

# **ENVIRONMENTAL ASSESSMENT (EA) REPORT**

## **Construction of Municipal Super Market (Ladies Market) at College Road**

(CIP-103)



**Sirajganj Municipality**  
**District: Sirajganj**

**Municipal Governance and Services Project (MGSP)**  
**Bangladesh Municipal Development Fund (BMDF)**

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# Table of Contents

## Page No.

<b>1.0</b>	<b>BRIEF DESCRIPTION OF SUBPROJECT</b>	
1.1	Sub Project background.....	1
1.2	Location of the Subproject.....	1
1.3	Layout of Sub-Project: (attached).....	2
1.4	Present status of the Sub Project site.....	3
1.5	Objectives and justification of selecting of this Sub Project.....	3
1.6	Key subproject activities and implementation process.....	3-4
1.7	Category of Sub-Project.....	4
<b>2.0</b>	<b>DETAILED ENVIRONMENTAL AND LAND USE FEATURES .....</b>	<b>5</b>
<b>3.0</b>	<b>BASELINE ANALYSIS OF ENVIRONMENTAL CONDITION</b>	
<b>3.1</b>	<b>Physical Environment.....</b>	<b>5</b>
3.1.1	Geology, Topography and soils .....	5
3.1.2	Meteorology and Climate.....	5
3.1.3	Hydrology (surface water, ground water and rainwater).....	6
3.1.4	Flooding, water logging, and drainage pattern.....	6
3.1.5	Air quality and dust.....	6
3.1.6	Noise level.....	6
<b>3.2</b>	<b>Biological Environment.....</b>	<b>7</b>
3.2.1	Flora and fauna.....	7
3.2.2	Biodiversity status.....	7
<b>3.3</b>	<b>Socio-economic environment. ....</b>	<b>7</b>
3.3.1	Land use.....	7
3.3.2	Beneficiary population.....	7
3.3.3	Educational status.....	8
3.3.4	Tribal communities.....	8
3.3.4	Tribal communities.....	8
3.3.5	Land acquisition and resettlement.....	8
<b>4.0</b>	<b>ENVIRONMENTAL SCREENING.....</b>	<b>8</b>
4.1	Potential environmental impact during construction phase.....	8
4.2	Potential Environmental Impact during Operational Phase.....	9
4.3	Summary of possible environmental impacts of the subproject.....	9-10

<b>5.0</b>	<b>SPECIFIC IMPACT AND MITIGATION &amp; ENHANCEMENT MEASURES TO SAFEGUARD ENVIRONMENT DURING CONTRUCTION PERIOD</b>	
5.1	Labor Shed Construction.....	10
5.2	Earthwork.....	10
5.3	Construction Material Storage, Transport and Handling.....	11
5.4	Air quality and dust.....	11
5.5	Workers Safety and Security.....	11
5.6	Noise and vibration.....	11-12
5.7	Rain water harvesting reservoir.....	12
5.8	Solar Energy and Glass Wall.....	12
<b>6.0</b>	<b>SPECIFIC IMPACT AND MITIGATION &amp; ENHANCEMENT MEASURES TO SAFEGUARD ENVIRONMENT DURING OPERATION PERIOD</b>	
6.1	Solid Waste Disposal.....	12-13
6.2	Waste Water Disposal.....	13
6.3	Traffic Congestion.....	13
<b>7.0</b>	<b>ENVIRONMENTAL MANAGEMENT PLAN (EMP)</b>	
7.1	Access to information.....	13
7.2	Grievance redress mechanism.....	13
7.2.1	Grievance redresses committee.....	14
7.2.2	Grievance resolution process.....	14
7.2.3	Institutional arrangement for safeguard compliance.....	14
7.3	Capacity building.....	14
7.4	Environmental Management Plan (EMP) Matrix.....	15-18
7.5	Cost of Environmental Mitigation and Enhancement Works in BOQ.....	19
<b>8.0</b>	<b>PUBLIC CONSULTATION AND PARTICIPATION</b>	
8.1	Methodology.....	20
8.2	Issues raised by the participants.....	20
8.3	Feedback, suggestions and recommendations of the participants.....	21
<b>9.0</b>	<b>CONCLUSIONS AND RECOMMENDATIONS.....</b>	<b>21-22</b>

## APPENDIXES

Appendix 1: Lay out plan of proposed kitchen market.....	23
Appendix 2: Side views of the sub project.....	24
Appendix 3: Grievance Redress Committee of Sirajganj Municipality.....	25
Appendix 4: Flow Chart of Grievance Review Process.....	26
Appendix 5: Picture of community Consultation.....	27
Appendix 6: Format of semi structure survey.....	28

## 1.0 INTRODUCTION

### 1.1 Background Description

Sirajganj Municipality is one of the oldest municipality of Bangladesh, established in 1869 it is now recognized as first class Municipality (Category A), total area is nearly 28.49 sq. km consisting of 15 wards approximately total population 297930 among which 147315 are male and 150315 are female with the density of 10,446 per sq. km. Sirajganj municipality areas indicating all of the 15 wards is shown in the Map (Ref. Sirajganj Municipality Map). This is a proposed subproject relates to the establishment of a Poura Super Market under the Municipal Governance and Services Project (MGSP) by Sirajganj Municipality. The name of the subproject is the construction of Super Market has been proposed and adopted in the Sirajganj Five-Year Capital Investment Plan (2017-2022). The Sirajganj Municipality aims at providing the modern facilities and availability of daily necessities in a same building and under the same roof to its citizens. Establishing of such a super market permanently in the Municipality areas will facilitate the shopping needs of the city dwellers. Local shopkeepers, business man, agencies and consumers will have the opportunity of buying and selling their trading goods, manufacturing items in this proposed super market at fair and competitive prices with safety and security under and comfortably in the healthy environment.

#### **The significant features of the Sub Project are mentioned below:**

Name of the subproject	:	Construction of Municipal Super Market at College Road
District Name	:	Sirajganj
ULB Name	:	Sirajganj Municipality
Market side Wards Number	:	Ward - 5, 6, 7,9,12
Structural design option	:	Structural bricks / stones built roof, walls and other works.
Wards population	:	297930
Tribal people	:	None
Land acquisition	:	Owned by Sirajganj Municipality
Starting of Waork	:	15-Feb-2019
Ending Date	:	31-March-2020
Sub-project duration	:	2 Years
Tentative start date	:	December 2018

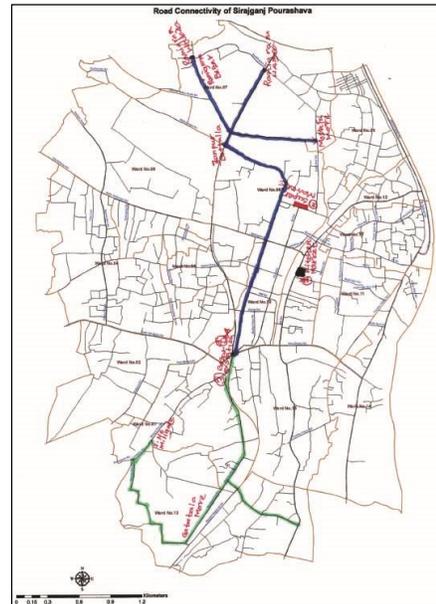
## 1.2 Location of the Sub Project

The project site is located within the Sirajganj Municipality under Ward no. 8 at College Road. It is located between 24°22' and 24°37' north latitudes and between 89°36' and 89°47' east longitudes situated on the bank of the Jamuna, in the west of the Brahmaputra River, and about 140 kilometres North West of Dhaka. An area of 0.36 acres of the Sirajganj Municipality owned land has been identified and selected for the proposed project development. The proposed site is well connected with Dhaka road. The adjacent areas are Ward No. 5,6,7,9 and 12 where about 30 percent households of the municipality are situated in and around the proposed super Market.

Sirajganj Municipality proposed to establish such a super market with the financial support of World Bank. The project as proposed to be constructed under the overall technical guidance of BMDf entrusted for ensuring an environmental friendly planning, design and construction of physical structures qualitatively and enhancing a user friendly operation and management system. The Municipality rightly planned for such a modern market with the realization of felt need of city dwellers. This Environmental Assessment (EA) report presents the screening of potential environmental impacts of the proposed sub-project with the recommendations of potential mitigation and enhancement measures in order to eliminate or reduce the negative impacts to an acceptable level, describes the institutional requirements, and provides a specific Environmental Management Plan (EMP).

## 1.3 Layout of Sub-Project:

The proposed super market area is clearly a vacant land in the northern part of the municipal area on which the Sirajganj Municipality intends to construct a four storied super market. The market area as observed and discussed with the people available are positive towards the construction of such market at the site. The area situated comparatively at the north side of the famous Sirajganj Govt. University College. On the point of Location view, it is rightly located at the forward facing of the college in Sirajganj city. A wide pucca road passes through the south side of the proposed market. The land is high and as observed flood free surrounding with residential area in the north, Sirajganj college in the south, a north - south connecting Dattabari to Kupadaspara road in the east and almost a closed offshore of the Jamuna river in the west. In around 100 – 300 meters extent in the neighboring areas there are schools, college, dwelling houses, government and non-government offices virtually enlightened the area where the proposed super market will add positive and progressive trend of commerce and business includes the aesthetic view of the area. **(Attached Layout Plan in Annex-1**



Location Map  
of Proposed  
Super Market

#### **1.4. Present status of the subproject site.**

The present status of the proposed Super Market (CIP-103) area is vacant. The land is owned by the Sirajganj Municipality authority. This sub project is well connected by sub-roads network within different Wards under the Sirajganj Municipality areas. The east – west connecting road is very wide and convenient comparatively for private cars, autos, rickshaws and other mini carriers of goods to and from the market with less rush of heavy vehicle running. On the other hand, people can come from their residences to this market for shopping on foot, car, rickshaw and rickshaw van through existing streets from all sides. There is a covered drain passes in front of the proposed market site along road in front could be reconstructed with the inter connection of market waste water through soak pit municipal drainage network and sewerage outlets to septic tank.

#### **1.5. Objectives and justification of selecting of this subproject**

The Capital Investment Plan (CIP) of Sirajganj Municipality lists a number of subprojects and placed this proposed Super Market as the priority one considering it's felt needs in the municipality. The PMU-MGSP of BMDF along with Sirajganj Municipality has visited and evaluated the existing geo physical, social and economic conditions of the proposed subproject site. Observed there is no such well facilitated super market in the Sirajganj Municipality to expedite the citizens' shopping includes all other commerce and business activities. The proposed super market, once established, will facilitate and increase the immense demand of shopping and trading of the neighboring people and other sides of the municipality. Reasonably considering the increasing demand and absence of any well-designed market in this area under the municipality has proposed for such an improved market which will be very helpful and comfort to the urban dweller and traders. Moreover, this market as one of the permanent source of revenue generation will increase the volume of revenue for the Sirajganj municipality. In all of these necessities, a well-designed market with necessary amenities and services is very much justified and essential for the municipality. In fact, the establishment of this proposed subproject will be an environment friendly market through the assurance of well architectural and structural design, customer comfort, easy trading, shopping and entertaining facilities of both buyers and sellers at different strata of male, female, youth and child in all seasons of the year round.<sup>1</sup>

#### **1.6. Major activities of proposed subproject, implementation process and business plan.**

As planned the market will be a four (4) storied comprehensive modern building and major activities to be accomplished can be mentioned are (a) construction of a basement, (b) car parking, (c) well-designed two wide stairs (d) one escalator (e) one large sized lift (f) children's play and entertaining corner (g) construction of gender friendly hygienic wash rooms, latrines, urinals and ventilation facilities convenient at each floor of the market (h) construction of roof top garden (i) food courts (j) market management office cum guest room at the top floor (k) construction of environmentally sound and effective drainage, outlets and garbage bins through a well thought land use plan of the market premises including other nearby areas (l) Land extension and soil erosion protection measures (esp. in the west side) and (m) Boundary and security measures will be

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<sup>1</sup> Analysis of Alternatives Not Applicable. Proposed site is pourasaba owned land, feasible to construct the market with no other suitable place.

done earlier of building construction with the using of high quality construction materials intensively following the approved design of the market.

The market as mentioned earlier will be a multi storied building and each of the floors will be designed and allocated for particular types of shops and business considering the nature of the selling goods, comfort and likely choices of customers. The following tentative business plan of each floor is portrait below table – 1.

**Table – 1: Proposed Floor Plan of Super Market**

Sl.	Floor	Use of each floor	Floor Area in sqm
01	Ground	Car Parking, Non-Motorized parking, Entry, Electrical room, Toilets, Stairs and other utilities.	
		Building 1	303.00
		Building 2	648.00
		Total (A)	<b>951.00</b>
02	First	Leasable office, Toilets, Stairs.	
		Building 1 (Part)	87.00
		Building 2 (Part)	486.00
		Total (B)	<b>573.00</b>
<b>Total: (A+B)</b>			<b>1,524.00</b>

All construction materials to be used for those and other key activities are soil in earth work, sand, bricks, brick chips, stone chips and reinforcement. Moreover, diesel used vibrator machine, pilling machine for construction work and electricity for reinforcement, fabrication and domestic purposes will be used during construction period. Besides, all other essentials equipment and machines like brick breaking or stone breaking machine, steel cutter, dump truck, water tanker, excavator and trucks for carrying construction materials and other essentials to be uses during the construction period.

All construction activities as planned will be undertaken following the standard rules and principles of competitive bidding process of the Municipality and country as well. Contractors' work will closely be supervised directly by assigned Municipality engineering team under the guidance and directive of the Executive Engineer of the Municipality.

Quality standard of construction materials will be maintained through site supervision, observation and in necessary cases through laboratory tests. The work will be continued following a work schedule and Environmental Management Plan (EMP) under the workman ship modality.

### 1.7 Category of the sub-project

- A) According to ECR 1997 : Green/ Orange A/ **√Orange B**/ Red/ Not Listed  
 B) According to WB Classification : **√Category B**/Category C

In view of the Environmental Conservation Rules (ECR 1997), the proposed sub project falls under the category ` **Orange B**', assumed to have moderately significant adverse environmental impacts may

observed due to the implementation of the proposed project activities. On the other hand, in consideration of the proposed sub project nature i.e. potential adverse impact on human and environment includes natural habitats it has been categorized as `Category B' according to the World Bank classification.

## 2.0. DETAILED ENVIRONMENTAL AND LANDUSE FEATURES

Environmental Assessment Report prepared based on the field observation of key environmental features of approximately 100 m surroundings of the proposed sub project. Detail observation and assessment made on existing environmental features like road communication and connectivity, rush-hour traffic flow, local vehicle movement, accidental risks, drainage congestion, waste water discharge, solid waste disposal, surface water contamination, dust spreading, soil degradation, erosion, odor spread around, increased traffic movement includes social conflict etc. in and around the catchment or influenced areas (100 meters around) of the sub project. Moreover, land use pattern of the catchment areas and probable impact over those were also observed and found no agricultural land around the proposed market but offices, commercial, health, educational and residential areas exists as mentioned in below table - 2.

Table – 2: Land use pattern / environmental features around the proposed Super Market

Sides/Direction	WARD Nos.	Major Land use / Environmental Features
North	W # 7	Residential and dwelling houses (11 Houses).
South	W # 5, 12	Sirajganj govt. university college campus, pucca wide road(East -West), primary school, Sirajganj women college, T&T and DPHE office
East	W # 9	Dattabari road square, Alia Madrasah, road side shops and residences.
West	W # 6	Bindupara square, fallow low land, offshore, Victorian school, road side shops, cover drain, mosque

## 3.0 BASELINE ANALYSIS OF ENVIRONMENTAL CONDITION

### 3.1 Physical Environment

Sirajganj district locates in the mid - north areas of the country in Rajshahi division may attribute as the gate way of the north western region. The Sirajganj municipal city areas situated on the west bank of Jamuna river belt and well protected through embankment in alongside the river in the east.

#### 3.1.1. Geology, Topography, and Soils

Sirajganj site is located in the flood plain area of the Jamuna River with deltaic deposition. Surface sediment of the proposed sub-project site is mostly sandy clay with considerable amount of sand in the sub surface areas. Soil of the area is grey loam on the ridges and grey to dark grey clays in the river basins. Top soils are strongly acidic and sub-soils slight acidic to slight alkaline. General fertility level of the soil is medium with low nitrogen and organic substance.

#### 3.1.2. Meteorology and Climate

The annual average temperature reaches a maximum of 34.6 °C and a minimum of 11.9 °C. The climate of the Sirajganj district areas characterized usually by sub-tropical monsoon of the country. North- west and north east monsoon dominates the rainy and summer seasons drives the dry in the winter season. Rainfall of the project area varies considerably depending on the seasons. The

annual average rainfall measured at Sirajganj is 1610 mm (63.4 inches) over the period of 1990-2014. On an average 60 to 70% of the annual rainfall of the project area occurs in the months of May, June, July and August. The post monsoon or transitional season, October to November, is warm and humid. The cool dry season during December-March is sunny sometimes with infrequent rainfall. The pre-monsoon between April-May is hot and characterized by thunder with heavy rain in the region.

### **3.1.3. Hydrology (surface water, ground water and rainwater)**

Surface water flow from the upstream of the Brahmaputra River is plenty throughout the monsoon and less discharge during the winter season in Bangladesh. In addition, a surface water source like offshore canals, beels, dead ditches or lakes and ponds are existed and passes through the Sirajganj Municipality with sufficient water flow in the monsoon period gradually drying in the winter. On the other hand, precipitation of rain as well as storage of water occurs due to which ground water found available in a reasonable depth though shortage observed in the dry season.

In view of safe drinking water, arsenic and other organic metals are moderately observed in the ground water around the peripheral of the city. Again, rain water during the monsoon increase the water volume and level in all surface water sources along with the increases of precipitation rates. Rain water harvesting is not in practice in the city but such an arrangement would meet the demand of safe water reasonably for a certain period during and even after the monsoon. Presently, approx.75% households depends on hand tube well water for their drinking and other purposes of bathing, cooking and daily uses and in regard, the rest 25% or more are uses pipe water and other sources.

### **3.1.4. Flooding, Water Logging and Drainage System**

Moderate level flood or over flow along the river belt areas of Sirajganj usually occurs during the monsoon period either due to excessive rainfall for a certain days continuous or with the excess rain water flow of upstream especially from the trans boundary region though as observed, no severe flood was in 1988, 1998, 2004 and 2007. Water congestion sometimes observed due to poor and insufficient discharging of heavy rain and flood water through existing canals and drains as those are mostly silted due to erosion, sediment deposition, and waste material accumulation. Storm drainage system of the city is not suffice and or functional to carry or discharge excess water timely from the city area but the sub project areas comparatively being in the higher areas adjacent to the road side drain in the south and discharge passage in the west towards the north offshore, no water congestion or any logging noticed by adjacent dwellers during the physical observation in assessment period.

### **3.1.5. Air Quality and Dust**

During the assessment no dust at noticeable level is observed in and around the sub project areas and no any earth work, factory operation or huge traffic movement which may generate dust in the areas but possibility of dust spreading due to wind flow in the summer may not be avoided. Moreover, it has been assumed that dust flow would be observed during the construction period in the proposed site.

Air quality data of the municipality is not readily available nor found any of such record even with the concerned department (DoE, Rajshahi). Specifically the air quality assessment involved the

determination of ambient levels of suspended particulate matter (SPM) may explore with the metrological department as will be required otherwise for any extended analysis.

### **3.1.6 Noise Level**

Noise is one of the major impediment for the quality of the environment and during the assessment no such exceeded decibel (db) than standard in the proposed sub-project area (Standard value (db) may referred for different categories at day and night respectively are a) 45 and 35 db for quiet place (hospitals, education), b) 50 and 40 for mainly Residential areas, 60 and for residential cum commercial and 70 and 60 for commercial and industrial areas).

In the proposed area a moderate level multi vehicles like trucks, cars, auto and rickshaw are found usually moves through the adjacent road in the south to generate noise at acceptable level and no other perceptible sources of noise generation such as factories or industries were found near the proposed super market areas.

## **3.2 Biological Environment:**

### **3.2.1. Flora and Fauna**

As observed no remarkable fruit, fire wood or timber trees found inside or neighboring or adjacent areas of the proposed sub project. The proposed market area is quite clear and vacated earlier with the aim of constructing the super market in this site. A few trees over the dwelling houses in the north seen on which native birds takes breaks prior to reaching their shelters or catches from the nearby river and river off shores. Except those natives no other endangered or critical species of both flora and fauna observed. Moreover, no possibility of having any aquatic species in the area but existence of species (frogs, rats, reptiles, creepy-crawlies, aquatic pests or algae around) might have been in the north western side of the ground and maintain their livelihood (food, shelter and birth) from the nearby low land, bushes and off shores in the west or surrounding environment.

### **3.2.2. Biodiversity Status**

During the public consultations discussed the impacts and assumed that there are no special or site specific terrestrial and aquatic ecosystems may have disturbed heavily with this market establishment. However, the population of floral and faunal species has degenerated generally even in the areas and hence in the region due to climate change (low rainfall, high temperature, high humidity, short winter period, and long dry season) owing to over exploitation, poor management, demographic pressure, natural catastrophes and gradual deterioration of general law and order situation.

## **3.3. Socio- Economic Environment.**

### **3.3.1. Land Use Pattern**

The proposed market site presently vacant high ground in the northern side of the Municipal areas. During the discussion, peoples feel inspiration and praise for the proposal of establishing of such a super market in this location. Land use pattern of the catchment areas were also observed and found a few shops and residential houses and a college alongside of the wide pucca road opposite to the proposed site.

### **3.3.2. Beneficiary Population**

This proposed market is situated in Ward # 8 (College Road), and about 30,000 households are settled around the proposed super market who will be benefitted directly through business and

other allied works with the establishment of this market. Moreover, peoples living in ward 8, adjacent wards 5, 6, 7, 9 and in general from all over the municipality and peripheries will have the opportunities of regular shopping of varieties goods includes essential, luxuries and over all daily needs. In fact almost one lakh people of the city including other whole sellers will have the benefit of the proposed market.

### **3.3.3. Educational Status**

In Sirajganj municipality, there are a numbers of medical colleges, girls and boys colleges, primary, kindergarten and secondary schools, Madrasas, poly techniques and vocational institutes and most of those are reputed and mainly established in the early eighteen through nineteenth centuries [Harina Baghbati High School (1866), BL Government High School (1869), Gyandayini High School (1884), Islamia College (1887), Victoria High School (1898) and Sirajganj Government University College (1940)] all of which together producing a numbers of scholars, educationists, politicians and civil servants since the centuries. Average literacy rate 47.44% with male 50.96% and female 43.6% in the city. In the subproject area, literacy rate among the population is 59.6 % higher than the national average of 51.8%.

### **3.3.4. Tribal Communities**

There is no tribal community as noticed living around the proposed market site.

### **3.3.5. Land Acquisition and Resettlement**

Not applicable as it is a vacant land. No additional land acquisition and any resettlement for the implementation of this sub-project.

## **4.0 ENVIRONMENTAL SCREENING**

The sub project has been selected through a careful Environmental Screening (ES) process following the guidance and the checklists in line with the requirements of DoE and WB. Environmental Screening ensures that environmental issues are properly identified in terms of extent of negative and positive impacts. To screen an environmentally sound sub project necessary field observation, consultation and discussion with available peoples, nearby inhabitants, business man and others made during the last months October and November, 2017 in the subproject area. Environmental Screening Checklist (ESC), as adopted in Appendix C of the Environmental Management Framework (EMF) of MGSP, was followed for identifying the impacts and their extents. The screening data and information for this subproject have been analyzed and are shown in below.

### **4.1. Potential environmental impact during construction phase:**

#### **(A) Ecological Impacts:**

- Felling of Trees : Significant  Moderate  Minor  **NO**✓
- Clearing of Vegetation : Significant  Moderate  Minor  **NO**✓
- Potential Impact on Aquatic Species : Significant  Moderate  **Minor** ✓

#### **(B) Physico-Chemical Impacts: <sup>2</sup>**

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<sup>2</sup> Solid waste assumed are insignificant. The pourasaba has the capacities i.e. amenities, skills and scope to manage solid waste may generate from this market. In concern mitigation measures stated in sub section in 6.1 and 6.2

- Noise pollution : Significant  **Moderate**   Insignificant
- Air pollution : Significant  Moderate  **Insignificant**
- Drainage congestion : Very likely  **Likely**   Unlikely
- Water pollution : Significant  Moderate  **Insignificant**
- Solid waste pollution : Significant  Moderate  **Insignificant**
- Construction wastes : Significant  **Moderate**   Insignificant
- Water logging : Significant  Moderate  **Insignificant**

**(C) Socio-Economic Impacts:**

- Traffic congestion : **Likely**   Unlikely
- Health and safety : Significant  Moderate  **Insignificant**
- Impact on archaeological : Significant  Moderate  **Insignificant**
- Impact on historical : Significant  Moderate  **Insignificant**
- Employment generation : Significant  **Moderate**   Insignificant

**4.2. Potential Environmental Impact during Operational Phase:**

**(A) Ecological Impacts:**

- Potential impact on species of aquatic : Significant  Moderate  Minor  **NO**

**(B) Physico-Chemical Impacts:**

- Potential air quality & noise level : Improvement  **No-improvement**  Deterioration
- Drainage congestion Improvement  Minor Improvement  **No Impact**
- Risk of Water pollution Significant  Moderate  **Minor**
- Pollution from solid waste Improvement  **No-improvement**  Deterioration

**(C) Socio-Economic Impacts:**

- Traffic : Improvement  No-improvement  **Adverse**
- Safety : **Improvement**   No-improvement  Adverse
- Employment generation : **Significant**  Moderate  Minor

**4.3. Summary of possible environmental impacts of the subproject**

The environmental assessment of this sub project have been conducted and observed that there will be no significant adverse environmental impacts with the establishment of this proposed market in present location. During the assessment period, closely observed and shared all potential environmental features with local communities of different strata based on which adopted the screening process. Through the review and analysis of all observations and findings it has been assumed that the project, if implement, will not incur any negative impact neither on ecological nor on Physico chemical or any of the ingredients of those components. Moreover, the project will be helpful to enhance positive socio economic impact through the increasing of trading facilities, ensuring the availability and supply of daily needs as well as generating the income and employment of local people both in construction and operational phases. The screening process indicate that a few negative impacts may arise categorized as local in nature and low in magnitude, very minimal possibilities of adverse impacts on some of the parameters of the physical, biological or socio-economic environment of the sub-project area. The sub-project as stated is also expected

to produce a large number of positive benefits on the overall community in respect of social and economic strengthening of the area.

However, as assumed those insignificant or moderate or minor adverse environmental impacts are subject to mitigation and would be addressed through proper mitigation and enhancement measures as will be appropriate earliest during the implementation as well as in operational period. The limiting of noise levels during construction and operation of the project, proper disposal of solid and other waste materials through sewage connectivity development, preservation of air quality by limiting dust spreading and gas emissions from equipment to be used during construction and vehicle exhaust as well as ensuring community and workers health safety measures have been prescribed for the mitigation of likely impacts. Similarly, construction activities in close and active participation of local communities and capacity development initiative of concerned staff of the Municipality and workers as well will be undertaken to implement appropriately all recommended mitigation measures.

## **5.0. SPECIFIC IMPACT AND MITIGATION & ENHANCEMENT MEASURES TO SAFEGUARD ENVIRONMENT DURING CONSTRUCTION PERIOD**

### **5.1. Labor Shed Construction**

In construction work it is very much essential for constructing 2 nos. labor sheds and in regard one twin construction shed separately for both male and female (If any female workers) workers with separate accommodation and hygienic toilet facilities will be constructed well ahead to the work. A site office will also be arranged there for constant work supervision and operational management. There should have safe water supply, enough light, ventilations, separate cooking places, security fence around with day night guarding system.

#### **Common Mitigation Measures**

Sanitary latrine facilities with adequate water facilities through installing a new arsenic safe tube well would be provided for workers separately for male and female at the North West side of the proposed market site. Provisions should be made for waste collection and disposed to the bins planned to be placed or constructed at the extreme edge of the North West corner of the site and erecting no litter signs at different places. A well arrangement should be made for the regular collection of waste materials of the construction site for disposal and dumping to the banbaria land filled area at the outside of the Sirajganj Municipality. A brevet ware fence around the construction site will be installed as security measures of workers and construction materials as well. The labor shed will also covered by enough lighting as workers safety and security measures.

### **5.2. Earthwork**

The proposed market construction work consists of earth cutting, trenching, earth filling, land dressing, garbage cleaning and removal of unsuitable or any hazardous materials. These works lead dust blowing, noise and vibration which may be the dis comfort to the dwellers in the north, nearby college in the south and to some extent adjacent residential areas in the eastern side includes pedestrians in the east west road in front of the market site. All those including the excavation and trenching are also hazardous nature of construction activities that needs to control and use comparatively during the off time schedule.

#### **Common Mitigation Measures**

The contractor will keep heavy equipment away from trench edges and know where underground utilities (T&T), electricity, gas, water supply systems are located. Water spray through hand pipe

or sprayer and necessarily by water spraying tanker of the municipality will be continued in working time at day time to control dust spreading both inside the site and on the adjacent road. Inspection of the trenches will be at the start of each shift. Adequate safety barrier will be provided with clear visible signs to alert both drivers and pedestrians. Provide adequate lighting to the barriers and signs to make them clearly visible at night from a distance sufficient to respond. Facilitate temporary arrangement for pedestrians and vehicular traffic at site. Retain the excavated earth in safer places so that pedestrian can walk smoothly.

### **5.3. Construction Material Sourcing**

The construction materials such as sand and bricks are normally obtained from the local suppliers. Sand for construction purposes is collected from quarry operations of nearby rivers. Bricks are produced using clay and firing by coals and somewhere wood where there may be smoke emission. Conscious or unconscious purchase of these materials from non - licensed operators indirectly supports, encourages and promotes environmental degradation at the illegal quarry sites, creates air pollution from using energy inefficient technologies and cause medium to long-term negative impact at sources.

### **Common Mitigation Measures**

As per plan construction bricks materials will be collected from Shialkole, Baghdadi, Bhadrdaqhat; construction sands materials will be collected from the suppliers of kazipur nouka ghat areas adjacent to Jamuna Rivera way and outside of the municipality areas who are officially valid license holders from the Government of Bangladesh.

### **5.4 Air quality and dust**

All civil construction works of the super market, will spread dust and emission and hence the air pollution during land preparation, operation of diesel engines, burning and working with toxic materials. All construction sites generate high levels of dust and particles (typically from concrete, cement, wood, stone and silica) suffice to pollute the air quality at site and adjacent areas.

### **Common Mitigation Measures**

Dust control through clean water spray used to dampen down the site. Screen the whole site to stop dust spreading or alternatively, place fine mesh screening close to the dust source. Cover skips and trucks loaded with construction materials and continually damp down with low levels of water. Cover piles of building materials like cement, sand and other powders, regularly inspect for spillages and locate them where they will not be washed into drainage areas. Use non-toxic paints, solvents and other hazardous materials wherever possible. Cover up and protect all drains on site.

### **5.5 Noise and Vibration**

Construction sites usually produce noise and vibration, mainly from brick breaking machines, equipment and machinery. Site worker's crowd, radio sound are usual and common phenomenon in the construction site. Materials unloading is another disturbing exercise. Excessive noise is not only annoying and distracting, but can lead to hearing problem, high blood pressure, sleeping disturbance and extreme stress.

### **Common Mitigation Measures**

It is essential for reduce noise pollution through careful handling of materials; using modern and comparatively quiet power tools, equipment and generators; low impact technologies and wall structures as sound shields.

## **5.6 Rain Water Harvesting Reservoir**

To meet the regular water demand for the market users and for regular cleaning and maintenance purposes, availability of full time required quantity of water supply is very essential.

### **Common Mitigation Measures**

To reduce dependency on water supply system or tube well a required number of water reservoirs can be built on the roof of the proposed market to harvest rain water in rainy season following rain water harvesting procedure. There is possibility of generating bacteria in the stored rain water in the long run and to maintain reserved water quality a periodic monitoring and cleaning of reservoirs includes water quality test for pathogen contamination will be undertaken as essential for health and hygienic consideration.<sup>3</sup>

## **5.7. Solar Energy and Glass Wall**

This is a general tendency of shop keepers having additional lights to exhibit and display their selling items more brightening even at day light and night time aiming to attract the customers. Moreover, including all other amenities, increased electricity demand will be generated in the market. Such an increasing demand can be reduced by using solar energy.

### **Common Mitigation Measures**

Installation of solar panel, regular maintenance of solar system, cleaning of glass is required for expected results. On the other hand, if glass wall use from certain heights at the top, sunlight can be reached where day time electric consumption comparatively will be reduced.

**5.8. Workers Safety:** There is a general risks of accidental injury of workers in various types materials procuring and carrying, materials mixing, equipment handling and operating, materials lifting, plastering, carpentry, painting, trenching and all other structural activities. Moreover, there are potential health risks from any sources of contamination at work sites.

### **Common Mitigation Measures**

Implementation of adequate safety procedures and provision of safety equipment like hard helmet, eye protecting glass, hand gloves, face mask, rubber shoe, gum boot, visible apparels, body belt and first aid arrangement. Appropriate removal techniques and safety procedures includes training and awareness raising among the workers will mitigate or reduce risks and negative impacts on workers' health and life.

## **6.0 SPECIFIC IMPACT AND MITIGATION & ENHANCEMENT MEASURES TO SAFEGUARD ENVIRONMENT DURING OPERATION PERIOD**

### **Solid Waste Disposal:**

The proposed market will be a Municipal Market which will be operated by female entrepreneurs. Considering the nature of the business, it is expected that insignificant volume of solid waste will be generated at the proposed market area. Solid waste will generate like spoilt fruits, waste papers, pet bottle from first food shops and pieces of clothes from cloth shops.

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<sup>3</sup> Necessary budget in regard may be included in budget as mitigation cost.

The lack of a suitable mechanism for proper disposal of this waste will lead to the development of breeding grounds for disease vectors, foul smells from decaying waste, drainage congestion and a deterioration in the aesthetic value of the entire area.

#### ***Common Mitigation Measures***

Adequate number of bins would be placed inside the market premises where the traders and visitors can put the solid waste easily within short distance and time. The primary collector of waste materials will collect solid waste carefully from the bins and will deposit to a garbage near the market. The rickshaw van will collect the solid waste from the garbage and dispose to the nearest secondary dumping container. A covered truck will carry the solid waste from container to Banbaria landfill area under Sirajganj Municipality. Market shop keepers will make aware of keeping their waste materials and residues properly and timely in the market bin to be placed in a specific corner. Moreover, the market place will keep clean with regular sweeping by assigned cleaners.

#### **Waste Water:**

Waste water will generate from first food shops, floor cleaning, toilets which may pollute adjacent environment if not properly cleaned and managed. It is assuming that 8m<sup>3</sup> waste will generate from the proposed super market.

#### ***Common Mitigation Measures***

There will be a soak pit adjacent to the market for discharging waste water from wash room and floors ((BoQ Sl. 69. 7.11.04.01).

#### **Fecal sludge management:**

Faeces from toilets will be discharged to septic tanks through separate pipe line. Possibility of bad odor and environmental degradation due to improper collection of fecal sludge from septic tank & improper handling, transportation and disposal of the fecal sludge. It is assuming that 20m<sup>3</sup> of fecal sludge will generate from the toilets of the proposed municipal market. Provision of septic tank system have been provided for the toilets (BoQ Sl. 68. 7.11.04.01); avoid discharge of the waste water from the complex in to the existing drains.

#### **Mitigation Measures:**

Ensure use of closed container/vacuum tanker with sucker machine for the collection of fecal sludge from the septic tank every year or need based; Disposal of the sludge at the existing dump site at Banbaria. Cover the sludge with earth to control spreading to adjacent areas. There are scope of recycling and treatment the sludge for reuse as manure if facilities are available in future.

**Foundation work:**

There will be no basement at Sirajganj Municipal Market. The soil type with sand and clay. Soil bearing capacity is 1.46kg/cm<sup>2</sup> at 2.44 m depth. This will be an isolated footing foundation building. There will need shore protection is required in some points where footings are very much adjacent to road and buildings. Most of the part of the soil will be excavated in a slope for foundation work.

The anticipated impacts due to the construction works are:

- Noise pollution due to use of the equipment;
- Potential occupational health and safety risks and accidents;
- Air and dust pollution due to black smoke emission from diesel based equipment.
- Avoid using of steel cutter, welding machine, concrete mixer machine, vibrator machine, rig machine and winch machine at night;
- Avoid prolonged exposure to noise (produced by equipment) by workers;
- Ensure use of the personal protective equipment's (helmet, goggles, gloves, safety boot);
- Availability and access to first-aid equipment and medical supplies in case of any accidents;
- Carefully operation of the steel cutter,
- Avoid operation of the concrete mixer and vibrator machine at night;
- Regular maintenance of the concrete mixer and vibrator machine to avoid any black smoke emission.

**Parking:**

Though Sirajganj is a small town and number of cars will not too much which can create traffic congestion. However, there will be an effective traffic management system fixing entry, exist area and basement parking. The existing parking area has the capacity of 4 number of Cars where needed 7 Car parking area as per BNBC 1993. Remaining number of Cars can park at road parallel which has sufficient road side spaces. Other than this, there is a designated area for parking rickshaw, motor bike etc. Community Police will be deployed by the market management committee in front of market who will manage all of traffic. Moreover, the market will be within walking distance of the local people, so it is assuming that at a time 4 number of Car may not come to the market at Sirajganj Municipality.

**Fire Accident:**

The proposed building will contain first food shops, stationeries, cosmetic shops, electronic shops, cloth shops, library etc. There may be electrical short circuit fire and other accidental fire.

**Mitigation Measures:** There will be a designed fire stair which can be used as emergency escape during fire accident. It satisfied the fire code. Fire extinguisher has been proposed as firefighting instrument and cost has been estimated in the BoQ. Need to provide training on device use to the staffs who will be on duty at the building. Emergency numbers displayed at prominent locations. There could also be regular fire drills. Installation of smoke detectors at all strategic points.

### **Female and disabled peoples Facilities:**

Separate male and female toilets have been provided except disable people toilets. There are scope to provide disable toilets in the building. The ground floor of the building is barrier free, accessible to disables, disable ramps provided for access to ground floor

## **7.0. ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

### **7.1 Access to Information**

The environmental assessment (EA) report will be translated in Bangla and disseminated and shared with local communities. The copies of the report (both in English and Bengali) will be sent to all the concerned of ULB Offices and BMDF. The final assessment report will also be made available to the public and uploaded in the BMDF and the World Bank websites well before appraisals is completed.

### **7.2. Grievance Redress Mechanism**

Sub-project specific Grievance Redress Mechanism (GRM) will be set up by the PMU-MGSP, BMDF to timely receive, ground trotting and mitigate the solution of affected person/s as per EMF (In fact no persons / houses is expected to be affected through the implementation of this proposed super market at the proposed site). This will be transparent and time-bound approach where the affected people , if any, has scope to raise his / their voice or claim transparently without any fear or undue influence with facts and documents.<sup>4</sup>

#### **7.2.1. Grievance Redresses Committee (GRC)**

A specific Grievance Redress Committee with 1 chairman (Mayor), 5 members from different diverse as from local administration (1), Educational Institution (1), Local NGO (1), Civil Society (1), Ward councilor – female (1), Executive Engineer, ULB (1) as member secretary of GRC will be formed by Sirajganj Municipality for this proposed super market. The Grievance Redress Committee of Sirajganj Municipality for the proposed subproject is given in Annex 3.

#### **7.2.2. Grievance resolution process**

Flow chart of Grievance resolution process for this proposed subproject is shown in Annex 4.

#### **7.2.3 Institutional arrangement for safeguard compliance**

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6. As stated there will be no any affected or grievant person due to the implementation of this sub project. GRC will act as the mitigating or arbitrary court to resolve any issue and assumed there will be no any ground of going court by aggrieved.

7. The kitchen market is not the high rise building. However, however, fire safety extinguishers installation plan will be in the market with adequate facilities of water supply from nearby water sources in case of any emergency will make available under the municipality arrangement with the support of district fire safety department.

Please find the flow chart, as stated in environmental and social safeguards management team (Tentative)

### **7.3 Capacity building**

A training program has been developed by the PMU to build the capability of PIU of Sirajganj Municipality. This has been conducted by the PMU-BMDF. The training based on a) Environmental screening, b) EMP implementation, including environmental monitoring requirements related to mitigation measures and c) taking immediate action to remedy unexpected adverse impacts or ineffective mitigation measures found during the course of the implementation.

<sup>5</sup>The contractor will be required to conduct environmental awareness and orientation of the workers and other support staff before deploying to the work sites in order to achieve the expected standards.

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## 7.4. Environmental Management Plan (EMP) Matrix.

Table: Environmental Management Plan (EMP)

Sub-project Activity	Potential Impact	Activity/ Issues	Proposed Mitigation & Enhancement Measures	Estimated Mitigation Cost	Frequency of monitoring	Responsible for monitoring	
						Implement	Supervision
<b>A. Pre-Construction Phase</b>							
Labor Shed Construction (Construction camp )	Improper waste disposal may affect the environment. Solid waste, waste water generation. Env. pollution; Workers health affect	Identify location of construction camps so that minimum disturbance. Camps shall not be located near settlements or near water supply source/ intakes. Camp place will be kept clean strictly to ensure good sanitary condition.	Gender friendly labor sheds (2) will be constructed at east side of the ground separate for male and female Construction of sanitary / Pit latrine with septic tank / Ring slab system - Erection of “no litter” sign and to manage waste. Install brevet ware fencing as security measures. Ensure no often defecation in the site or adjacent.	BDT 200000 (Approx.)	Ongoing (During Construction)	Selected Contractor	Environmental Specialist-PMU, MGSP, PIU/ULB
<b>B. Construction Phase</b>							
Earthwork	Slope erosion, dust Spreading	Proper care will be taken during earth cutting and filling so that slope of the foundation trench should not be eroded.	Provide adequate safety barriers. Keep heavy equipment at safer distance. Earth cutting; Earth filling; Slope protection measure, Foundation Trench Erosion control.	BDT 20000 (Approx.) (To be added to Tender BOQ)	During Construction	Selected Contractor	Environmental Specialist-PMU, MGSP, PIU/ULB
Construction material sourcing	Environmental degradation in case of procuring non licensed / local contractor / local sources.	Identify the licensed supplier of Construction materials specially Sand, Bricks at the local level.	Construction materials obtain from officially licensed and approved quarries and brick fields.	N/A	During Construction	Contractor	

Air, Water Quality and Dust	Air pollution, health and hygiene	Water should be sprayed to control the dust. Construction period and Operation period air and ground water quality should be measured for assessing SPM, Arsenic, Iron, and Salinity.	Water should be sprayed at certain interval to control the dust especially in day time.	BDT 100000 (Approx.)  (Actual Cost will be added in the BOQ of the tender documents)	During pre-construction & construction period	Contractor	Environmental Specialist-PMU, MGSP, PIU/ULB
Noise and Vibration	Increase noise level.  Increase vibration (construction site)	Noise level should keep within tolerance level of Bangladesh Standard (70dBA).  Construction period status of noise level of the sub-project site should be measured.	Maintain proper material transportation schedule. Maintain off time for material transportation and offloading. All vehicles and equipment used in construction shall be fitted by exhaust silencers, maintain regularly to minimize noise level.	BDT 30000 (Approx.)  (Actual Cost will be added in the BOQ of the tender documents)	During pre-construction, construction and operation period	Contractor	Environmental Specialist-PMU, MGSP, PIU/ULB
Water Logging	Due to excessive rainfall and construction waste materials	Construction of drain and connecting outlet to city drainage system to discharge waste materials and excess water.  Proper cleaning and maintenance of drains.	Identify the area of water logging at sub-project area  Connect out let to ongoing drainage network system.	BDT 15000 (Approx.)  (Actual Cost will be added in the BOQ of the tender documents)	During Construction and operation period	Contractor	Environmental Specialist-PMU, MGSP, PIU/ULB
Workers safety	Environmental degradation  Health hazard. Occupational Risks at work place / with equipment operation.	Construct required number of workers shed at a suitable place near the sub-project areas ensuring all environmental, health and safety measures.	Ensure labor shed for both male and female.  Separate toilets for Male and Female. Procure personal protective equipment (PPE) (Helmet, P Cap, hand gloves, eye protecting glass, gum boot, jacket etc.)	BDT100000 (Approx.) (Actual Cost will be added in the BOQ of the tender documents)	During Construction	Contractor	Environmental Specialist-PMU, MGSP, PIU/ULB
<b>C. Operation Phase</b>							
Solid Waste Disposal	Environmental degradation  Odor spreading	Required number of small bin to dispose solid waste generated from storage and traded commodities  Waste discharge by the traders/ visitors.	Construction or placement of waste /garbage bins in a distant corner inside the market.  Establishment of an active market mgt. Committee with the involvement of Municipal representatives.	Maintenance cost will be carried out by Market Committee	During Operation phase	Market Mgt. Com.	PIU/ULB

		Ensuring dumping of collected solid waste to secondary dumping station near the market by the waste collectors in a shorter time and on regular basis..	Developed and ensure proper solid waste management system.				
Waste Water and other watery Disposals.	Cause of Environmental degradation of market premises	Required number of pipes to drain out wastewater generated from wash room, floor cleaning, shops and visitors.	Ensure waste water disposal to the soak well in separate pipe line.	Maintenance cost will be carried out by Market Committee	During Operation phase	Market Mgt. Committee	, PIU/ULB
Traffic Congestion	Create traffic congestion by both traders and visitors	Identify the traffic congestion areas and causes	Establish Market Management committee and ensure proper parking of vehicles in the parking areas for motorized and non-motorized vehicles.	Maintenance cost will be carried out by Market Committee	During Operation phase	Market Mgt. Committee	PIU/ULB
Fecal Sludge Management	Cause of Environmental degradation of market premises	Septic tank will be provided and ensure sludge collection from septic tank by vacuum truck and safe removal.	Ensure fecal sludge disposal to the septic tank by the separate pipe line. Collection of sludge from septic tank by vacuum truck with maintaining safety and hygiene manner..	Maintenance cost will be carried out by Market Committee	During Operation phase	Market Mgt. Committee	, PIU/ULB
Air, Noise and Water	Monitoring air, noise and water quality	Air, noise and water pollution	Lab test of air, noise and water and taking measures to improve if require	Cost should include in the electrical cost in BoQ	During Operation phase	Contractor	PIU/ULB

C. Operation Phase							
Solid and all organic waste Disposal.	Environmental degradation  Odor spreading	Required number of small bin to dispose solid waste generated from storage and traded commodities  Waste discharge by the traders/ visitors.  Ensuring dumping of collected solid waste to secondary dumping station by the waste collectors in a shorter time and on regular basis..	Construction or placement of waste /garbage bins in a distant corner inside the market.  Establishment of an active market mgt. Committee with the involvement of PS representatives.  Developed and ensure proper solid waste management system.	Maintenance cost will be carried out by Market Committee	During Operation phase	Contractor, Market Mgt. Com.	Environmental Specialist-PMU, MGSP, PIU/ULB  PS Engineer
Waste Water, other watery Disposals.	Cause of Environmental degradation of market premises	Require number of drains to drain out wastewater generated by the traders/ visitors.  Ensure the outlet of drain connected to the ULBs existing drainage system.	Construct drain around and make connectivity with Municipality sewerage system  Establish Market Mgt. committee and ensure proper waste water management system.  May initiate for drain water quality fecal E. coliform test once in a year.  Regular fecal / sludge cleaning will be undertaken.	Maintenance cost will be carried out by Market Committee	During Operation phase	Contractor, Market Mgt. Committee	Environmental Specialist-PMU, MGSP, PIU/ULB  PS Engineer

Traffic Congestion	Create traffic congestion by both traders and visitors	Identify the traffic congestion areas, causes and remedial measures.	Coordinate with district traffic department and ensure effective traffic management. Ensure usual traffic and other vehicle movement. Controlling in and out going motorized and non-motorized vehicles. Market committee can manage by deploying community polices and keep the rush clear around the market areas.	Maintenance cost will be carried out by Market Committee	During Operation phase	Contractor, Market Mgt. Committee	Environmental Specialist-PMU, MGSP, PIU/ULB PS Engineer <sup>6</sup>
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## 7.5 Cost of Environmental Mitigation and Enhancement Works in BOQ

**Table 1: Cost of Environmental Mitigation and Enhancement Works.**

Item No.	Description of Activities	Approximate Costs (BDT in Million)
1	Construction of Labor shed, latrine, safe water supply	.20
2	Labor safety equipment procurement and operation	.10
3	Dust suppression measures like water spraying in and around the site	.02
4	Air, Water, Noise Quality test	.06
5	Water logging eradication – Drainage and cleaning	.02
	<b>Total Cost (BDT)</b>	<b>0.40<sup>7</sup></b>

<sup>6</sup> As stated Environmental Specialist-PMU, MGSP, PIU/ULB will be entrusted to monitor. However, in case of any external support may be taken from the market management committee.

<sup>7</sup> Cost of other mitigation measures, as added and may require during construction period will be considered. Moreover, cost estimated in table -1 may again be reviewed.

## **8.0 PUBLIC CONSULTATION AND PARTICIPATION**

### **8.1 Methodology**

Public consultation and participation ensured through organizing a Focus Group Discussion (FGD) with locally available peoples. Besides, a semi structures questionnaire survey also conducted and obtained necessary information, identified environmental and other problems, issues, concern and suggestions from the local people about the proposed subproject. Reviewed all of those findings and observations at sites based on which the present environmental assessment report prepared. Community Consultation in Annex – 5 and Semi Structure Questionnaire attached in Annex - 6). This Market Development has been selected from the CIP where all stakeholders - ULB, Mayor, Counselors, NGO representatives, and Community people were spontaneously participated. In the CIP, some subproject was selected and this subproject was taken as priority action to implement in the proposed location during the FY 2018.

Stakeholders at the subproject were identified under three main groups: (i) beneficiaries in the subproject area; (ii) community leaders and government officials and (iii) NGOs working at the local and regional levels.

Stakeholder participation was completed in two steps: (i) firstly to collect and disseminate information through briefing and discussion meetings; and (ii) secondly to receive feedback for formulating appropriate mitigation measures against all potential adverse impacts.

In order to ensure the implementation of all appropriate feedback a range of information sharing techniques was used. Techniques used for different stakeholder groups included (i) Discussion with stakeholders (ii) Semi-structured interviews; (iii) Small group meetings with concerned officials in presence of stakeholders Site visits- stakeholder discussion in the field level .

Special efforts were made to include the elderly, women, and vulnerable groups and to allow them to express their views regarding the subproject implementation. In all cases, the impression of stakeholders & general mass regarding sub-project implementation was positive.

### **8.2 Issues raised by the participants:**

- Cleaning of ground inside the subproject site.
- Controlling dust spray during construction work.
- Cleaning, garbage management during construction.
- Noise pollution during construction.
- Traffic congestion.
- Quality maintaining of all construction works
- Environmental friendly actions / mitigation measures.

### **8.3 Feedback, suggestions, and recommendations of the participants.**

Local people are very much interested and felt encouragement about the super market establishment and they are absolutely hopeful that the market will be visible within the time frame. They are encouraged and ready to provide necessary social responsibilities in establishing the market at the selected site. They suggested making the market environment friendly considering and addressing all assumed adverse effects with the implementation of potential mitigation and enhancement measures. Participants requested the PIU-Sirajganj to maintain the quality of the construction work of the building. Neighboring peoples of the proposed site requested PIU-Sirajganj to keep the noise level low, using quality construction materials and honoring the communities' comfort and over tranquility of the environment.

### **9.0 CONCLUSION AND RECOMMENDATIONS.**

The Super Market proposed and selected by the Sirajganj Municipality through a close consultation with different tiers of the community people and consideration of the felt needs of the them to enhance the business facilities in the city. This is one of the important sub project of the municipality because this subproject is taken as priority basis for the enhancement of revenue as well as to meet the requirements of Municipal dwellers with the increasing of income and trading facilities of their goods and services.

In construction of such a super market, there will not be required cutting or removed of any valuable trees or any bushes nearby rather as an enhancement of the aesthetic value and view of the proposed market necessary numbers of fruits, flowers and timber trees of indigenous varieties may be planted as if to generate a complete eco system of the areas.

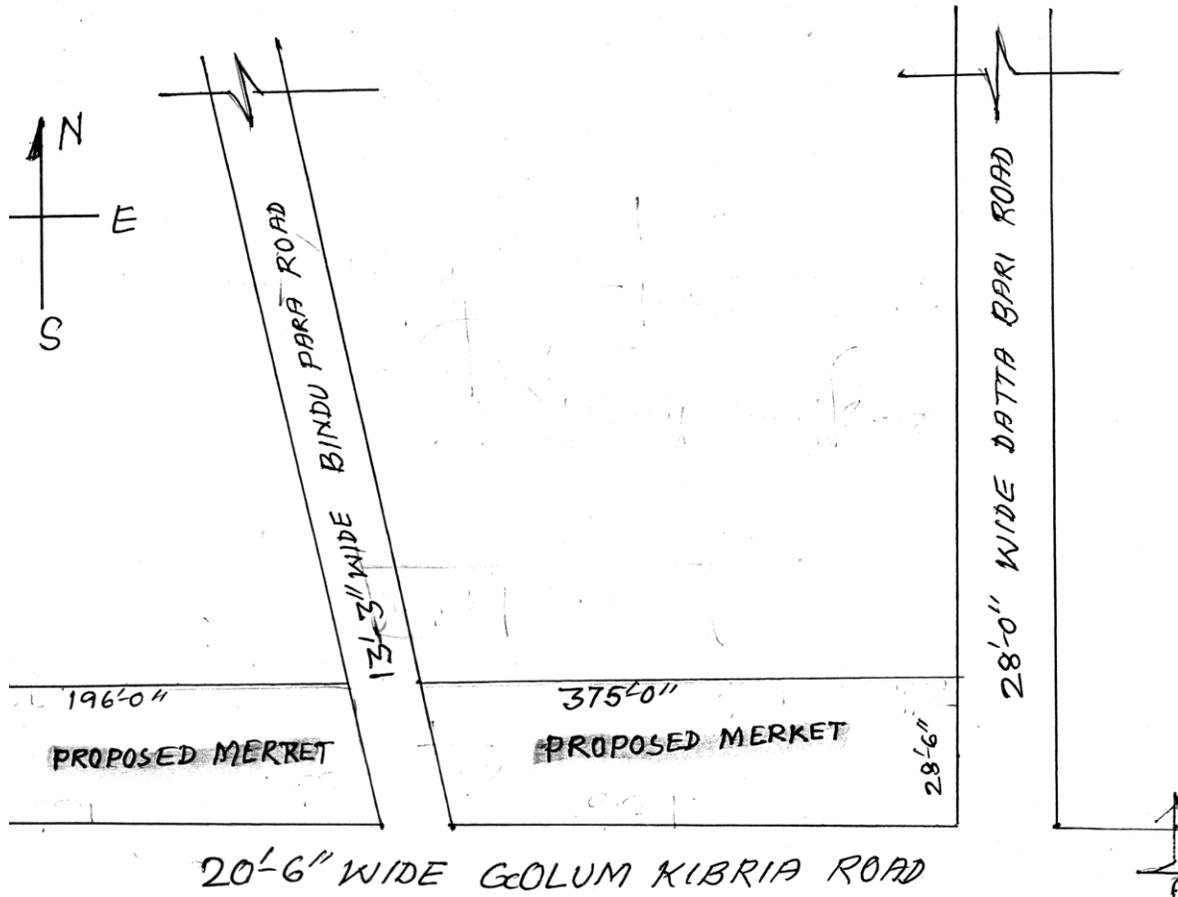
As observed and assessed the impact on physical as well as socio economic aspects relevant to the construction and operation of the proposed super market no significant adverse impact were observed. Potential positive impacts on diversified social and economic parameters like increasing of income and employment opportunities, enhancing of trade and business facilities, encouraging of participants towards the using of better water, health and sanitation facilities, making comfort of local marketers, facilitating the growers and suppliers for their produces, supplies, processing, and procuring as well as preserving of commodities keeping the quality as standard.

However, as follows the objectives of SMF and BMDF to ensure the implementation of intended activities and to mitigate all adverse impact along with the enhancement of possible social and economic outcomes, a sincere effort has been given by the Sirajganj Municipality authority to assess potential impacts. Carefully reviewed and assessed all findings of close field observation as well as concerns of the community people and recommended possible mitigation measures to be implemented as per to mitigate identified all adverse impacts that proposed market construction might cause on environment and people including protection of all environmental aspects relevant to construction and operation of the sub project. Noise level and any other adverse impact and any

sorts of disturbance by construction work would be reduced as much as possible. Emphasis will be given to make the market environment friendly during design and construction phase. Renewable energy would be installed and used as supplementary electric supply in water supply and energy use. Uses of solar energy and rain water harvesting would be ensured during the construction and operation periods. Environmental quality would be monitored and will make sure that natural environment of the area would not be affected by this super market establishment.

Lastly, the proposed site is clear and suffices as planned to construct the proposed Market where no land acquisition as well as resettlement will be required. The proposed works in no way will affect any community facilities like school, college, Madrasa, cemetery, mosque, temple or others that are of religious, cultural and historical significance.

Appendix 1: Lay out plan of proposed kitchen market



SIRAJGANJ GOVERNMENT COLLEGE

  
Engr. Md. Shahjahan Ali  
Executive Engineer  
Sirajgonj Pourashava  
Sirajgonj.

**Appendix 2: Side views of the sub project**



West Side of the Proposed Super Market



North Side of the Proposed Super Market



East Side of the Proposed Super Market

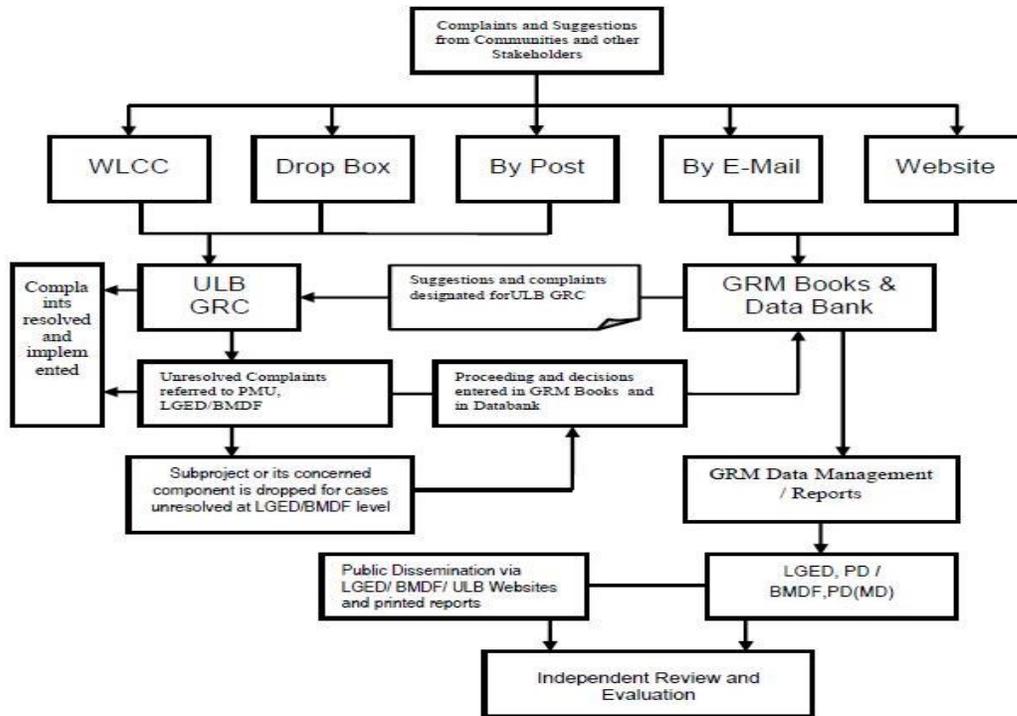


South Side of the Proposed Super Market

**Appendix 3: Grievance Redress Committee of Sirajganj Municipality**

<b>Sl.</b>	<b>Name</b>	<b>Designation</b>	<b>Designation</b>
01	Syed Abdur Rouf Mukta	Chairman	Mayor Sirajganj Municipality
02	Abu Nur Shamsujjaman	Member	DDLG, Office of Deputy Commissioner
03	Nur-A-Alam Hira	Member	Assistant Teacher Sabuj Kanan School & College
04	Jahangir Alam Ratan	Member	Executive Director Dip Shetu
05	Abdul Bari Sheikh	Member	Civil Society
06	Mst. Romana Reshma	Member	Ward councilor – female
07	Md. Shahjahan Ali	Member Secretary	Executive Engineer Sirajganj Municipality

### Annex 3: Flow chart of Grievance resolution process



Appendix 4: Picture of Community Consultation



Community consultation



Community consultation



**Discussion / FGD with Local Womanhood**

**Appendix 5: Format of Semi Structure Survey.**

পৌর মার্কেট নির্মাণ সম্পর্কিত জরিপ

বিশ্ব ব্যাংক এর আর্থিক সহযোগিতায় ও Sirajganj পৌরসভার তত্ত্বাবধায়নে সি এস দাগ নং ....., খতিয়ান নং ....., মৌজাঃ Sirajganj তে একটি Superমার্কেট নির্মাণ করা হবে। এই বিষয়ে আপনার অভিযোগ/আপত্তি, গুরুত্বপূর্ণ মতামত/পরামর্শ জানার জন্য নিম্নোক্ত তথ্য গুলো প্রয়োজন।	
ক্রমিক নম্বরঃ .....	তারিখঃ .....
১। নামঃ .....	বয়সঃ .....
৩। পিতার নামঃ .....	
৪। ঠিকানাঃ বাসাঃ.....রাস্তাঃ..... ওয়ার্ডঃ.....	
৫। মোবাইল নম্বরঃ .....	
৬। পেশাঃ .....	
৭। প্রকল্প এলাকা থেকে দূরত্বঃ .....	
৮। জমি সম্পর্কিত কোন অভিযোগ/আপত্তিঃ <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না	
যদি থাকেঃ .....	
৯। মার্কেট নির্মাণ সম্পর্কিত কোন অভিযোগ/আপত্তিঃ <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না	
যদি থাকেঃ .....	
১০। মার্কেট নির্মাণ সম্পর্কিত কোন মতামত/পরামর্শঃ <input type="checkbox"/> হ্যাঁ <input type="checkbox"/> না	

তথ্য দাতার	জরিপকারীর নামঃ.....
নামঃ.....	
স্বাক্ষরঃ .....	স্বাক্ষরঃ .....
তারিখঃ.....	তারিখঃ.....



যদি থাকে: .....