of site, Notice to owner, Objection, Hearing, etc.

Decision of the Commissioner
(1) Where the Commissioner, after hearing the parties, if any, is satisfied that—
   
   (a) the site is of cultural heritage significance; and
   
   (b) the State Authority has given its consent under section

   he shall

   (i) designate the site as a heritage site;

   (ii) record the heritage site in the Register; and

   (iii) give the owner a written notice of the Commissioner's decision.

Notice to local planning authority
The Commissioner shall notify the local planning authority for the area of the local authority where the heritage site is situated of the designation of the heritage site so that the local planning authority shall take into consideration any matter, policy, strategy or plan of action pertaining to the interest of the heritage site in preparing any development plan in that local authority area under the Town and Country Planning Act 1976 in Peninsular Malaysia or the relevant State laws in Sabah and Sarawak.
**Conservation area**

Where a site is designated as a heritage site, that site shall on the date of the designation become a conservation area and shall be conserved and preserved according to a conservation management plan.

A conservation area may:

(a) incorporate a buffer zone around a central core; or

(b) incorporate a buffer zone around a site that has been designated as a heritage site.

(3) The Minister may, in consultation with the Council, determine the buffer zone and the central core.

**Conservation management plan**

The Commissioner shall, in consultation with the Council, prepare a conservation management plan for the purposes of:

(a) promoting the conservation, preservation, rehabilitation, restoration or reconstruction of a heritage site;

b) ensuring the proper management of a heritage site including the use and development of all buildings and lands in the heritage site and the preservation of the environment including measures for the improvement of the physical living environment, communications, socio-economic wellbeing, the management of traffic and the promotion of economic growth; and

(c) promoting schemes for the education of, or for practical and financial assistance to, owners and occupiers, and for community involvement in decision making.

The Commissioner shall from time to time submit such conservation management plan to the State Authority or the relevant local planning authority, as the case may be, and advise and coordinate with the State Authority or the local planning authority for the implementation of the conservation management plan and its guidelines. The Commissioner shall from time to time revise any conservation management plan.

This document marked a defined process that should be followed in identification and evaluating cultural heritage landscapes. An overview of the process is as follows:

- Heritage Landscape Guide
- Policies and Legislation
- Public Values
- Identification of Cultural Heritage Landscapes
  - Background Details & Data collection
  - Evaluating Landscapes
  - Conservation, Protection & Monitoring
  - Statement of Cultural Heritage Value Significance

 Format for Identification of Heritage Sites

Cultural Heritage Landscape Definition (Provincial Policy Statement). *means a defined geographical area of heritage significance which has been modified by human activities and is valued by a community*

To identify a heritage site, three aspects are considered to declare a site as heritage. These are:

(i) Geographical Area of Significance; e.g. natural element(s) which led to human modification, location & extent of the landscape

(ii) Human Modification; e.g. Explain what kind of modification humans have affected this area

(iii) Values; e.g. What values are associated with this area (social, aesthetic, historic, scientific, natural, or other?)
2.7 Delphi Method

The Delphi method belongs to the subjective-intuitive methods of foresight. Delphi was developed in the 1950's by the Rand Corporation, Santa Monica, California, in operations research. (Cuhls K., Unknown) The Delphi method is a systematic, interactive forecasting method which relies on a panel of experts. The experts answer questionnaires in two or more rounds. After each round, a facilitator provides an anonymous summary of the experts’ forecasts from the previous round as well as the reasons they provided for their judgments. Thus, experts are encouraged to revise their earlier answers in light of the replies of other members of their panel. It is believed that during this process the range of the answers will decrease and the group will converge towards the "correct" answer. Finally, the process is stopped after a pre-defined stop criterion (e.g. number of rounds, achievement of consensus, and stability of results) and the mean or median scores of the final rounds determine the results.

Delphi Method can be summarized as follows:

- Delphi is an expert survey in two or more 'rounds'.
- Starting from the second round, a feedback is given (about the results of previous rounds).
- The same experts assess the same matters once more - influenced by the opinions of the other experts.

Characteristics of Delphi are therefore specified as

- Content of Delphi studies are always issues about which unsure respectively incomplete knowledge exists. Otherwise there are more efficient methods for decision making.
- Delphi is judgment processes with unsure aspects. The persons involved in Delphi studies only give estimations.
- For the participation experts are to be involved who on the basis of their knowledge and experience are able to assess in a competent way. During the rounds, they have the opportunity to gather new information.
- Especially the psychological process in connection with communication and less in the sense of mathematical models have to be stressed.
Delphi tries to make use of self-fulfilling and self-destroying prophecies in the sense of shaping or even 'creating' the future. (Cuhls K., Unknown)

**Strengths and limitations of the approach**

As has often been remarked, the results of a Delphi survey are only as valid as the opinions of the experts involved. This technique represents a 'last resort' when there are no other techniques suitable or available echoes the results of a number of systematic reviews and meta-analyses of the application of the technique. The key problems reported include: poor internal consistency and reliability of judgments among experts, and therefore low reproducibility of forecasts based on the results elicited; sensitivity of results to ambiguity and respondent reactivity in the questionnaires used for data collection; difficulty in assessing the degree of expertise held by participating experts.

A major problem identified by research into the implementation and application of Delphi surveys has been the tendency for experts to over-simplify particular issues, and treat them as isolated events. This has led to the development of techniques such as 'cross impact matrix forecasting', which are intended to compare a range of 'possible futures' against each other, and to consider the displacement, substitution and multiplier effects associated with the scenarios identified by the experts involved.

On the other hand, there have been several studies supporting the Delphi method. These studies seem to suggest that in general, the Delphi method is useful to explore and unpack specific, single-dimension issues. There is less support for its use in complex, multi-dimensional modeling. In these cases, the evidence does suggest that data gathered by Delphi surveys is a useful input, when supported by data gathered from other sources, to complex scenario-building.

### 2.8 Conclusion

These literatures portray the urgency of heritage identification and conservation of these heritages. Heritage identification and conservation are highlighted nationally and internationally. National organization including state party and some other international organizations are working with these aspects.
Chapter Three: Methodology

3.1 Introduction
Methodology governs the way through which a study would be conducted. Designing of methodology, therefore, refers to the process of making decision before the actual situation comes in which steps regarding the study are to be made. Methodology precisely means drawing a systematic approach and establishing a plan of action to carry out the study. In the following, the methodology of the research is presented.

3.2 Selection of Heritage Type
Criteria for heritage sites differ by type of heritage. Distinctive criteria describe distinctive type of heritage. For this reason heritage type was selected through literature review like Convention Concerning the Protection of the World Cultural and Natural Heritage and Operational Guidelines of United Nations Educational, Scientific and Cultural Organization (UNESCO); The Indian National Trust for Art and Cultural Heritage (INTACH); Heritage Act, 2005, Malaysia; Provincial Polity Statement of Ontario, 2006 and Antiquities Act, 1976, Bangladesh. Along with these literature findings experts’ opinions were compiled to derive standard type of heritage.

3.3 Selection of Criteria for Identification of Heritage Site
Criteria, thresholds, and statutory listing are the administrative and process devices have been developed to identify and protect ‘places we wish to keep’. These are the primary means by which the heritage values of such places and, critically, focus our management of these places are articulated (Department of the Environment and Water Resources, Canberra ACT, 1999). Heritage criteria help heritage experts to look at the qualities places have to qualify as heritage. For setting some criteria, related literatures and acts like Convention Concerning the Protection of the World Cultural and Natural Heritage and Operational Guidelines of United Nations Educational, Scientific and Cultural Organization (UNESCO); The Indian National Trust for Art and Cultural Heritage (INTACH); Heritage Act, 2005, Malaysia; Provincial Polity Statement of Ontario, 2006 and Antiquities Act, 1976, Bangladesh were comprehensively reviewed. Experts’ opinions were also accumulated to fix the criteria for identification of heritage site.
3.4 Selection of Study Area

Total number of 4 (four) heritage sites were selected to scrutinize the existing land uses and proposed land uses in DAP. Sites were selected among the declared heritage site list in DAP of CMMP. Sites were chosen based on location, type/use of heritage sites, nature and pace of development activities going around the site.

Table 3.1: Study Area, Type of Heritage and Location

<table>
<thead>
<tr>
<th>Name Type</th>
<th>e</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anderkilla Shahi Jame Masjid</td>
<td>Mughal Monument</td>
<td>Anderkilla</td>
</tr>
<tr>
<td>Qadam Mubarak Mosque</td>
<td>Mughal</td>
<td>Monument</td>
</tr>
<tr>
<td>Court Building</td>
<td>Colonial Times:</td>
<td>Court Hill Anderkilla</td>
</tr>
<tr>
<td></td>
<td>Institutional/Government Use</td>
<td></td>
</tr>
<tr>
<td>J.M. Sen Hall</td>
<td>Colonial Times:</td>
<td>Dewan Bazaar</td>
</tr>
<tr>
<td></td>
<td>Institutional/ Government Use</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author, 2010

3.5 Literature Review

As stated in chapter-2, literatures from various sources had been reviewed. Present rules and regulation in Bangladesh regarding heritage identification criteria and provisions for heritage conservation were studied. Methodologies for identification and conservation of heritage sites of different countries were also evaluated to convey a comprehensible knowledge on heritage identification and conservation. Cultural evidences/ significance of the study areas were also found out to categorize the criteria of the heritage sites. Legal provisions to protect the heritage sites within CMMP area were also reviewed to chalk out the compatible and incompatible land uses within the vicinity of heritage sites.

3.6 Collection of Map

Base maps of the study areas showing existing features and proposed land use maps in Detailed Area Plan (DAP) were collected from Chittagong Development Authority. Available attribute data within 250 meter buffer of the selected heritage site was also collected with these maps showing existing hill, road, structure type, structure use, land use and proposed land use and roads.
3.7 Data Collection

A blend of qualitative and quantitative methods is applied in this research. Data is gathered from literatures, secondary sources and primary. In the following section, the process is described in detail.

3.7.1 Primary Data Collection

Considering the limitations, the study avoids employing primary statistical data collection method. Three different primary data collection method have been used: exploratory Questionnaire Interviews of dwellers in the buffer area (250 meter) of heritage sites (DAP), Focus Group Discussion and Expert Questionnaire Interviews.

3.7.1.1 Questionnaire Interviews to the Dwellers

The view of the local people regarding the sustainability criteria was evaluated through personal interview with people from different strata. Random sampling method was used to interview the concern dwellers. Questionnaire Interviews were conducted to the dwellers residing within 250 meter buffer of each heritage site. Total 60 dwellers were interviewed with the designed questionnaire and 15 interviews were taken in each study area (Anderkilla Shahi Jame Masjid, Kadam Mubarak Mosque, Court Building and J.M. Sen Hall).

3.7.1.2 Questionnaire Interviews to the Experts

Different concerned professionals, experts, academics, decision makers were interviewed to set the criteria and to understand the process of development in the vicinity of the heritage sites and ensure compatibility of land uses. Following the Delphi Method, after justification of the first questionnaire results, experts were interviewed second time showing the ranks and results of the previous questionnaire. Finally the changes and corrections done by the experts were assessed and second ranks of their opinions were derived. Delphi Method for justification of the experts’ opinion was pursued from Cuhls K. , “Delphi method”, Germany, Hyperlink URL: www.unido.org/fileadmin/import/16959_DelphiMethod.pdf.
Table 3.2: Questionnaire Interviews of the Experts

<table>
<thead>
<tr>
<th>Type of Professionals</th>
<th>Number of Interviews</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academics</td>
<td>06</td>
<td></td>
</tr>
<tr>
<td>Concern Government Officers</td>
<td>06</td>
<td></td>
</tr>
<tr>
<td>Local Expert</td>
<td>04</td>
<td></td>
</tr>
<tr>
<td>Members of Professional Institutions</td>
<td>03</td>
<td></td>
</tr>
<tr>
<td>Members of Non Government Organizations/Forums</td>
<td>02</td>
<td></td>
</tr>
<tr>
<td>Journalists / Newspaper Reporters</td>
<td>03</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author, 2010

3.7.2 Secondary Data Collection
Data and information about the heritage identification procedure and compatible/incompatible land uses were also collected from different secondary sources like newspapers, previous studies, government reports and attribute data of GIS maps. Proposed land use in the DAP in the four study areas have been identified. Within 250 meters buffer area; existing land use, height of building and type of structure are analyzed to define the compatibility of land use in the four heritage sites.

3.8 Focal Group Meeting
One focal group meeting was arranged comprising local political leaders, respected persons from different professional and social groups and peoples who are residing for more than 10 years in the study area. Through these focal group meetings it was tried to evaluate the perception of the local people regarding their attitude regarding heritage conservation.

3.9 Data Compilation
Obtaining relevant data from literature and questionnaire interviews, it was compiled. Using Delphi Method the answers are analyzed in order to determine the general tendency and the most extreme answers. At this stage, data was aggregated to make a simple statistical rank of experts’ argument. A second questionnaire was formulated and sent to the experts again. Each expert was informed of the results of the first
questionnaire’s rank and was asked to provide a new answer and to justify it if it differs from the general tendency. After getting the second questionnaire, data was aggregated again and criteria for identification of heritage site and compatible land uses in the vicinity of heritage sites were conceptualized.

3.10 Suggestions Having Policy Implication

Based on Delphi analysis of interviewed results, some suggestions are prepared about development of heritage identification procedure. Suggestions for considering land use suitability has been an outcome of the findings as both compatible and incompatible land uses are found in the vicinity of the selected heritage sites.
Chapter Four: Study Area Profile

4.1 Introduction

Four study areas were selected from Heritage List of DAP to envisage whether existing and proposed (DAP) land uses in the vicinity of these heritage sites are compatible or incompatible. Study areas were selected based on geographical location, archaeological significance, architectural significance and historical significance. These study areas were selected in such a way that it articulates the history of emergence of settlements in Chittagong city; social, economical and political movement witnesses; human value regarding these sites; architecturally invention in this city and religious aspects. It can be mentioned that heritage sites were chosen from the declared heritage list in Detailed Area Plan (DAP) of Chittagong Metropolitan Master Plan (CMMP). From the list of heritage sites in DAP, focus was paid to the availability of data and information of the concerned heritage sites.

The selected study areas are as follows:
1. Anderkilla Shahi Jame Masjid
2. Qadam Mubarak Mosque
3. Court Building
4. J.M. Sen Hall.

Anderkilla Shahi Jame Masjid was selected due to its historical importance as first structure by the administrator of Mughal. Its architectural invention in the city was carried out by the architectural style of Mughal. Human value regarding this structure is very high. Qadam Mubarak Mosque was also built in Mughal period by the later administrator of Mughal. Its human value and architectural significance of the tombs are very high. Court building was developed in British era and was structured for the administrative works of the colonial government. Its architectural style was followed by the British architecture. The geographical location of this structure is considered as one of the panoramic site in Chittagong city. Jatra Mohan (J.M.) Sen Hall was developed by private dwellers. It is the first town hall in Chittagong city. It witnesses political and social movement of Chittagong city. Narrate descriptions of this study areas are described in this chapter.
Map 4.1: Location Map of Study Areas

Source: CDA, 2010
4.2 Study Area One: Anderkilla Shahi Jame Masjid

The jame Mosque at Anderkilla was built by Buzurg Ummid Khan son of Sayesta Khan, in 1667 after the conquest of Chittagong by the Mughals. This mosque was also called as Jame Sangin Masjid (Chowdhury A.H., 1994). It has the Shiasta Khani architectural style, but only one dome over the central bay and the side bays are roofed over by cross vaults. At the middle of the nineteenth century many of the old features were altered. After 1947 the mosque has been enlarged and given completely a new look. (Bangladesh District Gazetteers, Chittagong, 1975)

4.2.1 Existing Land Use and Development Status

The adjoining area of Anderkilla Shahi Jame Masjid is a business hub of Chittagong. There exist mixed land uses where most of the lands beside road are commercially used. Streets are lined with shops, small manufacturing workshops and offices while residences are in the upper floors or at the rear plots which are often accessed by very narrow lanes.
### Photograph 4.1: Anderkilla Shahi Jame Masjid and Surrounding Land Uses

<table>
<thead>
<tr>
<th>Front elevation of Anderkilla Shahi Jame Masjid</th>
<th>West elevation of Anderkilla Shahi Jame Masjid</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.jpg" alt="Front elevation of Anderkilla Shahi Jame Masjid" /></td>
<td><img src="image2.jpg" alt="West elevation of Anderkilla Shahi Jame Masjid" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activities in the vicinity of Anderkilla Shahi Jame Masjid</th>
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</tr>
</thead>
<tbody>
<tr>
<td><img src="image3.jpg" alt="Activities in the vicinity of Anderkilla Shahi Jame Masjid" /></td>
<td><img src="image4.jpg" alt="Activities in the vicinity of Anderkilla Shahi Jame Masjid" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Road side land uses of Anderkilla Shahi Jame Masjid</th>
<th>Visibility status of Anderkilla Shahi Jame Masjid</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image5.jpg" alt="Road side land uses of Anderkilla Shahi Jame Masjid" /></td>
<td><img src="image6.jpg" alt="Visibility status of Anderkilla Shahi Jame Masjid" /></td>
</tr>
</tbody>
</table>

and by-lanes. Anderkilla Road, Rajbari Road, Najir Ahmed and Hazari lane are the prominent roads in this area. Anderkilla intersection exist here which produce huge traffic jam in most of the day time.

Map 4.3: Satellite Image of Anderkilla Shahi Jame Masjid

Source: Google Earth, 2010

4.2.2 Proposed Land Use within 250 Meter Buffer Area

In Detailed Area Plan (DAP) of CMMP, proposed land uses in 250 meter surrounding of Anderkilla Shahi Jame Masjid are stated as following codes: R-03-18, Com-03-08, Com-03-09, Com-03-11, MU-03-01, Comm-03-03, Comm-03-04 and CH-03-06.

Under these codes guidelines are stated as follows:

**R-03-18**: “Road are densely built with houses very closely packed. Many are poorly constructed. Efforts will have to be made to identify buildings in distress, with close participation of the landowners a phased program of identifying buildings and sites for upgrading and enhancing of the environment may be initiated. Provision of green spaces and other urban amenities should be a collective responsibility.”
**Com-03-08/Com-03-09:** “Anderkilla area should be retained as traditional commercial area. The Authority may enhance the urban setting to include traditional structure.”

**Com-03-11:** “Urban renewal program has to be undertaken to reorganize the area such that warehousing and wholesale trade will continue in a planned manner. Access has to be improved and networked. Parking, waiting, for freight vehicles has to be reserved and loading unloading facilities incorporated. A 5% green area has to be reserved in renewal program. Where this kind of renewal is not possible due to use constraint, mixed use may be permitted subject to the assessment to be done by the Planning Committee of the authority.”

**MU-03-01:** “Mixed uses may be permitted in all areas marked as MU-03-1. Special attention however has to be made by the authority to reserve the residential character in the inner areas. High-rise transformation may be permitted when reserves for play grounds, open spaces and urban amenities are provided as collective effort of the community and the city authority and the Planning Authority. Conservation and enhancement of cultural and historic sites should get special attention.”

**Comm-03-03:** “The CMCH has ample opportunities to expand and enhance its environment. Formal play grounds and other public amenities may be incorporated.”

**Comm-03-04:** “Shahi Jam-e-mosque, MES School and Law College exist at this site. Its present use will be retained.”

**CH-03-06:** “The public plaza will be retained and enhanced with appropriate planting, landscaped features and other public facilities such as public toilets in appropriate locations.

- A walkway, trees, fencing and streetlights will define the eastern limit.
- The vacant foothill of DC Park may be reserved for a primary and preschool / day care for local school district. No vehicular traffic will be permitted. There will be indoor swimming and sports facilities for girls.
- Low-density low-rise forest accommodation will be retained.
- Surroundings of CDA, other government buildings, and new market will be enhanced and integrated with the overall scheme.”
4.3 Study Area Two: Qadam Mubarak Mosque

The Qadam Mubarak Mosque built in 1723-1728 A.D. by Faujder Muhammad Yasin Khan (Bangladesh District Gazetteers, Chittagong, 1975). It was found that Hurman Hossain Fakir from Noakhali had collected two pairs of footprints from Arab and presented shamser Gazi, administrator of Rawshanabad kingdom (Tripura region) in 18th century. Nawab Yasin Khan has collected these two pairs of footprints and set up in this mosque. From this time, this mosque had been called as Qadam Mubarak Masjid. It has been believed that these pairs of footprints are to be of the Prophet Hazrat Muhammad (SM) (Chowdhury A.H., 1994).

It is oblong in plan with thick octagonal corner towers rising above the parapets. The eastern side has three arched entrances, each doorway opening under a high cusped arch, the central one being bigger, contained within a projected surface, with a slender fluted pillar on its either side. Each doorway has a frame of rectangular panels, and the side frames are topped over by crenellations. The parapet which is straight is battlemented. The domes have a basal ornamentation and tall finials. The central dome is exceptionally bigger than the side ones. The attached rooms have a modern appearance. The latticed windows and the overhanging cornice are clearly of the north Indian type with a finial on the top. On the whole the mosque, though kept in a constant repair, still retains the Mughal features and the Mughal design.
Photograph 4.2: Qadam Mubarak Mosque and Surrounding Land Uses

Front of Qadam Mubarak Mosque

Three arched of Qadam Mubarak Mosque

Footprints of Qadam Mubarak Mosque

Qadam Mubarak Mosque from bird’s eye

Development trends in the vicinity of Qadam Mubarak Mosque

Development trends in the vicinity of Qadam Mubarak Mosque

Source: Field Survey, August, 2010
4.3.1 Existing Land Use and Development Status
The vicinity area of Qadam Mubarak Mosque is dominant by residential use. Ribbon development trends are also found here. Mixed uses of land is very common along the roadside land. There are some vacant lands here which are chronologically diverting to residential and commercial use. It is found that areas are growing sporadically, without any guidance, resulting in poor environmental conditions and inadequate urban amenities and facilities.

Map 4.4: Satellite Image of Qadam Mubarak Mosque

4.3.2 Proposed Land Use within 250 Meter Buffer Area
In Detailed Area Plan (DAP) of CMMP, proposed land uses in 250 meter surrounding of Qadam Mubarak Mosque are stated as following codes: R-03-16, R-03-17, R-03-18, Com-03-08, MU-03-01 and CH-03-06.

Under these codes guidelines are stated as follows:

**R-03-16, R-03-17, R-03-18:** The recommendations are same as the recommendations depicted in vicinity area of Anderkilla Shahi Jame Masjid.
MU-03-01: This area is overlapped by the proposed mixed uses of study area 1.
Com-03-07/Com-03-08/Com-03-09 This area has common characteristics of the proposed commercial land uses of study area 1.
CH-03-06: This area also goes beyond by the proposed cultural and heritage land uses of study area 1.

4.4 Study Area Three: Court Building
Located at the top of Porir Pahar (Fairy Hill), the Court Building was established in 1893 replacing administrative and court building from Madrasar Pahar. This hill was acquired from Jamindar Okhilchandra Sen in 188A.D. Former British Government constructed this two storied building at a cost of 0.6 million Tk. In Pakistan era, this building was extended to three storied.

At this time, this hill is known as Katchari Pahar and most well known as Court Hill. The building is now under renovation and restoration process. On this hill, the massive Court Buildings stands which accommodate the Civil Courts, Criminal Courts and Session Judges. (Bangladesh District Gazetteers, Chittagong, 1975 (Azadi, 1995). Total area of this building is about 1,53,00square feet and accompanying more than hundred rooms. This type of government building with hilly landscape is no more exist in Bangladesh. (Azadi, 1995)
Photograph 4.3: Court Building and Surrounding Land Uses

<table>
<thead>
<tr>
<th>Front of Court Building</th>
<th>Court Building in a busy day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Extension of Court Building</td>
<td>Main access of Court Building</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Hotels and associated shops on the access of Court Building</td>
<td>Court Building in cityscape</td>
</tr>
</tbody>
</table>

Source: Field Survey, August, 2010
4.4.1 Existing Land Use and Development Status

This area bears heavy rush of peoples and commuters for variety of activities. On the valley of the former Porir Pahar, there exist Cittagong Biponi Bitan (Central New Market of Chittagong), General Post Office (Central Post Office of Chittagong), Bangladesh Bank (Central Bank of Bangladesh, Chittagong Branch), Chittagong Development Authority (CDA), Govt. Muslim High School, Kotowali Police Station, District Commissioners Office (D.C Office), Reazuddin Bazar (largest concentration of retail shopping and kitchen market in the city), Johur Hawker Market and WASA hill. Beside these overcrowding places, there also exist mixed commercial activities in the vicinity of Court Building.

4.4.2 Proposed Land Use within 250 Meter Buffer Area

In Detailed Area Plan (DAP) of CMMP, proposed land uses in 250 meter surrounding of Court Building are stated as following codes: Com-03-05, Com-03-12, Com-03-15, Comm-03-01, Adm-03-01, CH-03-03 and CH-03-05.
These codes guide as follows:

**Com-03-05:** “Johur hawker market is situated in this site which has to be renovated for commercial use. CDA, CCC and others may take initiative to renovate this market.”

**Com-03-12:** “New market (Biponi bitan) is set up at this site that will be retained as pure commercial establishment.”

**Com-03-15:** “On the both sides of Jubilee road will be permitted as predominantly commercial use. In addition, a small scale mixed use may be permitted.”

**Comm-03-01:** “The Collegiate school main building and the water body will be conserved. The school grounds will be covered with tree plantation. Measures will be taken to designate dropping area for vehicles and wide footpaths for at least 10' on both sides of the entry gate up to 15' Footpaths will be provided on all roads. The gate entrance will be indented for student safety and convenience. These measures will also be taken in respect to the Municipal Model School, Muslim Model School, St. Placid's School, St. Scholistica, Kazem Ali School, Chittagong College, Mohsin College, Government City College, Government Arts College, BAWA School and other educational institutions.”

**Adm-03-01:** “GPO, CDA, Bangladesh bank Zilla Parishad are located at this site. The present functions of these places have to be retained.”

**CH-03-03:** “The Shaheed Minar, the theatre institute and the triangular area consisting of the Society of Arts and Literature (SAL), the Muslim hall and the public library should be conserved as a cultural precinct of the traditional city. The triangular area was formerly a park known as the Hands Park. No commercial development should be permitted. The existing theatre and library facilities may be upgraded. The domed structure of the SAL, the Bose Brothers should be listed for conservation and the whole site should be appropriately landscaped and wide footpaths and pedestrian comfort ensured.”

**CH-03-05:** “Parir Pahar Conservation and EnhancementThe Parir Pahar is identified as one of the group of three hillocks in the traditional city centre. The Court Building is
perched on the highest peak on the south. Further northeast is the hillock, which has the civil surgeons residence (now in ruins). The third has a water tank operated by WASA but in a state of dereliction. The area comprising of the three hillocks and its surroundings should be given heritage status and considered as a cultural precinct and developed with tourist interest. The forecourts and public plazas and gardens should be landscaped to a high standard of design.

- A cycle and pedestrian route may be incorporated.
- All informal restaurants, typing and printing services shall be removed from its present haphazard locations and these facilities provided within the planned formal buildings. No such informal activities should be permitted.
- The hawker market will be reorganized and redeveloped to a high standard of design incorporating public plazas, public toilet and parking facilities.
- A viewing tower should be built in the WASA hillock.
- All the three hillocks should be interconnected by means of pedestrian walkways/bridge-ways from existing building such as the New Market etc.”

4.5 Study Area Four: J.M. Sen Hall

This is the first town hall in Chittagong located in Rohomotganj. Jatindra Mohon, former famous barrister, Mayor of Calcutta (Present Kolkata) and president of National Congress had put the name of this hall as his fathers name Jatra Mohon Sen (J.M. Sen) in 1916 A.D. In 1875 A.D., Jatra Mohon Sen formed Chattagram Association and a trustee board. In 1914 A.D. He granted this land and 300Taka for the development of this hall. Saratchandra Das Roybahadur had founded this hall in November 1916 A.D. and Roybahadur Nabinchandra Datta had opened the activities of this hall formally in 8 February 192A.D.
This hall has a legendary contribution by gathering people and building influential public opinion in the movements against British in 1947 and liberation of Bangladesh in 1971. East Pakistan Poet Committee meeting was also held here. From the British period to present time, this hall has been contributing a lot to the cultural and political movement of Chittagong. (Azadi, 1995)

In the court yard of this hall there exist sculpture of Revolutionist Masterda Surju Sen, Famous Pub LeaderJotindra Mohon Sen, Journalist and Politician Mohimchandra Das and Neli Sengupta, famous pioneer for women education.
4.5.1 Existing Land Use and Development Status
The adjoining area of J.M. Sen hall is dominating by residential use. There is lot of potentiality found here for high rise buildings. There also exist mixed land uses where most of the lands beside road are commercially used. Streets are lined with shops, small manufacturing workshops and offices while residences are in the upper floors or at the rear plots which are often accessed by very narrow lanes and by-lanes.

4.5.2 Proposed Land Use within 250 Meter Buffer Area
In Detailed Area Plan (DAP) of CMMMP, proposed land uses in 250 meter surrounding of J.M. Sen Hall are stated as following codes: R-03-17, R-03-18, Com-03-08, Com-03-09, MU-03-01, Comm-03-03 and Comm-03-04.

**R-03-17 R-03-18:** The recommendations are same as the recommendations depicted in vicinity area of study area 1.

**Com-03-08 Com-03-09:** This area has common characteristics of the proposed
commercial land uses of study area 1.

**MU-03-01:** This area is overlapped by the proposed mixed uses of study area 1.

**Comm-03-04:** This area is overlapped by the proposed mixed uses of study area 1.

### 4.6 Conclusion

From the study areas profiles it has envisaged that surrounding areas of Anderkilla Shahi Jame Masjid and Qadam Mubarak Mosque are commercially occupied with few haphazard settlements. Adjacent areas of Court Building are used by institutional and commercial purpose where most vicinity areas of J.M. Sen Hall are used by residential uses. There is a high tendency for high rise building due to scarcity of land and people’s demand for commercial and residential use. Huge traffic jams are occurred in the intersections such as Anderkilla intersection, Cheragi Pahar Mor and in the vertex from Laldighi to Chittagong City Corporation Building. DAP has arbitrary marked the land uses in the study areas following the existing land use tendency and road network.
Chapter Five: Analysis and Findings

5.1 Introduction
This chapter discusses on some criteria for identification of heritage site and visualizes the acceptance of these criteria by experts’ opinion. To justify the criteria for identification of heritage site, heritage sites were classified in to 8 (eight) categories. These categories were derived from literature review and accepted by experts’. By sorting heritage sites’ type, experts’ opinions on compatible and incompatible land uses in the vicinity of heritage site were derived. By explanation of the existing and proposed land use pattern in the vicinity of heritage sites, problems regarding land use suitability in the vicinity of heritage sites were tried to grasp.

5.2 Type of Heritage Site
Type of heritage was reviewed from various literature and heritage related acts of different countries like Convention Concerning the Protection of the World Cultural and Natural Heritage and Operational Guidelines of United Nations Educational, Scientific and Cultural Organization (UNESCO); The Indian National Trust for Art and Cultural Heritage (INTACH); Heritage Act, 2005, Malaysia; Provincial Polity Statement of Ontario, 2006 and Antiquities Act, 1976, Bangladesh. Mostly probable types of heritage sites are found as a) Cultural Heritage, b) Natural Heritage, c) Mixed Heritage (Cultural and Natural), d) Material Heritage, e) Intangible Heritage, f) Historic Town and Town Center, g) Heritage Canal, and h) Heritage Route. Experts’ opinions regarding type of heritage are revealed as follows:

5.3 Experts’ Opinion
5.3.1 Type of Heritage Site
Each expert was interviewed two times by the questionnaire format. First questionnaire accumulate experts’ fresh opinion regarding the questions of the questionnaire. Fist answer was sorted and ranked according to the quantitative opinions of the experts’. After ranking the experts’ opinion, each expert informed of the results of the first round is asked by second questionnaire to provide a new answer and to justify it if it differs
from the general tendency. Experts made some correction and reviewed their views regarding criteria for cultural heritage.

The ranking of the type of heritage sites is presented in the following table using the Delphi Method technique in the field survey to define heritage site.

Table 5.1: Experts’ Opinions Regarding Type of Heritage

<table>
<thead>
<tr>
<th>Type of Heritage</th>
<th>Experts’ Opinion (1st Question.)</th>
<th>Rank (1st Question.)</th>
<th>Experts’ Opinion (2nd Question.)</th>
<th>Rank (2nd Question.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural Heritage</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Natural Heritage</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Mixed (Cultural and Natural) Heritage</td>
<td>21</td>
<td>2</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Material Heritage</td>
<td>18</td>
<td>3</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Intangible Heritage</td>
<td>17</td>
<td>4</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Historic Town and Town Centre</td>
<td>17</td>
<td>4</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Heritage Canal</td>
<td>16</td>
<td>5</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Heritage Route</td>
<td>14</td>
<td>6</td>
<td>15</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2010

From the above table, it is quite clear that most of the expert standby their previous point for cultural and natural heritage sites. But, they have changed their opinion regarding material and mixed heritage by giving higher priority. Noticeably, the priorities for most of the heritage sites have significantly increased.

5.3.2 Question regarding Age of Ancient Products or Objects

The issue of ancient products or objects belonging or relating to preceding hundred years is dictated in “Antiquities Act, 1976”. Bangladesh National Building Code (BNBC), 2006 dictates that buildings belonging 20 years old may be considered as national heritage if the concern buildings fulfill the necessary conditions to be listed as heritage site. Some of the experts also argued that this static time period of ancient products should be lessen to preceding 50 years or more less. In this regard, the issue of fixing the age of structures was questioned several times. Few experts agreed with the period of time dictated in BNBC to identify objects or products as heritage or antiquity. , most of the experts do not agree with this time scale. Very few experts also agree with the time period of preceding hundred years stated in “Antiquities Act, 1976”. But most of the experts do not agree with the time bindings for a site to be listed as heritage site. They
have argued that time period should not be a parameter to declare a heritage or antiquity. Time period may differ for various objects, situations and incidents. So, static time period should not be rectified in general to identify sites/ objects/ products as national antiquity or heritage.

5.3.3 Criteria for Identification of Heritage Site

Questionnaire survey was carried out with different professionals and academics which are involved with concern activities. Some experts also argued that heritage should be broadly classified as Cultural, Natural and Mixed (Cultural and Natural) Heritage. They have merged historic town and town center, historic canal and historic route with cultural heritage. In this chapter these heritage classes have been integrated with cultural heritage type for better understanding. With the questionnaire survey, opinions on compatible/ incompatible land uses in the heritage site were also derived.

5.3.3.1 Cultural Heritage

After fixation of criteria through literature review and experts’ opinion, criteria were tabled to do questionnaire survey. First questionnaire data were ranked to find out the priority of the criteria. This questionnaire result shows that distinctive physical characteristics of design, construction or form which is representing a masterpiece of human creative genius is the most preferable criteria for identification of cultural heritage site. Beside this, other criteria which were stated in the questionnaire are also highly cared by the respondent experts.

Table 5.2: Age of Cultural Heritage

<table>
<thead>
<tr>
<th>Age Limit</th>
<th>Experts' Opinion (1st Question.)</th>
<th>Rank (1st Question.)</th>
<th>Experts' Opinion (2nd Question.)</th>
<th>Rank (2nd Question.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belonging 20 years old</td>
<td>6</td>
<td>2</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Belonging 100 years old</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>No age bindings</td>
<td>16</td>
<td>1</td>
<td>16</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2010

In addition to the stated opinion, some experts stated that distinctive physical characteristics of design, construction or form that representing a masterpiece of human creative genius should be declared as cultural heritage if it is 20 years old. They also argued that manmade water bodies (dighi); events or places association with war with
liberation war 1971 and places with industrial revolution significances should be incorporated with the list for cultural heritage criteria.

Table 5.3: Criteria for Cultural Heritage

<table>
<thead>
<tr>
<th>Criteria for Cultural Heritage</th>
<th>Experts' Opinion (1st Question.)</th>
<th>Rank (1st Question.)</th>
<th>Experts' Opinion (2nd Question.)</th>
<th>Rank (2nd Question.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distinctive physical characteristics of design, construction or form, representing a masterpiece of human creative genius</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Association with events, activities or patterns</td>
<td>23</td>
<td>2</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Association with important persons</td>
<td>23</td>
<td>2</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Potential to yield important information such as illustrating social, economic history, such as railway stations, town halls, clubs, markets, water works, etc.</td>
<td>22</td>
<td>3</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>Illustrating significant stage(s) in human history</td>
<td>22</td>
<td>3</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Technological innovations such as dams, bridges, etc.</td>
<td>21</td>
<td>4</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Place’s possession of uncommon, rare or endangered.</td>
<td>21</td>
<td>4</td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td>Exhibiting an important interchange of human values over a span of time.</td>
<td>21</td>
<td>4</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Distinct town planning features like squares, streets, avenues.</td>
<td>20</td>
<td>5</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>Example of a traditional human settlement or land-use which is representative of a culture.</td>
<td>20</td>
<td>5</td>
<td>22</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2010

Second questionnaire result envisage that distinctive physical characteristics of design, construction or form which representing a masterpiece of human creative genius; association with events, activities or patterns and association with important persons holds the prime preference of the respondent experts. Like first questionnaire result, other criteria also hold a bulky support from the experts’ opinion.

5.3.3.2 Natural Heritage

Following the first questionnaire survey for fixation of criteria for cultural heritage, first questionnaire data were ranked to find out the priority of the criteria for identification of natural heritage. First questionnaire result shows that distinctive important areas of
biodiversity consisting of diverse species of both fauna and flora and offshore coral reef are the most preferable criteria for identification of natural heritage site. Beside these, other criteria have got 22 to 9 respondents’ opinion. Some experts strongly focused on single or group of trees which is associated with events, culture, place’s identity and landscape as natural heritage.

Table 5.4: Criteria for Natural Heritage

<table>
<thead>
<tr>
<th>Criteria for Natural Heritage</th>
<th>Experts' Opinion (1st Question.)</th>
<th>Rank (1st Question.)</th>
<th>Experts' Opinion (2nd Question.)</th>
<th>Rank (2nd Question.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Important areas of biodiversity consisting of diverse species of both fauna and flora</td>
<td>23</td>
<td>1</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>Offshore coral reefs</td>
<td>23</td>
<td>1</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Ecological and Biological Significance</td>
<td>22</td>
<td>2</td>
<td>22</td>
<td>2</td>
</tr>
<tr>
<td>Important breeding and nesting sites</td>
<td>22</td>
<td>2</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Habitats of gravely endangered species of both fauna and flora including fish fauna</td>
<td>22</td>
<td>2</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Important migration routes and corridors between habitats of gravely endangered species</td>
<td>22</td>
<td>2</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>Unique geological and rock formations of geomorphologic significance, rock shelters</td>
<td>22</td>
<td>2</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>Unique coastal landforms</td>
<td>22</td>
<td>2</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Stretches having mangrove vegetation</td>
<td>22</td>
<td>2</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Fossils</td>
<td>21</td>
<td>3</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>Headwaters of important watersheds</td>
<td>21</td>
<td>3</td>
<td>21</td>
<td>3</td>
</tr>
<tr>
<td>Areas having natural vegetation of cultural significance, such as sacred groves, water bodies, hill tops, etc. and similar areas associated with cultural and religious beliefs and practices.</td>
<td>20</td>
<td>4</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Natural vegetation</td>
<td>19</td>
<td>5</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Habitats of species of fauna and flora which are endemic and restricted in their range to a particular area</td>
<td>18</td>
<td>6</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>Superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance and recreational value</td>
<td>18</td>
<td>6</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Outstanding examples representing major stages of earth’s history, including the record of life, significant on-going geological processes in the development of land forms, or significant geomorphic or physiographic features.</td>
<td>18</td>
<td>6</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>Wetlands, marshes, seasonal wetlands used by migratory avifauna or by local farmers, natural lakes, lagoons, creeks,</td>
<td>16</td>
<td>7</td>
<td>11</td>
<td>10</td>
</tr>
</tbody>
</table>
streams, water channels, etc.
Uncultivated riverine islands, natural riverine stretches 13 8 20 4
Unique desert patches 10 9 10 11
Important natural grasslands 9 10 9 12

Source: Field Survey, 2010

Second questionnaire results shows offshore coral reefs; important breeding and nesting sites; habitats of gravely endangered species of both fauna and flora including fish fauna; unique coastal landforms and stretches having mangrove vegetation as the prominent criteria for identification of natural heritage site.

For identification of criteria for material heritage and intangible heritage same procedure was followed to rank, assessment and reassessment of the criteria.

### 5.3.3.3 Material Heritage

Table 5.5: Criteria for Material Heritage in First Questionnaire

<table>
<thead>
<tr>
<th>Criteria for Material Heritage</th>
<th>Experts' Opinion (1st Question.)</th>
<th>Rank (1st Question.)</th>
<th>Experts' Opinion (2nd Question.)</th>
<th>Rank (2nd Question.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Archaeological deposits/ archaeological relic on land or under water</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Rock, cave or other natural object of historical, archaeological, artistic or scientific interest</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Archaeological Monument, tombstone, headstone, gravestone, cairn, marker, cenotaph, stele, mound, tumulus.</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Ethnographic material such as a household or agricultural implement, decorative article or personal ornament, precious stone</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Any gate, door, window, paneling dados, ceiling, inscription, wall painting, wood work, iron work or sculpture or other thing which is attached or fastened to any immovable antiquity.</td>
<td>24</td>
<td>1</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Carving, sculpture, inscription, painting, architecture, textile, musical instrument, weapon and any other handicraft that represents a tradition of a specific period</td>
<td>23</td>
<td>2</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Manuscript, coin, currency note, medal, badge, insignia, coat of arm, crest flag, arm or armour, or any object or article of historical value</td>
<td>23</td>
<td>2</td>
<td>23</td>
<td>2</td>
</tr>
</tbody>
</table>
Carving, sculpture, inscription, painting, architecture, textile, musical instrument, weapon and any other handicraft that are formed by rare material  |  22 | 3 | 23 | 2
Vehicle, ship and boat, in part or in whole, whose production has ceased or no longer exist | 22 | 3 | 22 | 3

Source: Field Survey, 2010

From the above table it has been found that criteria: Archaeological deposits/ archaeological relic on land or under water; Rock, cave or other natural object of historical, archaeological, artistic or scientific interest; Archaeological Monument, tombstone, headstone, gravestone, cairn, marker, cenotaph, stele, mound, tumulus; Ethnographic material such as a household or agricultural implement, decorative article or personal ornament, precious stone; Any gate, door, window, paneling dados, ceiling, inscription, wall painting, wood work, iron work or sculpture or other thing which is attached or fastened to any immovable antiquity get the highest priority from both questionnaire where criteria: Carving, sculpture, inscription, painting, architecture, textile, musical instrument, weapon and any other handicraft that represents a tradition of a specific period and Carving, sculpture, inscription, painting, architecture, textile, musical instrument, weapon and any other handicraft that are formed by rare material change their priority by stepping forward.

In this regard, some experts commented as follows:
- Material heritage must be at least 100 years old.
- Experts incorporated some other objects as material heritage such as household materials which were used by famous persons or in specific time with distinctive design and material, special terracotta, books, literature or any legal documents which are carrying special events, dress or food is specific time or used by specific community.
5.3.3.4 Intangible Heritage

Table 5.6: Criteria for Intangible Heritage in First Questionnaire

<table>
<thead>
<tr>
<th>Criteria for Intangible Heritage</th>
<th>Experts' Opinion (1st Question.)</th>
<th>Rank (1st Question.)</th>
<th>Experts' Opinion (2nd Question.)</th>
<th>Rank (2nd Question.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Popular and traditional expression - such as languages, oral literature, music, dance, games, mythology, rituals, costumes, craftwork, know-how, architecture</td>
<td>23</td>
<td>1</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Cultural spaces - places where popular and traditional cultural activities take place in -a concentrated manner (sites for storytelling, rituals, marketplaces, festivals, etc.) or on a regular basis (daily rituals, annual processions).</td>
<td>22</td>
<td>2</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Conflict and evolution of the cultural and modern expressions of art, culture and indigenous knowledge.</td>
<td>20</td>
<td>3</td>
<td>20</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: Field Survey, 2010

From the above table it is noticeably found that criteria: Popular and traditional expression - such as languages, oral literature, music, dance, games, mythology, rituals, costumes, craftwork, know-how, architecture have stood as the first priority where criteria: Cultural spaces - places where popular and traditional cultural activities take place in -a concentrated manner (sites for storytelling, rituals, marketplaces, festivals, etc.) or on a regular basis (daily rituals, annual processions) have changed its priority and stepped up.

In compliance of the above criteria, experts focused some other criteria as intangible heritage. Such as: sound and sign language; food and dress habit in specific time, design and material; poet song and special speech or lectures.

5.3.4 Land Use in the Vicinity of Heritage Site

Land uses in the vicinity of heritage sites (study areas) were analyzed to portray the present land use condition, proposed land use in DAP and development trends of these surrounding areas. Attribute data of Detailed Area Plan (DAP) of CMMP were used to carry out this job. Present land use scenario of the heritage sites are revealed here.

5.3.4.1 Planning Tools to Guide Land Uses in the Vicinity of Heritage Site

Planning law/ obligation have to identify, take protective measures, and manage the land uses in the surroundings of heritage site. In it an obligatory subject to take permission
from Special permission Committee of the concerned authority for any development works within 250 meter buffer area of a heritage site. But it is observed that there is no statutory planning rule to identify, protect and manage the land uses in those areas. Experts were surveyed to fix planning rules that can assure compatible land uses in the vicinity of heritage sites.

Some probable provisions for assurance of compatible land uses in the surroundings of the heritage sites were sorted out by literature review and experts’ opinions. The sorted provisions were verified by the practitioners, academics and other professionals who are involved in this job. The result of this survey produces the following ranks of the provisions: Special zoning by-laws with distinct heritage criteria overlay; recovering landscape of the heritage site to the antiquated landscape and preparation of conservation management plan or equivalent study were prioritized by the experts.

Table 5.7: Measures suggested (by experts) to be undertaken to Prepare Land Use Plan within 250 Meter Buffer Area

<table>
<thead>
<tr>
<th>Provision Ex</th>
<th>Experts' Opinion (1st Question.)</th>
<th>Rank (1st Question.)</th>
<th>Experts' Opinion (2nd Question.)</th>
<th>Rank (2nd Question.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special zoning by-laws with distinct heritage criteria overlay may be permitted</td>
<td>22</td>
<td>1</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Landscape of the heritage site should be recovered to the antiquated landscape of the heritage site.</td>
<td>21</td>
<td>2</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Should have a conservation management plan or equivalent study for each heritage site.</td>
<td>19</td>
<td>3</td>
<td>24</td>
<td>1</td>
</tr>
<tr>
<td>Land use permission may be permitted after Heritage Impact Assessment or equivalent study assurance which is free from doubt of adverse effect (direct or indirect, physical or aesthetic) for the concern heritage</td>
<td>18</td>
<td>4</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Should control height restriction for the visibility of the heritage site.</td>
<td>15</td>
<td>5</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Site alteration should be offered by financial incentives</td>
<td>15</td>
<td>5</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Land use permission should be allowed with the obligation of low density and low height</td>
<td>12</td>
<td>6</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>No horizontal expansion should be allowed to retain the former landscape of the heritage site</td>
<td>10</td>
<td>7</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>No commercial/ congregation use should be permitted</td>
<td>9</td>
<td>8</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Should be preserved in their entirety together</td>
<td>8</td>
<td>9</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>
with their natural surroundings whenever possible.

| Land Use permission may be given according to existing building construction rules and regulation | 5 | 10 | 5 | 6 |

Source: Field Survey, 2010

Second questionnaire was prepared following the previous methodology which was used to derive the ranking of criteria for cultural, natural, material and intangible heritage. Some experts had changed their opinion regarding provision for land use management in the vicinity of heritage sites. Final ranking of their arguments area as follows: 1. Should have a conservation management plan or equivalent study for each heritage site; 2. Special zoning by-laws with distinct heritage criteria overlay may be permitted; 2. Land use permission may be permitted after Heritage Impact Assessment or equivalent study assurance which is free from doubt of adverse effect (direct or indirect, physical or aesthetic) for the concern heritage.

In addition to the stated common suggestions by the experts, there are other useful arguments or comments which are described below:

1. **Separate Heritage Act** should be formulated in which heritage of the nation should be conserved. Existing Antiquities Act will be subjected to the national antiques whether Heritage Act will be subjected to the identification and conservation of national heritage.

2. **National Planning Department** should be formed under Planning Ministry. In this department, there will be a division named “Heritage”. Branches of this division should be placed in different level of local government tiers. Research cell must be incorporated with this division.

3. Have to conduct a **detail survey to identify the heritage sites in Bangladesh**. Development Authority and City Corporation (Local Government Bodies) with the collaboration of Archaeological department should conduct this study to identify the heritage sites.

4. Should form a **specialized committee** to fix up the land uses, building design parameters and heights of the buildings in the vicinity of the heritage sites. More powerful committee (than existing one) should be formed to manage the land uses in the vicinity of heritage sites. This committee will be comprised with
artists, planner, architects, historians, engineers, advocates and other civil members. Govt. should give the statutory approval to the committee for carrying out this job.

5. **Conservation Management Plan** should be prepared for each heritage site. After preparation of these Conservation Management Plans, provisions of these plans must be incorporated with Detailed Area Plan (DAP) of CMMP.

6. **Buffer area of 250 meter should be minimal**. There should have a specialized committee to fix up the distinct buffer area for each heritage site.

7. Time Criteria period of “**preceding hundred years**” to identify heritage site should be minimized.

8. **Existing Heritage Buildings/ Objects must be made active** to make a live environment with the heritage sites. It should be noticed that pressure on the heritage sites should be at tolerable limit for the concerned heritage site.

9. To portray actual image of the heritage, **old structures in the vicinity of heritage sites must be preserved or restored**.

10. **New structure in the vicinity of heritage site must follow the fabric and image of the heritage site**.

11. City center/ parts of the city must be **preserved according to specific time period** such as Sultani period, Mughal period, British period and Pakistan period.

12. **Height of new structure should not cross the height of the heritage**.

13. **Land use in the vicinity of heritage site must follow the preceding land uses of the surroundings of the heritage sites**.

14. **Old town center should not be destroyed or redeveloped**. Attempts should be taken to survive the fabric of the old town.

15. **Must consider local, regional and international context for identification of heritage site**. It is the utmost necessity to follow the indigenous knowledge and expertise to identify the heritage site.

16. **Development works in the vicinity of heritage sites, should be carried out by proper authority**. It may be done by architecture department of ministry of public works. Necessary guidelines will be provided to make necessary works.

17. **Print and telecasting media should play a vital role** to increase awareness among the general people and concerned stakeholders. So, print and telecasting
media should be incorporated to make heritage list and Heritage Conservation Management Plan.

18. **Concern authority should not allow development works** in the vicinity of heritage sites which may destroy the image of heritage site. In the vicinity of heritage site, **high rise structure should be avoided. Drainage and transportation condition in the vicinity should be improved.**

19. **International cooperation may be fetched** to identify and protect the heritage site.

20. At first, tourists should be attracted. Then **commercial activities may develop targeting the comfortness of the tourists. Special Map showing heritage sites should be prepared. Should arrange loan for the surrounding land owners to develop their site as tourist spot. Surrounding street should be decorated according to the image of heritage. In Conservation Management Plan, tourism should also be focused.** Facilities should be provided to attract the tourists such as:
   a. Good access for tourists.
   b. Good visibility.
   c. Good landscape design.
   d. Parking facilities (in a comfortable place)
   e. Souvenir shop, food shops and small shops to sell products which will be reflecting the image of heritage site such as: coin, sculpture, replica, etc.

21. **Theoretical and practical course on Arts Appreciation should be launched** in the relevant subjects such as: Civil Engineering, Town Planning, Architecture, and other relevant subjects.

### 5.3.4.2 Question and Answers regarding 250 Meter Buffer of Heritage site
Question regarding 250 meter buffer of heritage site was raised by some experts. In this point, some experts expressed that buffer area of heritage site should not be static. Following Conservation Management Plan for each heritage site, buffer area should be demarcated. Consulting with related officials of DAP technical committee, it has been found that there is no study behind the demarcation of 250 meter buffer of heritage site. They have argued that “having no static and strong planning legislation and planning structures regarding conservation of heritage sites, this demarcation has been imposed.
This has been done just to take an initiative to set restriction for construction of buildings adjacent to the heritage site”. In this regard, some members of the concerned committee have told that the 250 meter buffer is minimum rather than maximum. But, in *Chattogram Imarat Nirman Bidhimala, 2008*, the matter of minimum or maximum 250 meter buffer is fully absent. It has just told about 250 meter buffer of a heritage site must be controlled by Special Permission Committee. It has been noticeably found that general policy guidelines of DAP has told about the recognition of historic events and persons who have made major contribution to society and statutory control on conservation of listed buildings and sites. In the appendix of this plan, they have listed 54 heritage sites to conserve without study and necessary documents of the heritage sites.

### 5.4 Public Opinion Regarding Heritage Site

Total 60 people were interviewed by questionnaire to find their perceptions regarding heritage conservation. 15 peoples were selected from each study area who was residing more than 10 years in the locality. Beside this one focus group discussion was held in the local counselor’s office comprising local leaders and general people. Their views are very much positive regarding conservation of the heritage sites.

100% of the respondents answer that they want to conserve their heritage site. About 90% of the respondents are not aware about the “Antiquities Act, 1976”. Even they have not heard the name of this act. Their arguments regarding regulations that should be adopted to protect the heritage sites are as follows:

Table 5.8: Public Opinion Regarding Regulations should be Adopted to Protect the Heritage Site (Multiple Response)

<table>
<thead>
<tr>
<th>Opinion</th>
<th>No. of Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>May prepare conservation management plan for each site.</td>
<td>38</td>
<td>63.33</td>
</tr>
<tr>
<td>May make the entire area with high landscape design.</td>
<td>28</td>
<td>46.66</td>
</tr>
<tr>
<td>Illegal encroachment by violator may be banned.</td>
<td>51</td>
<td>85</td>
</tr>
<tr>
<td>May acquire the vicinity area of each heritage site.</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>May strengthen the concern authority to monitor the land use pattern in the vicinity of each heritage site.</td>
<td>48</td>
<td>80</td>
</tr>
</tbody>
</table>

From the above table, it is found that more than 80% of the respondents argue that illegal encroachment by violator should be banned and it should strengthen the concern authority to monitor the land use pattern in the vicinity of each heritage site. But, the dwellers response regarding acquire of the vicinity area of heritage site was not as much as other options.

All the respondents agree to help the government by raising awareness about the rules and regulations to protect the heritage sites. No one agrees to sacrifice own land or monetary assistance to the government to protect the heritage sites.

Table 5.9: Probable reaction against government regulation to bar on expansion of building or demolition of any extra part of building

<table>
<thead>
<tr>
<th>Opinion</th>
<th>No. of Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept willingly</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Will never accept and protest the move</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Will never accept</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Accept after getting compensation</td>
<td>51</td>
<td>85</td>
</tr>
</tbody>
</table>


To the answer of the question “How would you react if for any government regulation you face bar on any expansion of your building or demolition of any extra part of your building?” 85% of the respondents allow in lieu of accurate compensation for their asset.

5.5 Findings from Study Area Profile

Comparing to the provisions dictated by the experts, present land use scenarios of the study areas are described here to envisage the problems associated with land use provisions in the vicinity areas.

5.5.1 Anderkilla Shahi Jame Masjid

Comparing to the provisions dictated by the experts, present land use scenarios of the study areas are described here to envisage the problems associated with land use provisions in the vicinity areas.
**Residential:** There is no planned housing within 250 meter buffer of Anderkilla Shahi Jame Masjid. These areas have not good access to individual plots and have inadequate provision of open spaces and urban facilities. There is limited footpaths comparing public rush in peak hour. Overbuilding is destroying the fabric of these areas (DAP, 2008).

**Commercial:** The area has some specific trade in specific areas such as the largest medicine centre (*Hazard Golly*), Book Market (beside Anderkilla Shahi Jame Masjid). Reazuddin bazaar, which is the largest concentration of retail shopping and kitchen market in the city, is located here.

**Industrial:** As per reconnaissance survey, it was found that a large number of printing and press related industries are found here.

**Community Facilities:** This area is scaring community facilities and urban amenities. There is little community facilities exist in this study area.

**Leisure, Recreation, Parks and Open Spaces:** In the vicinity of Anderkilla Shahi Jame Masjid there exist DC hill which is serving as a park and gathering place at this moment. Beside this study area, there exist Laldighi Filed.

**Religious:** Most significant mosques are Anderkilla Jame Masjid and Qadam Mubarak Masjid.

**Parks:** The Laldighi Park with tank has been renovated by CCC is situated in this area. The existing land use with 250m buffer area of the site, the land use has been shown in the following figure:

![Figure 5.1: Structure Uses within 250 Meter Buffer Area of Anderkilla Shahi Jame Masjid](image)

Source: DAP, 2008
It has found that total 54% of the total buildings are used by residential purpose and about 19% of total structures are used for commercial activities where another 19% buildings are used as mixed use.

As identified before, building material is one of the major factors to define and conserve heritage sites according to the experts. In the study site, presently, the buildings structures are mostly dominated by Pucca structures.

Figure 5.2: Building Material Based Structures within 250 Meter Buffer Area of Anderkilla Shahi Jame Masjid

Study shows that total 531 structures were found in this study area in which 363 are pucca (full masonry building), 141 semi pucca (partially masonry building) and 27 buildings are tin shed structures.

Figure 5.3: Number of Storey Based Structures within 250 Meter Buffer Area of Anderkilla Shahi Jame Masjid

Source: DAP, 2008
One storey buildings are prominent here. Total 219 buildings are one storied where number of two storied, three storied, four storied, five storied, six and more storied buildings are 107, 65, 74, 44 and 22.

Figure 5.4: Height Based Structures within 250 Meter Buffer Area of Anderkilla Shahi Jame Masjid

![Pie chart showing the distribution of structures based on height categories: Low Rise (34%), Medium Rise (4%), High Rise (62%)]

Source: DAP, 2008

Note: Considering the height scale, 1st.-2st. =Low Rise, 3st.-5st. =Medium Rise, 6st. and Over =High Rise, it was found that low rise structures are dominating here.

It has been found that about 62% of the total structures are low rise structure where only 4% structures are found as high rise structures.
Map 5.1: Existing Land Uses within 250 Meter Buffer Area of Anderkilla Shahi Jame Masjid

Source: DAP, 2008
Map 5.2: Existing Building Height in the Surrounding Area of Anderkilla Shahi Jame Masjid

Source: DAP, 2008
Through field visit and consulting with the concern officials of CDA it has found that ribbon development trend is the major phenomenon in this area. Along side Anderkilla main road, there is a tendency observed for high rise structures and real estate developments. Beside this, due to positioning in the centre city, there is also a tendency for high rise structures in the inner area (beside access road) of this site. The present ruling law regarding building structures allows high rise structures in this area. Following Floor Area Ratio (FAR), owner of land can build his building without any height restriction. In the study it has found that this trend will cover the whole area with high rise structures by which present heritage site will loose its visibility as well as attraction.

**Proposed Land Uses in DAP**
DAP has arbitrary marked 12 acre of land for residential use, 11.20 acre of land for mixed use, 2.78 acre of land for commercial use, 3.10 acre of land for community facilities and 1.20 acre of land for cultural and heritage use. It’s a noticeable matter of fact that according to *Chattagram Imarat Nirman Bidhima, 2008*; building
permission within 250 meter buffer area of a heritage will be controlled by Special Permission Committee. But, DAP has failed to notice the provisions regarding heritage site in this area. DAP has randomly marked the land uses following existing land use pattern and road network of this area.

Figure 5.5: Proposed Land Use by DAP within 250 Meter Buffer Area of Anderkilla Shahi Jame Masjid

![Pie chart showing land use percentages](image)

In the above figure, it is found that about 58% area in the vicinity of Anderkilla Shahi Jame Masjid is marked as Mixed Use and 14% as Commercial Use.
Map 5.4: Proposed Land Uses within 250 Meter Buffer Area of Anderkilla Shahi Jame Masjid

Source: DAP, 2008
Map 5.5: Proposed Buffer Area and Land Use Map Following the Conservation Aspects of Anderkilla Shahi Jame Masjid

Considering the existing land use pattern, development trends and conservation of Anderkilla Shahi Jame Masjid, a buffer area was realigned. A tentative land use and
height zoning map was prepared. In this map, a core area in the near vicinity of Anderkilla Shahi Jame Masjid is recommended as no development zone. In this zone, landscaping should be carried out focusing the conservation manner of Anderkilla Shahi Jame Masjid. In other buffer area of Anderkilla Shahi Jame Masjid, height control is recommended up to 3 (three) storied (thirty feet) with residential and mixed land use.

5.5.2 Qadam Mubarak Masjid

Residential: Like the study area one, there is no planned housing area within 250 meter buffer of Qadam Mubarak Mosque. In this area, buildings are found along major roads and access roads. This area is partially unoccupied due to its hilly terrain (DC Hill). Total 75% of the total buildings are used by residential purpose.

Commercial: About 8% of total structures are used for commercial activities where another 11% buildings are used as mixed use. Like study area 1, this area has some specific trade in specific areas.

Industrial: As per reconnaissance survey, there is no industry found here.

Road Network: Anderkilla Road, Momin Road and Jamal Khan Roads are the important roads in this area. Anderkilla intersection is also exist here at the periphery of 250 meter boundary.

Community Facilities: Like Anderkilla Shahi Jame Mosque, this area is also scaring community facilities and urban amenities. There is little community facilities exist in this study area.

Leisure, Recreation, Parks and Open Spaces: In the vicinity of Qadam Mubarak Mosque, DC hill occupies a large area which is serving as a park and gathering place. Smooth transportation network coordinate this hill with the other parts of the city.

Parks: In this study area, valley of DC hill serves as a park for the dwellers specially for children. There is no public or Private Park is existing here.

Religious: Most significant mosques are Anderkilla Jame Mashjid and Qadam Mubarak Masjid in this area.
Figure 5.6: Structure Uses within 250 Meter Buffer Area of Qadam Mubarak Mosque

About 75% of total area is covered as residential area. Commercial activities also exist here. But there is conversion tendency of residential buildings to commercial and mixed uses found here. At present, total commercial and mixed uses of structures are 8% and 11%.

Figure 5.7: Building Material Based Structures within 250 Meter Buffer Area of Qadam Mubarak Mosque

Total 603 number of structures are found here in which 353 are (full masonry building), 206 semi pucca (partially masonry building) and 44 buildings are tin shed structures.
Study conducted by DAP team found that 303 buildings are one storied where number of two storied, three storied, four storied, five storied, six and more storied buildings are 76, 59, 90, 57 and 18. It is found that one storied structures are foremost structure among all categories of structure.

N.B. Considering the height scale, 1st.-2st. = Low Rise, 3st.-5st. = Medium Rise, 6st. and Over = High Rise, it was found that high rise structures are very much low in context of medium and high rise structures.

It has found that about 63% of the total structures are low rise structure where 34% are medium height and 2% are high rise structures.
Map 5.6: Existing Land Use within 250 Meter Buffer Area of Qadam Mubarak Mosque

Source: DAP, 2008
Map 5.7: Existing Building Height in the Surrounding Area of Qadam Mubarak Mosque

Legend

Heritage Site
Building Heights
1. St. Building
2. St. Building
3. St. Building
4. St. Building
5. St. Building
6. St. Building
7. St. Building
8. St. Building
9. St. Building
10. St. Building
11. St. Building
12. St. Building

Waterbody
Drain
Road
Hill

Source: DAP, 2008
Through field visit and consulting with the concern officials of CDA it has also found that like study area one, ribbon development trend is a common phenomenon in this area. Along side major road, high rise structures can be built up following the existing building construction rule. It can be mentioned here that, present scenario of high rise structures is very much acute and already has hidden the scenic beauty of Qadam Mubarak Mosque. There is a high tendency of real estate development observed here.

**Proposed Land Uses in DAP**

DAP has marked 7.10 acre of land for residential use, 3.10 acre of land for mixed use, 5.25 acre of land for commercial use and 4.10 acre of land for cultural and heritage use. There is no proposed community uses in this area. Like study area 1, DAP has also failed to notice the provisions of heritage site and land use planning is also done following existing land use pattern and road network.
Figure 5.10: Proposed Land Use by DAP within 250 Meter Buffer Area of Qadam Mubarak Mosque

From the above figure, it is found that DAP has marked 29% area for residential use, 22% area for commercial use and 17% area for cultural and heritage use.
Map 5.9: Proposed land uses within 250 meter buffer area of Qadam Mubarak Mosque

Source: DAP, 2008
Map 5.10: Proposed Buffer Area and Land Use Map Following the Conservation Aspects of Qadam Mubarak Mosque

Source: DAP, 2008 and Author
Considering the existing land use pattern, development trends and conservation of Qadam Mubarak Mosque, a buffer area was realigned. A tentative land use and height zoning map was prepared. In this map, a core area in the near vicinity of Qadam Mubarak Mosque is also recommended as no development zone. In this zone, landscaping should be carried out focusing the conservation manner of Qadam Mubarak Mosque. In other buffer area of Qadam Mubarak Mosque, height control is recommended up to 2 (two) storied (twenty feet) and 3 (three) storied (thirty feet) with mixed land use. The natural hilly area in the vicinity of Qadam Mubarak Mosque is recommended as Reserve Hill. The landscaping of the hill must be preserved with the landscape of Qadam Mubarak Mosque.

5.5.3 The Court Building

Residential: Approximately 26% of the total structures are occupied by residential purpose. There is no planned housing area within 250 meter buffer of Court Building. These areas also have not good access to individual plots and have inadequate provision of open spaces and urban facilities.

Commercial: About 47% of total structures are used for commercial activities where another 5% buildings are used as mixed use. Cittagong Biponi Bitan (Central New Market of Chittagong), Reazuddin Bazar (largest concentration of retail shopping and kitchen market in the city), Johur Hawker Market exist here.

Industrial: As per reconnaissance survey, it was found that there is no industry in the vicinity of Court Building.

Road Network: Abdur Rahman Road and Jubilee Road are the prominent roads in this area. There are two important intersections named Kotwali intersection and New Market intersection. There is limited footpaths comparing public rush in peak hour. Beside this, footpath of this area is occupied by illegal encroachers.

Community Facilities: This area is scaring community facilities and urban amenities. There are 4% community facilities providing structures in this study area.

Leisure, Recreation, Parks and Open Spaces: Once upon a time, the core area (Parir Pahar) was famous for recreational space which also provided nice scenic natural beauty to the dwellers. But after the conversion of Parir Pahar to Administrative buildings and shopping markets, this area is lacking for recreational and open spaces.
Figure 5.11: Structure Uses within 250 Meter Buffer Area of Court Building

Source: DAP, 2008

Figure 5.12: Building Material Based Structures within 250 Meter Buffer Area of Court Building

Source: DAP, 2008

Total 275 structures were found in this study area in which 135 are pucca (full masonry building), 110 semi pucca (partially masonry building) and 30 buildings are tin shed structures.
Figure 5.13: Number of Storey Based Structures within 250 Meter Buffer Area of Court Building

Source: DAP, 2008

One storey buildings are prominent here. Total 176 buildings are one storied where number of two storied, three storied, four storied, five storied, six and more storied buildings are 51, 20, 10, 3 and 15.

Figure 5.14: Height Based Structures within 250 Meter Buffer Area of Court Building

Source: DAP, 2008

Note: Considering the height scale, 1st.-2st. =Low Rise, 3st.-5st. =Medium Rise, 6st. and Over =High Rise, it was found that low rise structures are dominating here.

Here 83% of total structures are low rise where 12% structures are medium rise and 5% structures are high rise structures.
Map 5.11: Existing Land Uses within 250 Meter Buffer Area of Court Building

Source: DAP, 2008
Map 5.12: Existing Building Height in the Surrounding Area of Court Building

Source: DAP, 2008 and Author
Through field visit it has been found that most of the structures in the vicinity of Court Building are developed by government itself. Different governmental organizations and autonomous bodies have built their office buildings in the valley of Court Building Hill. The visibility and attraction of the Court building is fully destroyed by these structures. Beside this Johur Hawker’s Market and Reazuddin markets were developed in the valleys of this hill. Without replacing the structures the fabric of the Court Building can not be restored.

**Proposed Land Uses in DAP**

DAP has arbitrary marked 2.73 acre of land for mixed use, 5.90 acre of land for commercial use, 2.05 acre of land for community facilities and 8.90 acre of land for cultural and heritage use. There is no recommendation for residential usage in this area. Land use guidelines are similar to the previous guidelines stated in the above study areas’ profile.
The above figure states that 38% of the land has been earmarked for cultural heritage use and 24% area for commercial land use. It has also observed that the land use plan has been followed the existing land use pattern and road network of this area.
Map 5.14: Proposed Land Uses within 250 Meter Buffer Area of Court Building

Source: DAP, 2008
Map 5.15: Proposed Buffer Area and Land Use Map Following the Conservation Aspects of Court Building

Considering the existing land use pattern, development trends and conservation of Court Building, a buffer area was realigned. In this buffer area a tentative land use and height
zoning map was prepared. The core area of Porir Pahar is recommended to preserve without any damages of the hill. Lands between the surrounding roads and Porir Pahar is kept under height restriction up to 3 (three) storied or equivalent to 30 (thirty) feet with mixed land use.

5.5.4 J.M. Sen Hall

**Residential:** There is no planned housing area within 250 meter buffer of J.M. Sen Hall. Total 71% of the total buildings are used by residential purpose.

**Commercial:** About 12% of total structures are used for commercial activities where another 10% buildings are used as mixed use. The area has some specific trade in specific areas such as printing and sculpture, Book Market (beside Anderkilla Shahi Jame Masjid).

**Industrial:** As per reconnaissance survey, it was found that a large number of printing and press related industries are found here.

**Road Network:** Momin Road, Abdur Sattar, Siraj Ud Dawla Road, Anderkilla Road, Nazir Ahmed Road and and Rajbari Road are the prominent roads in this area. There is one important intersections named Anderkilla intersection which produces huge traffic jam in most of the day time.

**Community Facilities:** This area is scaring community facilities and urban amenities. There are only 2% community facilities structures exist in this study area.

**Leisure, Recreation, Parks and Open Spaces:** Except the court yard of J.M. Sen Hall, there is no place where people can pass their leisure time and children can play in the 250 meter buffer area of J.M. Sen Hall.

**Religious:** Most significant mosques are Anderkilla Jame Masjid and Qadam Mubarak Masjid.
Figure 5.16: Land Uses within 250 Meter Buffer Area of J.M. Sen Hall

![Pie chart showing land uses within 250 meters of J.M. Sen Hall](chart.png)

Source: DAP, 2008

Figure 5.17: Building Material Based Structures within 250 Meter Buffer Area of J.M. Sen Hall

![Bar chart showing number of structures by category](chart2.png)

Source: DAP, 2008

Total 574 structures were found in this study area in which 348 are pucca (full masonry building), 195 semi pucca (partially masonry building) and 31 buildings are tin shed structures.
Figure 5.18: Number of Storey Based Structures within 250 Meter Buffer Area of J.M. Sen Hall

<table>
<thead>
<tr>
<th>Category of Building</th>
<th>Number of Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Storied</td>
<td>275</td>
</tr>
<tr>
<td>Two Storied</td>
<td>94</td>
</tr>
<tr>
<td>Three Storied</td>
<td>64</td>
</tr>
<tr>
<td>Four Storied</td>
<td>76</td>
</tr>
<tr>
<td>Five Storied</td>
<td>44</td>
</tr>
<tr>
<td>Six and More</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>574</td>
</tr>
</tbody>
</table>

Source: DAP, 2008

One storey buildings are prominent here. Total 275 buildings are one storied where number of two storied, three storied, four storied, five storied, six and more storied buildings are 94, 64, 76, 44 and 21.

Figure 5.19: Height Based Structures within 250 Meter Buffer Area of J.M. Sen Hall

Source: DAP, 2008

Note: Considering the height scale, 1st.-2st. =Low Rise, 3st.-5st. =Medium Rise, 6st. and Over =High Rise, it was found that low rise structures are dominating here.

It has found that about 64% of the total structures are low rise structure where 32% are medium height and 4% are high rise structures.
Map 5.16: Existing Land Uses within 250 Meter Buffer Area of J.M. Sen Hall

Source: DAP, 2008
Map 5.17: Existing Building Height in the Surrounding Area of J.M. Sen Hall

Source: DAP, 2008 and Author
Through field visit and consulting with the concern officials of CDA it has found that like study area one and two, ribbon development trend is the major phenomenon in this area. This area has been developing as a residential area through high rise apartment buildings. Taking the advantage of the width of Rahmatganj Road, real estate developers can easily build high rise structures following the existing building construction rule. The forward effect of this real estate development is also observed in the inner area (beside access road) of this site.

**Proposed Land Uses in DAP**

DAP has arbitrary marked 12.70 acre of land for residential use, 2.50 acre of land for mixed use, 3.78 acre of land for commercial use and 1.10 acre of land for community facilities. It can be mentioned here that there is no proposal for cultural and heritage land uses here.
From the above figure it is found that DAP has marked 52% area for residential use, 16% area for commercial use and 10% area for mixed use. **Though DAP has declared J.M. Sen Hall as heritage site, there is no provision for cultural and heritage land use in this plan.** Like other study area, DAP has marked land use following existing land use pattern and road circulation of the area.
Map 5.19: Proposed Land Uses within 250 Meter Buffer Area of J.M. Hall

Source: DAP, 2008
Map 5.20: Proposed Buffer Area and Land Use Map Following the Conservation Aspects of J.M. Sen Hall

Source: DAP, 2008 and Author
Considering the existing land use pattern, development trends and conservation of J.M. Sen Hall, a buffer area was realigned. In this buffer area a tentative land use and height zoning map was prepared. The close vicinity area of J.M. Sen Hall is kept under no development zone. In this area, necessary landscape should be carried out spotlighting the conservation manner of J.M. Sen Hall. Surrounding areas are kept for residential land use where maximum allowable height is fixed up to 2 storied (twenty feet) and 3 storied (30 feet) following the distance from J.M. Sen Hall. The other adjacent areas beside the major roads are remained for mixed use where height restriction will be twenty feet and thirty feet considering the distance from the hall. A small portion of land is kept for institutional use where Chittagong City Corporation (CCC) located at this moment.

5.6 Conclusion

It has been observed that the cultural and natural heritages are increasingly being threatened by traditional causes of decay and by changing economic and social condition. Department of Archaeology has not the proper list of heritage sites in Chittagong. Beside these, there are lots of heritage sites in Chittagong which are not listed in DAP such as Dighis (Behular Dighi, Joor Dighi, Agrabad Deba, Ranir Dighi, Ashker Dighi, Komol daha, Raja Pukur, Boro Dighi, Alaul’s Dighi, etc.), Natural Canals (Chaktai Khal, Mohesh Khali Khal, etc.), natural scenic places (Foy’s Lake, Vatiary, Patenga Sea Beach, etc.), etc. Beside these, existing land use tendency of the study areas shows high demand for high rise commercial and residential buildings without noticing the existence of the heritage site. Development promotion and controlling authority has Detailed Area Plan to guide the development and land uses for the whole city. But DAP has overlooked the provisions for conservation of the heritage sites in Chittagong. As a result, heritage sites are facing horrific condition to survive.
Chapter Six: Suggestion, Policy Implementation and Conclusion

After analyzing the problems and findings some recommendations were provided in immediate action plan and long term action plan framework. These recommendations were prepared following experts’ opinion, literature review and through detail study on existing regulations for identification and conservation process of heritage sites in Bangladesh. These recommendations consider the upgrade identification process of heritage sites and sustain compatible land uses in the vicinity of heritage sites.

6.1 Immediate Action Plan

Following the period (2005-2015) of Detailed Area Plan (DAP) of Chittagong Metropolitan Master Plan (CMMP) some action plans should be adopted on immediate basis to identify and protect the heritage sites. These action plans should be pursuit by the concern authorities and organizations. The activities which need to be immediately solved will indicate a period of 2 to 3 years. These action plans are as follows:

6.1.1 Fixation of criteria for heritage site

The criteria depicted in “Antiquities Act, 1976” and Bangladesh National Building Code, 2006 should be modified for different heritage types. Distinctive criteria should be considered for unique heritage type such as Cultural Heritage, Natural Heritage, Mixed (Cultural and Natural) Heritage, Material Heritage and Intangible Heritage. Criteria for each heritage type may be followed as depicted in chapter 5: Analysis and Findings. There should have threshold of criteria for identification of each heritage. For defining cultural heritage some contexts should be considered. Following INTACH; the following three key concepts need to be understood to determine whether a property is worthy of listing.

- Historic significance
- Historic integrity
- Historic context

Full descriptions of these contexts are described in Chapter 2: Literature Review.

Banding of Heritage Building

After listed of a heritage building, buildings may be categorized as follows:
h. Offices of the Government, Army, Railways and Government Undertakings  
i. Institutional Buildings and Associated Facilities  
j. Offices, Warehouses, Manufacturing and retailing Facilities, Markets and buildings of the Press  
k. Residences, Apartment Housing and hostels  
l. Religious buildings, Burial Grounds and cremation grounds  
m. Congregational Buildings, Theatre Halls, Cinema Halls, Clubs and Hotels  
n. Waterfront Structures, Parks, Memorials and Gateways  

This type of practice is recommended by INTACH.

6.1.1.1 Threshold of Criteria for Identification of Heritage Site

Criteria fixation will not be static for assessing a place as heritage. The value of heritage may differ by categories of heritages and other parameters. Concerned authority should use a standard threshold for identification of heritage site. To define a standard threshold for listing cultural heritage grading system may be adopted.

Grading of Cultural Heritage

Cultural heritage may be assigned values on the basis of three criteria as follows:

Criteria 1: Age or Archaeological Significance
- Before 1800 = High Value
- Between 1800 and 1850 = Medium Value
- Between 1850 and 1900 = Low Value

Criteria 2: Historic or Social Merit/ Significance
- Associated with event or person of national significant = High Value
- Associated with event, person or social situation or regional or local significance = Medium Value
- Associated with event, person or social situation or lifestyle of purely local significance. Similarly to the above category but of reduced significance = Low Value
Criteria 3: Architectural Merit/Significance

- Unique, special, distinctive, one-of-a-kind = High Value
- Distinctive of a particular style or period, noteworthy examples = Medium Value
- Interesting architectural elements. Similarly to the above category but of reduced significance = Low Value

This type of grading system is carried out by INTACH. Total grading value may be fixed to identify site as cultural heritage.

For identifying natural heritage, material heritage and intangible heritage; one criteria of the prescribed criteria of each heritage may qualify the site/product/aspects as heritage. It may be mentioned that to reach the threshold for the national heritage list, a place must have outstanding heritage value to the nation. This means that it must be important to the nation/community. The degree of significance can also relate to the place's significance locally, regionally, nationally or internationally.

6.1.2 Upgradation of Detailed Area Plan regarding Conservation of Heritage Site

Though DAP has marked 54 sites as heritage sites in CMMP, there is no official document and prescribed formula to enlist a site as heritage site. To prepare a list of heritages in CMMP, detail study, documentation, and defined procedure should be followed to identify the heritage sites in Chittagong statistical metropolitan area. In the process of upgradation, land use plan in the vicinity of the heritage site should be modified focusing the conservation manner of the heritage site. Before doing this job, conservation management plan may be prepared for each heritage site and later, the conservation management plan may be adhered in DAP.

6.1.3 Collaboration between different concerned institutions and organizations

It is the utmost necessity to develop a strong relationship among different government and non-government organizations which are involved with city planning, infrastructure development and local experts, professionals, academics which are intellectually grasped with heritage conservation. It may be developed a coordination cell with the stated organizations, persons and institutions. The institutions and organizations are as follows:

1. Department of Archaeology
2. District Commissioner (DC) Office
3. Chittagong Development Authority (CDA)
4. Chittagong City Corporation (CCC)
5. Department of Environment
6. Roads and Highway Department (RHD)
7. Local Government Engineering Department (LGED)
8. Concerned Upazila Parishad
9. Concerned Ward Counselor Office
10. Bangladesh Institute of Planners (BIP), Chittagong Chapter
11. Institute of Architects, Bangladesh (IAB), Chittagong Branch
12. Institution of Engineers, Bangladesh (IEB), Chittagong Branch

6.1.3.1 Development of Coordination Cell
A cell comprising officials from Chittagong Development Authority, Chittagong City Corporation, Archaeological Department of GoB; representative from professional institutions such as Institution of Engineers, Bangladesh (IEB), Institute of Architects, Bangladesh (IAB), Bangladesh Institute of Planners (BIP), Chittagong BAR Association of Bangladesh; local experts; representative from public and private universities; representative from non government organizations such as Bangladesh Paribesh Andolon (BAPA); Forum for Planned Chittagong (FPC) and other concerned agencies should be formed to manage the land uses within the 250 meter (minimum) buffer area of heritage site. Central government and the local government have to provide necessary power and approval to the cell. This cell will certificate of appropriateness for the following land use provisions:

a) Construction of new buildings within 250 meter of a heritage site which are visible from abutting street of the heritage site;

b) Demolition or removal of main buildings which are visible from abutting street of the heritage site;

c) Substantial alterations to an existing building which are visible from abutting street of the heritage site;

Cell will supervise the following matters: distance from the heritage site, assuring clear visibility of the heritage site from abutting road, building form with respect to orientation, proportion, and height and roof shape with respect to style, pitch and the addition or removal of roof elements such as towers and chimneys.
6.1.4 Formation of Conservation Committee for each Heritage

It should be formed a Conservation Management Committee for each heritage site which will comprise elected public representatives, local experts, local leaders, government representative of concerned authorities and representatives from local Non Government Organization (NGO). Government should provide necessary approval to this committee. This committee will exercise power according to the Conservation Management Plan.

6.1.5 Conservation Management Plan

The concerned authority should adopt heritage conservation policies in their official plan. In this plan, Conservation Management Plan for each heritage must be incorporated. Conservation Management Plan may include demolition control by-laws, interim control bylaws, subdivision development agreements, financial incentives, architectural design guidelines, and heritage conservation easements, role of conservation committee and grants and loans for heritage conservation. Detailed Area Plan (DAP) must follow the Conservation Management Plan to make land use plan for this area.

A Conservation Plan generally contains, but is not limited to the following information:

1. **Identification** of the conservation principles appropriate for the type of heritage resource being conserved;
2. **Analysis** of the heritage resource, including documentation of the resource, descriptions of heritage value or interest, assessment of resource conditions and deficiencies, discussion of historical, current and proposed use;
3. **Recommendations** for conservation measures and interventions, short or long term maintenance programs, implementation, and the qualifications for anyone responsible for the conservation work;
4. **Schedule** for conservation work, inspection, maintenance, costing, and phases of rehabilitation or restoration work;
5. **Monitoring** of the heritage resource and the development of a long term reporting structure.

This type of conservation management plan is now taken into action by Ministry of Culture, Ontario, Canada since 2005.
In addition to the conservation management plan, there should have detailed land use plan in the vicinity of heritage site. The buffer area for heritage site may differ from heritage site to site. Distinctive buffer area has to be declared in the distinctive heritage conservation management plan. In the buffer area of a heritage site it has to ensure various functions that the site has acquired over time. These functions give it an overall ambience which create or define its special character. It has to ensure that all conservation work and new building intervention carried out within the vicinity of heritage site is to an appropriate internationally acknowledged standard.

6.1.6 Heritage Impact Assessment

To conserve a significant heritage, Heritage Impact Assessment may be made compulsory for the permission of a building within the stated buffer area of the heritage site. A heritage impact assessment is a study to determine the cultural heritage resources (previously identified) or in any areas of archaeological potential, are impacted by a specific proposed development. This study will explain mitigative or avoidance measures or alternative development or site alteration approaches. For archaeological assessments, fieldwork must be undertaken by licensed professional archaeologists.

A Heritage Impact Assessment generally contains, but is not limited to the following information:

1. Historical Research, Site Analysis and Evaluation

Research, site survey and analysis, and evaluation are required at the first phase. An explanation must accompany a clear statement of the conclusions regarding the significance and heritage attributes of the heritage resource.

2. Identification of the Significance and Heritage Attributes of the Heritage Resource

This is usually a summary of the heritage value or interest and the heritage attributes contained in a heritage property designation bylaw, heritage conservation easement agreement, or other listings. This summary should clearly articulate the heritage value or interest and heritage attributes of the heritage resource.
3. Description of the Proposed Development or Site Alteration
This description details the rationale and purpose for the *development* or *site alteration*, the proposed works and graphical layout, and how the *development* or *site alteration* fits with the objectives of the approval authority.

4. Measurement of Development or Site Alteration Impact
Any impact (direct or indirect, physical or aesthetic) of the proposed *development* or *site alteration* on a heritage resource must be identified. The effectiveness of any proposed conservation or mitigative or avoidance measures must be evaluated on the basis of established principles, standards and guidelines for heritage conservation.

5. Consideration of Alternatives, Mitigation and Conservation Methods
Where an impact on a cultural heritage resource is identified, and the proposed conservation or mitigative measures including avoidance, are considered ineffective, other conservation or mitigative measures, or alternative *development* or *site alteration* approaches must be recommended.

6. Implementation and Monitoring
This is a schedule and reporting structure for implementing the recommended conservation or mitigative or avoidance measures, and monitoring the heritage resource as the *development* or *site alteration* progresses.

7. Summary Statement and Conservation Recommendations
This is a description of:
   a) the significance and *heritage attributes* of the heritage resource;
   b) the identification of any impact that the proposed *development* will have on the heritage resource;
   c) an explanation of what conservation or mitigative measures, or alternative *development* or *site alteration* approaches are recommended to minimize or avoid any impact on the heritage resource;
   d) if applicable, clarification of why some conservation or mitigative measures, or alternative *development* or *site alteration* approaches is not appropriate.
This type of heritage impact assessment has been taken into action by Ministry of culture, Ontario, Canada since 2005.

6.2 Long Term Action Plan
The activities that need long term duration to implement indicates time span ranging between 15 to 20 years.

6.2.1 National Movement
Urban conservation through a focus on power structure and funding system, arguing that urban conservation is not a public welfare undertaking, but an economic and political project firmly controlled and manipulated by the state (Su, J., 2009). For the identification and conservation of heritage, government should move up national movement. Government must take initiative to formulate National Heritage Act endeavoring the identification and protection of national heritage. It is also recommended that government should join to the global movement with UNESCO and other international organizations for the protection of the heritages.

6.2.2 Formulation of Heritage Division under National Planning Department
Government should take initiative to formulate National Planning Department under Planning Ministry. National Planning Department would be responsible to line up the urban and regional planning aspects of the country. Under this department there should have a Heritage Division to supervise the heritages of the country. Planning Department will guide and monitor the activities of heritage division. This division would be decentralized to the administrative units of Bangladesh. This division will be responsible to identify heritage sites and send proposals to the upper tier for necessary approval. This division will also be responsible to prepare Heritage Conservation Plan for the heritage site and implement this for the protection and conservation of the heritage site.

6.2.3 Research, Site Inventory and Publication
Under National Planning Department, there should have Research and Publication Division where researcher can develop the knowledge on heritage on Bangladesh. Research and publication may open the door of tourism industry in Bangladesh and develop the identification process as well as conservation process of heritage in
Bangladesh. Research cell will cover up listing or inventorying of heritage properties; documentation and conservation plans for historic sites and buildings, heritage gardens; restoration of historic buildings and their adaptive reuse and urban conservation, including new development within historical, cultural and/or vernacular context that encourages revival of traditional building arts and crafts.

Once an area has been identified as a potential heritage site, the next step in the process is to research the landscape and collect as much information as possible on it to facilitate its evaluation. The inventory provides a systematic way to organize and present information to identify the heritage being considered and what is significant about it. This is used to guide the direction of detailed research and, later, support the recognition of the area as a Heritage Landscape.

The inventory should record the following:

**Identification / Location of the Heritage Site**

a) Photos and Map of landscape of the heritage boundaries and surroundings  
b) Location of the heritage site  
c) Properties contained within the heritage boundaries

**Physical Description**

a) **Significant views and vistas:** Internal views within the boundaries of the place and external views beyond the boundaries.  
b) **Setting Inventory / Mental Map:** A “mental map” of any area is comprised of five things: nodes, paths, landmarks, edges, and districts. The setting inventory can list: all structures/buildings/formal gardens, drainage courses, soils, rail lines, roads, surface water (wider area of site specific) and monuments. The inventory can help identify a theme of importance for the heritage.  
c) **Significant Landscape Features:** Identify what specific features, elements, or groups contribute to the area as a whole.  
d) **Ownership/Access:** Identify ownership (as private/public/other); access (as unrestricted/restricted/no access); and preservation (safe/endangered/preservation action needed)  
e) **Present Use:** Current identified land use and activities that take place there.
Cultural Patterns

It will include

a) **Historical boundaries**: From historic maps and other documents

**History of Land use**: Describe by time periods

**Cultural Traditions/Associations**: Significant activities, patterns that influence land use, patterns of division, building forms, use of materials, form and layout of element, etc.

**Significant changes to the landscape and periods of change over time**: This should highlight significant changes to the landscape’s form and experience.

This type of heritage inventory is recommended by The Indian National Trust for Art and Cultural Heritage (INTACH) to develop the conservation and documentation of the heritage site.

6.2.4 Heritage Education

Heritage Appreciation course must be incorporated in the concerned education program like Civil Engineering, Town Planning, Architecture, and other relevant subjects. Regular training on heritage appreciation should be organized in local and national level. It will be working to create awareness among different target groups such as the public, professionals, city and local authorities, school and college teachers, and students. Beside these, it is the utmost necessity to design different types of training programs with the aim to make citizens aware of their role in the conservation and preservation of their heritage.

6.3 Conclusion

From the study it is found that present “Antiquities Act, 1976” is not enough to identify the heritage in Bangladesh. There are many heritages which can not be grasped with this Act such as: events, speech and other significant documents of Liberation War, 1971 which are not 100 years old. Beside this, intangible heritage is fully absent in this Act. Criteria for identification of heritage sites should be upgraded through proper research and expertise. The responsible government department should be reorganized and upgraded to develop skill and expertise regarding heritage identification and proper conservation.
Present land use plan of Detailed Area Plan (DAP) of CMMP is not well furnished to act as a tool to conserve the heritage sites in Chittagong. Present land use policies in the vicinity of heritage sites are not heritage site oriented. Heritage site will lose its attraction and significance with the implementation of this land use plan. It is the utmost necessity to revise the land use policies in the vicinity of heritage sites. Heritage Conservation Management Plan with necessary documents should be prepared for each heritage site and should be incorporated with DAP. Beside this, public awareness should be built up and necessary steps should be taken to attract the tourists to the heritages of Bangladesh to blow up national heritage to outside of the world. These efforts made today to conserve community heritage will also ensure a lasting legacy for future generations.

These recommendations are generated through experts’ opinions and study perception. These are formulated intending preparation of accurate heritage list and their perfect conservation. By injecting short term recommendations, long term recommendations must be initiated for sustainable conservation of the heritage sites. Necessary review of the Conservation Management Plan must be carried out on regular basis.
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