Government of the People's Republic of Bangladesh
Ministry of Local Government, Rural Development and Cooperatives Local Government Division

Improving Urban Governance and Infrastructure Program (IUGIP)

Environmental Screening Report for LIN Upgradation at Bhabaniganj Pourashava

Sub-Project No: IUGIP/BHAW/SI/01-06/2023

November 2025

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CURRENCY EQUIVALENTS

(As of 13th December, 2023)
Currency Unit = BDT
BDT 1.00 = $ 0.0097

$ 1.00 = BDT 105.4

ABBREVIATIONS

ADB	-	Asian Development Bank
AFD	-	Agence Francaise de Development
Ap	-	Affective Person
DoE	-	Department of environment
DLI	-	Disbursement Link Indicator
ESMF	-	Environmental and Social Management Framework
ECA	-	Environmental Conservation Act
ECC	-	Environmental Clearance Certificate
ECR	-	Environmental Conservation Rules
EIA	-	Environmental Impact Assessment
EMP	-	Environmental Management Plan
ESR	-	Environmental Screening Report
FD	-	Forest Department
GoB	-	Government of Bangladesh
GRC	-	Grievance Redressal Cell
GRM	-	Grievance Redress Mechanism
IEE	-	Initial Environmental Examination
IUGIP	-Improving Urban Governance and Infrastructure Program	
LGED	-Local Government Engineering Department	
MDSC	-Management Design and Supervision Consultant	
MLGRDC	-Ministry of Local Government, Rural Development, Cooperatives	
O&M	-	Operation and Maintenance
PMU	-	Project Management Unit
PPTA	-Project Preparatory Technical Assistance	
MDSCP	-	Poverty Reduction Strategy Paper
RBL	-	Result-Based Lending
RP	-	Resettlement Plan
SPS	-	Safeguard Policy Statement
UGIAP	-	Urban Governance Implementation Action Plan
LIN	-	Low Income Neighborhood

LINIC	-	Low Income Neighborhood Improvement Committee

I. GLOSSARY OF BANGLADESHI TERMS

Crore	-	10 million (= 100 lakh)
Ghat	-	boat landing station
Hartal	-	nationwide strike/demonstration called by opposition parties
Khal	-	drainage ditch/canal
Khas, khash	-	belongs to government (e.g., land)
Katcha	-	poor quality, poorly built
Lakh, lac	-	100,000
Madrasha	-	Islamic college
Mouza	-	government-recognized land area
Parishad	-	authority (Pourashava)
Pourashava	-	municipality
Pucca	-	good quality, well built, solid
Thana	-	police station
Upazila	-	sub district

II. WEIGHTS AND MEASURES

ha	-	hectare
km	-	kilometre
m	-	meter
mm	-	millimetre

NOTE{S}

(i) In this report, "$" refers to US dollars.

(ii) —BDT refers to Bangladeshi Taka

PREFACE

The premises of this Environmental Screening Report (ESR) are the MDS Consultant services presentation of an analysis of data and conclusions, together with its appendices.

The key elements of the ESR focus on: Assessment of Compliance Guidelines of Environment Safeguards according to ADB, AFD and GoB policy.

DISCLAIMER

This draft Environmental Screening Report (ESR) of Bhabaniganj Pourashava, Under Management Design & Supervision for Improving Urban Governance and Infrastructure Program (IUGIP) at (RBL). All the data used to prepare this ESR have been collected from the Pourashava Development Plan (PDP), Community Action Plan (CAP) and field visit. Some of the information's have also been collected from the Pourashava personnel over telephone. Moreover, some information's have been collected by the respective experts of MDS consultant through intensive field visit which have been used in writing this report. If any information or data or any other things coincide with other project documents that are beyond our knowledge and fully coincidental event and we express apology for that.

Submitted by:

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Table of Contents

I. GLOSSARY OF BANGLADESHI TERMS 3
II. WEIGHTS AND MEASURES 3
III. Introduction 4
Purpose of Environmental Screening Report 4
Proposed LINs 4
IV. Environmental Screening of Proposed LINs 7
Bhabaniganj Hindu Para LIN (Lot-01) (Ward- 05) 7
a. Location of the LIN 7
b. Description of Interventions 9
c. Present Condition (Baseline Environment) 9
d. Site Map of Bhabaniganj Hindu Para LIN Area 11
e. Baseline Information 11
f. Environmental Impact Assessment and Mitigation 13
g. Environmental Management Plan (EMP) 19
h. Public Consultations 21
i. Grievance Redress Mechanism 21
j. Conclusion 22
Chand Para North South Para LIN (Lot-02) 23
a. Location of the LIN 23
b. Description of Interventions 25
c. Present Condition (Baseline Environment) 25
d. Site Map of Chand Para North South Para LIN Area 27
e. Baseline Information 28
f. Environmental Impact Assessment and Mitigation 30
g. Environmental Management Plan (EMP) 35
h. Public Consultations 37
i. Grievance Redress Mechanism 37
j. Conclusion 38
Kosba Doptori Para LIN (Lot-03) (Ward no.01) 39
a. Location of the LIN 39
b. Description of Interventions 41
c. Present Condition (Baseline Environment) 41
d. Site Map of the Kosba Doptori Para LIN 43
e. Baseline information 44
f. Environmental Impact Assessment and Mitigation 46
g. Environmental Management Plan (EMP) 51

h. Public Consultations 53
i. Grievance Redress Mechanism 53
j. Conclusion 54
Dacta Dorji Para (Lot-04): (Ward No. 01) 55
a. Location of the LIN 55
b. Description of Interventions 57
c. Present Condition (Baseline Environment) 57
d. Site Map of Dacta Dorji Para LIN 59
e. Baseline Information 60
f. Environmental Impact Assessment and Mitigation 62
g. Environmental Management Plan (EMP) 67
h. Public Consultations 69
i. Grievance Redress Mechanism 69
k. Conclusion 70
Surjo Para LIN (Lot-05) :(Ward No. 07) 71
a.Location of the LIN 71
b. Description of Interventions 73
c. Present Condition (Baseline Environment) 73
d. Site Map of Surjo Para LIN 75
e. Baseline information: 76
f. Environmental Impact Assessment and Mitigation 78
Pre-construction and Construction Phase 79
Operation Phase/Post-Construction 81
g. Environmental Management Plan (EMP) 83
h. Public Consultations 85
i. Grievance Redresses Process 86
j. Recordkeeping: 86
Uttarekdala Rishipara LIN (Lot-06) :(Ward No. 02) 87
a. Location of the LIN 87
b. description of Interventions 89
c. Present Condition (Baseline Environment) 89
d. Site Map of Uttarekdala Rishipara LIN 91
e. Baseline information: 92
f. Environmental Impact Assessment and Mitigation 94
Pre-construction and Construction Phase 95
Operation Phase/Post-Construction 97
g. Environmental Management Plan (EMP) 99

h. Public Consultations 101
i. Grievance Redress Mechanism 101
j. Grievance Redresses Process 102
k. Recordkeeping: 102
l. Conclusion 102

List of Tables

Table 1: Description of Proposed Interventions of Bhawaniganj Hindu para LIN 9
Table 2: Description of Proposed Interventions of Chandpara North South Para LIN 25
Table 3: Description of Proposed Interventions of Kosba Doptori Para LIN 41
Table 4: Description of Proposed Interventions of Dacta Dorji Para LIN 57
Table 5: Description of Proposed Interventions of Surjo Para LIN 73
Table 6: Description of Proposed Interventions of Uttarekdala Rishipara LIN 89

List of Figures

Figure I: Pourashava map and Location Map of Proposed LINs 5
Figure II: Location of Proposed LINs in Pourashava Map 6
Figure III: Location of Bhawaniganj Hindupara LIN 8
Figure IV: Existing Situation at Bhabaniganj Hindu Para LIN 10
Figure V: Location of Chandpara Uttar Dokkin Para LIN 24
Figure VI: Existing Situation at Chand Para North South Para 26
Figure VII: Location of Kosba Doptori Para LIN 40
Figure VIII: Existing Situation at Kosba Doptori Para LIN 42
Figure IX: Location of Dacta Dorjipara LIN 56
Figure X: Existing Situation at Dacta Dorji Para LIN 58
Figure XI: Location of Surjopara LIN 72
Figure XII: Existing Situation at Surjo Para LIN 74
Figure XIII: Location of Uttarekdala Rishipara LIN 88
Figure XIV: Existing Situation at Uttarekdala Rishipara LIN 90

List of Appendix

Appendix 1: Environmental screening and categorization Form 103
Appendix 2: Typical Detailed Design of Proposed LIN 105
Appendix 3: Budget for Implementation of EMP 110
Appendix 4: Photographs & Attendance List of Public Consultation 112
Appendix 5: Waste Management Plan for LIN Development (for short-time period) 119
Appendix 6: Site and Design Conditions to Meet the ESMF Criteria 120
Appendix 7: Health Safety Manual of Construction workers 121
Appendix 8: Standard Operation Procedure (SOP) of toilet 122
Appendix 9: Standard Operation Procedure (SOP) of street light 123
Appendix 10: DoE Approval letter for IUGIP 123

III. INTRODUCTION

1. Bangladesh is still a predominantly rural country, but it is rapidly urbanizing. Its total population is nearly 160 million and by one account, around 28 percent of the aggregate population lives in the urban areas. With the present high increase-trend in urban population, it is justifiably anticipated that by the year-2020, such populace will constitute nearly 40 percent of the national aggregate. One principal cause of such rapid growth is the presence of better opportunities spanning economic, communication, education, health and other social aspects in the urban areas. It is worth noting that by one account, in countries of Bangladesh's standing, around 55-60% of a country's aggregate economic activities takes place within the urban confines.
2. Now, in line with aforesaid trend, and particularly the visibly sharp rise in rural-urban migration in the recent decades, urbanization of the existing Pourashavas of the country will as well register a concomitant speedy growth. This will warrant provision and development of adequate basic infrastructure for the dwellers. The poor people, mostly displaced by river erosion and landless, have migrated to the cities for better opportunities of earning their livelihoods and other social aspects. This type of new migrants and second-generation migrants tend to live in LIN areas without basic housing and services.
3. The LIN people have been suffering from acute problem of inadequate availability of drinking water, inadequate & deteriorating internal roads/footpaths/ walkways, street lighting, paucity of drainage and sewerage facilities, poor housing, and pollution. Thus, urban LINs improvement remains at the forefront of municipal infrastructure provision through IUGIP-III-AF in selected Pourashavas. The responsibility of improving the living conditions of the people of the LIN areas lies with the Pourashavas vis-a-vis urban service providers.
4. Basic services for the poor LINs include improvement of (i) internal roads, (ii) drainage facilities, (iii) footpaths/ walkways, (iv) supplying water (installation of hand tube wells), (v) sanitation facilities (construction of toilets/ community toilets), (vi) solid waste management and (vii) street lighting in LIN areas, (viii) construction of dust bins, and (viii) piloting low-cost housing for the poor LIN dwellers. The piloting of the construction of the low-cost housing will also be done for the sweepers in sweeper's colony.

Purpose of Environmental Screening Report

5. The objectives of the Slum Improvement Sub-project are to improve the slum environment through the installation of drinking water well, sanitation, street light facility, and rehabilitation/ improvement of footpaths and drains in various locations in the slum area, which ultimately improves the basic services for the urban poor. The report aims to improve the urban environment by identifying the potential impacts of proposed interventions and taking mitigation measures.

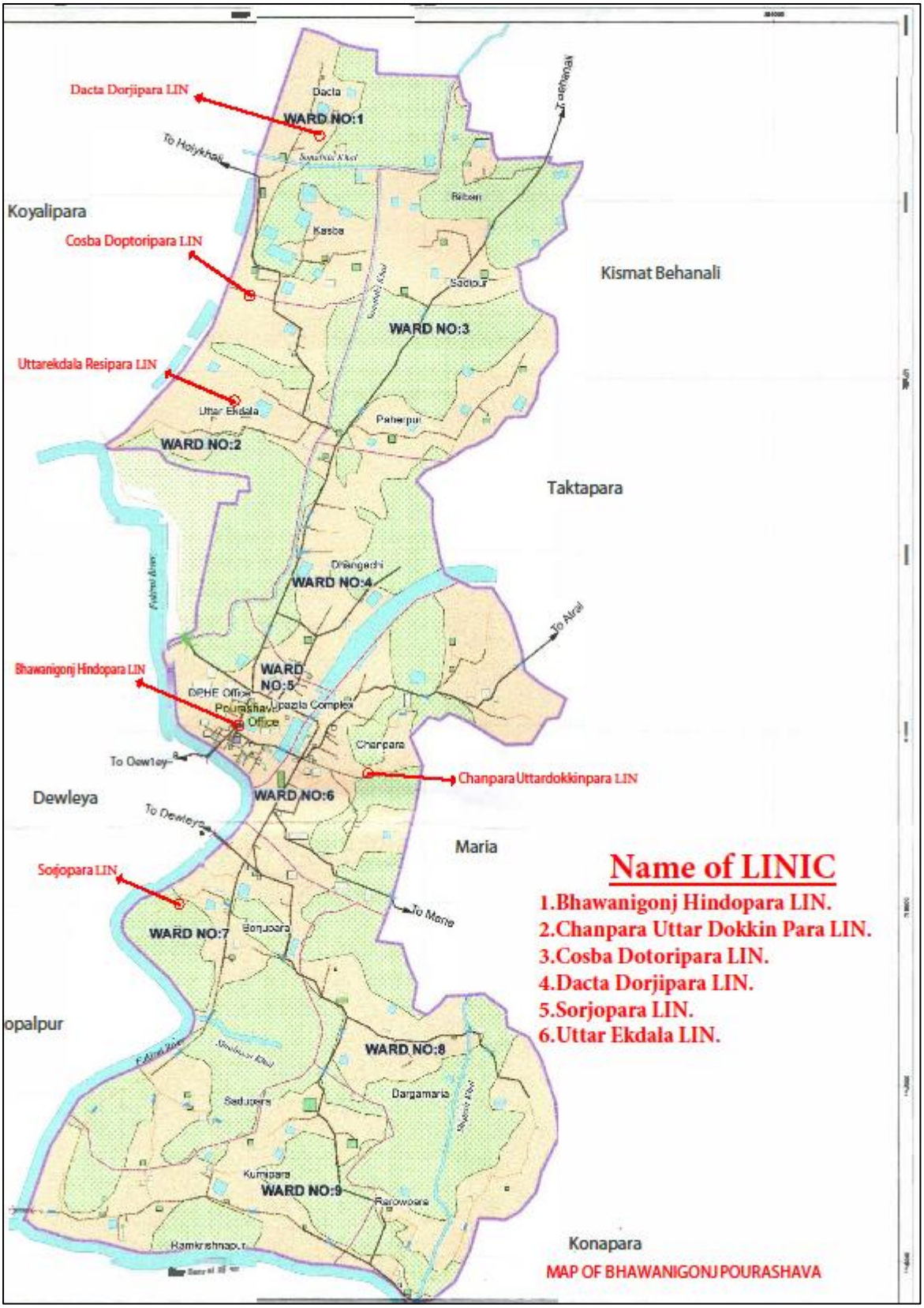
Proposed LINs

6. Bhawaniganj Paurashava lies between 24°33'03" to 24°37'07" north latitude and 88°39'27" to 88°49'46" east longitude. This Paurashava is located at Bagmara Upazila of Rajshahi district under Rajshahi Division. Paurashava is located about 260 km north-west of the capital city Dhaka and about 40 km north of the district town Rajshahi, which started its journey on 12ve July, 2000. Paurashava is bordered by Dwippur and Bara Bihanli Union Parishads on the north, Kacharikoyli Para on the northwest and Basupara Union Parishad on the west, Bagmara Upazila and Sreepur Union Parishad on the south and Mariya Union on the east. The people of the 4 upazila cities Puthia, Durgapur, Atrai and Manda, respectively, come and go for business in this market. Its distance from neighboring district town Naogaon is about 40 km respectively. Bhawaniganj Paurashavas present area is 10 square kilometers and has of 22982 nos. population.
7. 06 (Six) slums have been included in the Sub-project under discussion for providing infrastructure facilities in the selected slums and improving the environment.

Environmental screening reports on the six proposed slums in Bhabaniganj Paurashava have been presented in this report (Hindu para-LIN (Lot-01), Chanpara Uttar Dokkin Para LIN (Lot-02), Cosba Dotoripara LIN (Lot-03), Dacta Dorjipara LIN (Lot-04), Sorjopara LIN (Lot-05) and Uttar Ekdala LIN (Lot-06), the location of the proposed slums is presented in **Figure II.**

Figure I: Pourashava map and Location Map of Proposed LINs

Figure II: Location of Proposed LINs in Pourashava Map



IV. ENVIRONMENTAL SCREENING OF PROPOSED LINS

Bhabaniganj Hindu Para LIN (Lot-01) (Ward- 05)

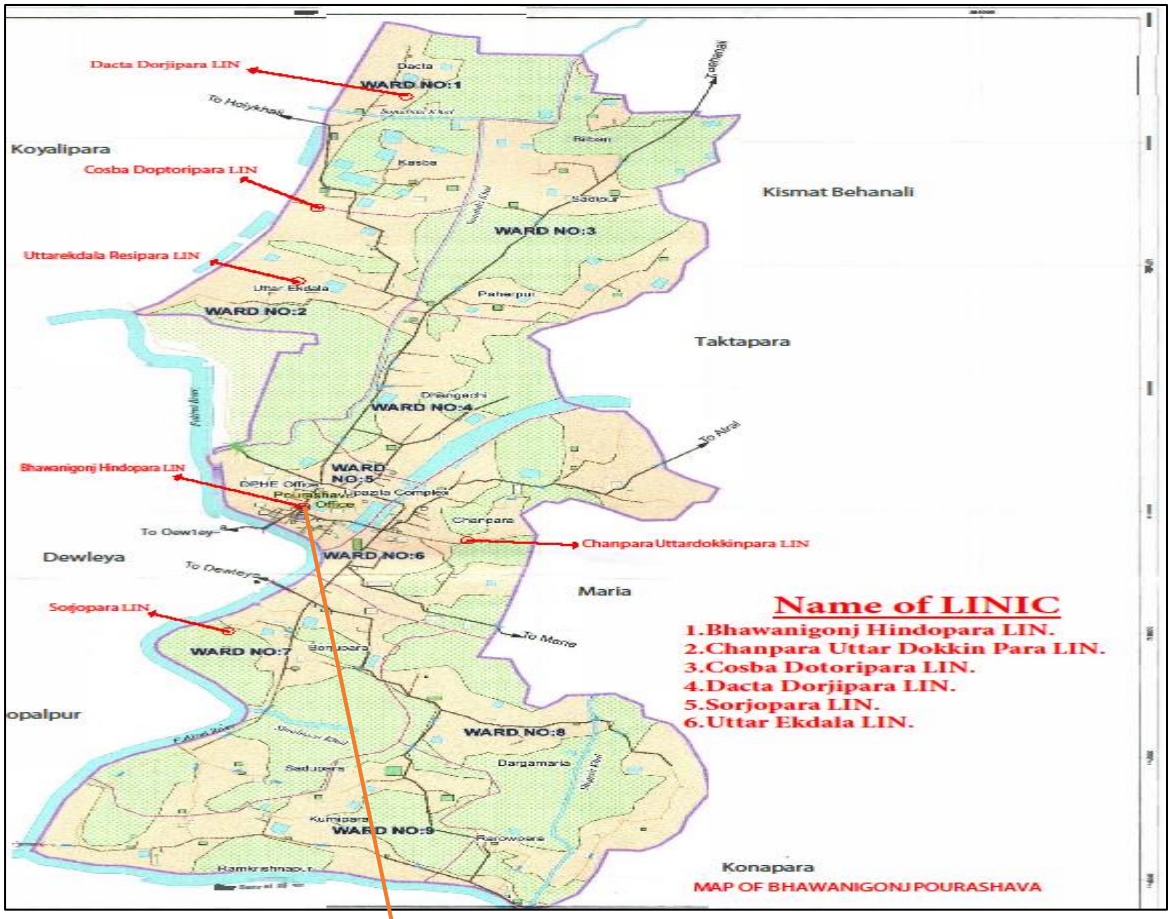
Package No: IUGIP/BHAW/SI/01-06/2023 (Lot-01)

8. The LIN is situated in ward no. 05. There are 83 families with 249 members, of which 127 are males, and 122 are females. The land area is 0.4 acres, and the government & local people own the land. Majority of the families earn their livelihood as labourar, 07 families by shopkeeper and the rest by other means. The average income per head per month is less than BDT 5000.00. Most of the families live in Tin-shed, Semi-Pucca, Pucca houses. They are deprived of most of the needed basic services. This LIN has an acute problem of inadequate sanitary latrines, inadequate facilities for drinking water, inadequate and deteriorating internal roads/footpaths/walkways, street lighting, dustbins, etc.

a. Location of the LIN

9. The Slum is situated in ward no. 05 under Bhabaniganj Paurashava of Bagmara Upazila under Rajshai District; for the location of the slum in the Bhabaniganj Paurashava map attached below.

Figure III: Location of Bhawaniganj Hindupara LIN



b. Description of Interventions

10. A description of the proposed interventions for Bhabaniganj Hindu Para LIN Slum is given in.

Table 1: Description of Proposed Interventions of Bhawaniganj Hindu para LIN

Improving Urban Governance and Infrastructure Program (IUGIP)
LIN Improvement Sub-project Package
Pourashava: Bhawaniganj, District: Rajshahi.

Sl. No.	Name of Package	Financial Year		Name and Number/ Length of Scheme	Unit (m/nos)	Amount TK/ (nos/m)	Quantity	Engineer's Estimated Amount (TK)	Remarks
				Name of works: Construction of 144 Nos Single unit (type-B)Toilets with 278 Number Soak pits, Construction 907 m Footpath, 1,155 m Brick drain, 27 numbers of solar street light, 48 numbers hand tubewell with 48 Nos of soak pits, 06 nos Dustbin and 600 Nos Tree Plantation in (Hindu Para, Chand Para North South para, Kosba Doptori Para,Dorji para ,Surjo Para, Uttar Ekdala Rishi para & LIN) at Pourashava: Bhawaniganj, District: Rajshahi.					
				Name of LIN: Hindu Para (Lot-01)					
	IUGIP/BHAW/SI/01-06/2023 (Lot-01)	2025-2026		Name of works: Construction of 28 Nos Single unit (type-B) toilets with 56 Nos soak pits & Construction of 1 nos. 97 meter of Footpath,115 meter Brick Drain, 04 numbers of solar street light, 08 numbers hand tubewell with 08 Nos soak pits, 1 Nos Dustbin and 100 Nos Tree Plantation in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhabaniganj, District: Rajshahi.					
1			a)	Construction of 28 Nos. Single unit (type-B) Toilet with 56 nos soak pit in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhawaniganj, District: Rajshahi.	nos	245500.34	28	6,874,009.52	
2			b)	Construction of 01 Nos. Dustbin in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhawaniganj, District: Rajshahi.	nos	15248.10	1	15,248.10	
3			c)	Construction of 97m Footpath in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhawaniganj, District: Rajshahi.	nos	7204.00	97	698,788.04	
4			d)	Construction of 115m Brick drain with top slab in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhawaniganj, District: Rajshahi.	m	5354.20	115	615,732.43	
5			e)	Installation of 04 Number solar street light in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhawaniganj, District: Rajshahi.	nos	94481.79	4	377,927.16	
6			f)	Installation of 08 number tube well with 08 Nos soak pits in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhawaniganj, District: Rajshahi.	nos	66925.45	8	535,403.60	
7			g)	Plantation of 100 nos. Tree in Hindu Para LIN, at Ward no.-05, under Pourashava: Bhawaniganj, District: Rajshahi.	nos	495.00	100	49,500.00	
				Total (Lot-01) Amount=				9,166,608.85	

Md. Thousikul Islam, Sub-Assistant Engineer (Civil), Bhawaniganj Pourashava, Rajshahi. 16-09-25
Md. Razaruzzaman, Municipal Engineer-10, Bhawaniganj Pourashava, Rajshahi. 16-09-25
Liton Miah, Assistant Engineer, Bhawanigong Pourashava,Rajshahi. 16/09/25
Mohammad Mehedi Hassan, Administrator, Bhawaniganj Pourashava,Rajshahi. 21/10/25
Md. Mamun, Sub Assistant Engineer, LKSS, IUGIP, LGED HQ, Dhaka 21.10.25
Ria Khanam Ria, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka. 27.10.25
Mohd. Golam Sarwar, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka. 27/10/25
Md. Nasir Uddin, Deputy Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka. 27/10/25
Tofail Ahamed, Project Director, Improving Urban Governance and Infrastructure Project (IUGIP)
Dr. Khondokar Abu Zafor, Team Leader, MDS Consultants IUGIP, LGED, Dhaka

c. Present Condition (Baseline Environment)

(i) Flooding/Water-clogging

11. This slum frequently experiences waterlogging. There exist no paved internal drainage systems in the slums. The existing drains are earthen that are poorly functioning. As the LIN areas are low-lying, heavy rainfall during the rainy season creates water logging. Hence, the construction of drains is necessary to remove water logging conditions in these LINs.

(ii) Water Source/Level/Quality/Tube well

12. Currently, the slum people have been suffering from the acute problem of inadequate availability of drinking water. Hence, slum dwellers have demanded no tube wells in their area; refer to Appendix 1 for the typical design of a tube well.

(iii) Sanitations

13. There is no existing sufficient sanitary toilet facility in the LIN area. LIN dwellers are facing a scarcity of hygienic sanitation; refer to **Figure IV** for the existing condition of toilet facilities. Hence, they have demanded the construction of 28 nos. of sanitary toilets to improve the sanitation condition of their area. Refer to **Appendix 1** for the typical design of the proposed improved toilet.

(iv) Access Roads/Footpaths

14. There is no existing paved road/walkway in the LIN area. Refer to **Figure IV** for the existing condition of access roads. LIN dwellers want 97 m of footpaths for their improved communication system within the LIN area. The proposed footpaths have been designed with cement concrete (CC) pavement over a prepared sub-base with crushed stone chips and/or

Single Layer Brick Flat Soling (BFS). The LIN area is connected to Pourashava roads. A typical design of the footpath is given in **Appendix 1.**

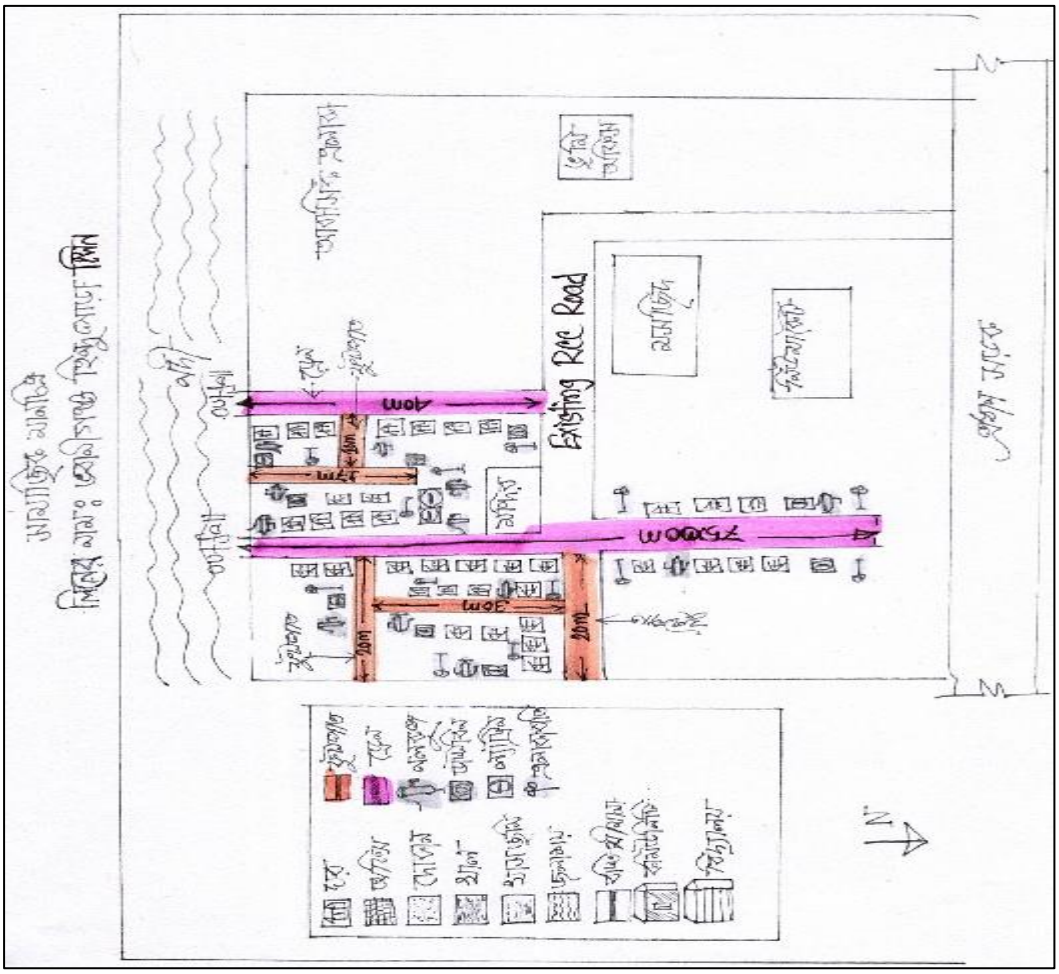
Figure IV: Existing Situation at Bhabaniganj Hindu Para LIN

Bhabaniganj Hindu Para

(v) Solar Street Lights

15. There exists no street lighting system in these LIN areas. Inadequate light during nighttime is an additional problem. Social nuisance is created due to the lack of adequate street lights. Pilferage and unsocial activities are promoted in the dark. The LIN dwellers urged for installing 04 nos. of street lights in and around their LIN. Refer to **Appendix 1** for a typical design of the solar street light.

d. Site Map of Bhabaniganj Hindu Para LIN Area



e. Baseline Information

All LINS fall under a single pourashava, so their baseline profiles are nearly identical, differing only in aspects of Physical Cultural Resources

16. The key baseline information on the LIN area is depicted in below table:

Sl	Key environmental and social aspects	Key baseline information
1	Noise	Noise is not a major impediment for the quality of the environment in the study area. Vehicles such as motorcycle, tempo, mini truck, votvoti, and tractor trailer etc. move on the road during day and night. These vehicles generate noise in the sub-project area but within tolerable limit in most cases. No other perceptible sources of noise generation such as factories, industries, etc. are found near by the sub-project area.
2	Air	Ambient air quality data were not available for the project area. In general, the ambient air quality within the LIN area of Bhawaniganj Pourashava is considered to be good, as there are no major industrial establishments, thermal power plants, brick kilns within the immediate project area, or other significant stationary sources of air pollution. Limited vehicular emissions are generated from occasional inter-Pourashava

Sl	Key environmental and social aspects	Key baseline information
		traffic, including motorcycles, auto-rickshaws, trucks, and other light vehicles using the regional and local road network. Traffic volume within the Pourashava is generally low to moderate; however, emissions increase temporarily during market hours and at road intersections where traffic congestion occasionally occurs. Fugitive dust is generated from unpaved or deteriorated road surfaces, particularly during the dry season, as well as from localized construction activities. Open burning of household waste and emissions from the use of local woods for cooking also produce localized smoke and odour. However, these activities are sporadic and are not expected to significantly affect the overall ambient air quality within the LIN area.
3	Ground water	The quality of groundwater extracted from shallow aquifers is generally poor, as many shallow tube wells contain arsenic concentrations, while elevated iron concentrations are common throughout the area. Consequently, groundwater from shallow aquifers is often unsuitable for drinking without appropriate treatment. The lower deep aquifer is found at a depth of 80 m to 120 m. Fresh groundwater from deep aquifers is extracted to meet the water demand of the inhabitants of the Pourashava.
4	Surface water	Rivers, canals (khals), and ponds occupy approximately 232.427 acres (7.41%) of the total land area of Bhawaniganj Pourashava. The canal network is hydraulically connected to the adjacent Rani River and plays an important role in local drainage and irrigation. During the dry season, water levels in the canals decline considerably, and some canal sections are used for agricultural cultivation. During the rainy season, the canals overflow and inundate low-lying areas of the Pourashava. There are numerous ponds, ditches, and four canals in Bhawaniganj Pourashava that serve as sources of surface water. Surface water quality is influenced by runoff from surrounding agricultural lands. The use of insecticides and chemical fertilizers in crop fields results in the transport of agrochemicals into nearby canals and ponds during rainfall events, contributing to localized surface water pollution. In addition, domestic wastewater, solid waste disposal, and other human activities may also affect the quality of surface water bodies in certain locations.

Sl	Key environmental and social aspects	Key baseline information
5	Ecological Resources and Protected Area (PA)	The sub-project components are located within the Bhawaniganj Pourashava urban area and its immediate built-up surroundings. Common flora identified in the area includes Mango (*Mangifera indica*), Jackfruit (*Artocarpus heterophyllus*), Kalojam (*Syzygium cumini*), Betel nut palm (*Areca catechu*), Coconut palm (*Cocos nucifera*), Guava (*Psidium guajava*), Neem (*Azadirachta indica*), Raintree (*Samanea saman*) etc. Common terrestrial fauna includes local birds (myna, house crow), small mammals (squirrels, bats), and common reptiles and amphibians. Aquatic resources are centered around the Barasia River, canals and ponds, supporting common freshwater fish species (Ruhi, Katla, Shing, Magur). There are no declared Ecologically Critical Areas (ECAs), National Parks, Wildlife Sanctuaries, Ramsar sites, or critical breeding grounds within or adjacent to the project site. No rare, endemic, or endangered species of flora or fauna have been recorded in the area.
6	Physical and Cultural Resources	There is no accurate information about the naming of Bhabaniganj Pourashava. The Pourashava was previously a Union Parishad which was converted into a Pourashava in 2000. The Pourashava. is located on the banks of the Rani River. There is no amusement park, playground, cinema hall for entertainment in the Pourashava. The Pourashava consists of nine wards.

f. Environmental Impact Assessment and Mitigation

17. The review process will be greatly facilitated by comprehensive and detailed answers in this section. When completing this section, please state a specific reason [i.e., “there will be no impacts to environment because this project will not involve any disturbance”] and cite a source [i.e., local master plan, previous environmental assessment, correspondence with Pourashava Office, etc.] to support a response of “no impact (-)” or “potential to impact (+).”
18. The LIN toilets are being considered with two types of design: (i) Type A, and (ii) Type B. Type A is considered with septic tank whereas Type B considered with pit along with soak pit. The note from the Pourashava engineers taken that in many of the LIN area there is shortage of space for constructing septic tank where soak pit is designed with the pit. However, such soak pit has mitigation measure for ground or surface water contamination (e.g., sand and brick chips envelope on the bottom of pit). Moreover, municipality will ensure good maintenance for such toilets having soak pit.
19. The demolition, construction, and waste management activities in the LIN area may generate several short-term and localized environmental impacts. Dust from demolition, debris movement, and broken footpaths can impair air quality, while demolition and temporary camps may create unhygienic conditions. Noise from demolition is minimal. Since project activities are scattered and not near water bodies, the likelihood of surface or groundwater pollution is low. Pollution from construction work yards is minimal, requiring only limited environmental monitoring. Finally, urban construction activities such as excavation and

earthmoving carry inherent occupational safety risks, particularly related to working at heights or in excavated areas, though these risks are reversible with proper mitigation.

(i) Pre-construction and Construction Phase

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
Demolition of existing infrastructure: - Dust from demolition - Noise from demolition - Waste from demolition -Un-hygiene of demolition	(-)	-Different activities regarding the demolishing the existing structure (part) and broken footpath generate dust which impair the air quality -Unhygienic/unsanitary environment due to demolition of old/poor infrastructure and construction of camps in the development site -Creation of noise from demolition is negligible	-Water will be sprayed to control the dust, which is the main way to suppress dust in the working site as per necessary Appendix-2 EMP cost. -Apply water to disturbed soils after demolition is completed or at the end of each day of cleanup. - Transport/handle debris from demolished infrastructures in a hygienic manner. -Tree plantation at the LIN boundary/open space/slope on the basis of space availability -Collection of construction debris and dispose in a hygienic way by LINIC and it is included in engineering estimate item (LGED rate schedule) -PIU/LINIC will strongly monitoring the construction activity and instant action will take.	PIU, LINIC
Dust Management	(-)	-Moving debris/sediments may create dusts during dry season. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures	- Use tarpaulins to cover soils, sand and other loose material. - Water will be sprayed to control the dust when necessary	PIU, LINIC
Community facilities and services - Blockage to access roads - Fire & Safety	(-)	- Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. Poor safety signage and lack of barriers at work site and trenches will create hazard to pedestrians and children. - Chances of fire only from open cooking in the area which may create major loss of property to the residence in the LIN.	-Provide safety signage at all sites visible to public that is monitored by PIU/LINIC and it will be confirmed in semi-annual monitoring report -Provide safety barriers near any trenches, and cover trenches with planks during non-work hours. -LINIC's activities and movement of staff will be restricted to designated construction areas. -Consult with Pourashava local authority on the designated areas for stockpiling of, soils, gravel, and other construction materials. -If the LINIC chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner. -Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged. -Workers need to be made aware of the following general rules: (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction workers are to make use of the facilities provided for them; (iv) no fires permitted on site except if needed for the construction works; and (v) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do. - Bucket filled with sand will be kept at the construction zone.	PIU, LINIC
Air/water/noise quality monitoring	(-)	- Component of works are scattered in the LIN area, which are not located near-by any water stream/canal. There stands little probability of surface and ground water pollution, as nothing like gasoline, oil, road salts and chemicals are dumped on the adjoining ground.	- No need for Air/water/noise quality monitoring in construction area by test due to short-term effect. - Water will be sprayed to control the dust, when necessary, it will be visually observed	Not required

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
		- Construction work yards are located in small areas and its activities are also minimum. Here the intensity of pollution from air/dust/ noise is also very low and short-term. As such little monitoring of water/air/noise pollution parameters is needed at the surroundings work place.		
Drainage congestion/water logging	(-)	- Clogging/stagnation of flow in the storm drain, source of waste water is LIN dweller used water (bathing and washing) - Backflow of water through drain (e.g., due to high water level at downstream discharge point, such as khal/ river) - Drainage congestion/water logging due to cross road/construction activity	-Designing drain considering the downstream discharge point; adequate slope and x-section; RCC cover for drain, where appropriate - Not allowing direct connection to drain from toilet -The out fall of proposed drain is primary to secondary drain and water quality will be monitoring as per necessary (in Appendix-2 EMP cost)	PIU, LINIC
Waste Management	(-)	- Uncollected wastes blocked the drainage and sewage system. - Air, water and soil pollution during the waste collection - Smoke from the open burning of uncollected waste. - The loading and unloading of waste at transfer station pollutes the air and soil. - Odor from waste disposal site and composting system. - Contamination of ground water by leachate.	- Follow the waste management plan given in Appendix 4 during construction period. - Encourage 3R (reduce, reuse, and recycle) - Encourage composting of kitchen waste on the basis of land availability otherwise transfer waste by hand trolley/van that is available in Pourashava and it is inspired by EMP implementation training - Adequate distance between waste bin and water body. - Adequate distance should be maintained between the waste collection point and house - Coordinate with the municipality for collection of domestic waste and disposal at the designated site	PIU/LINIC
Workers H & S	(-)	-There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.	- Comply with requirements of GoB Labor Law of 2006, Labor law and services rules 2015 and all applicable laws and standards on workers H & S. - Ensure adequate safety and provisions as per the Appendix 5 in relation to the COVID-19. - Produce and implement a site health and safety (H&S) plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use PPE at all times; (iii) providing (H&S) training for all site personnel; (iv) Providing fire extinguisher at construction site (v) documenting procedures to be followed for all site activities; and (vi) maintaining accident reports and records. - Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances. -Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.	PIU, LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
			- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;	
Sanitation/excreta management	(-)	-Noise and soil pollution during the construction but short- term -Microbial contamination to the ground water from the pit latrine. -Waste during loading of sewage from the sanitary communal containers. -Odor	-Design and installation of sanitary toilet to stop the microbial contamination to the ground water. -Adequate height with proper ventilation. -Water supply and hand wash facility -Regular cleaning and monitoring -5-10m distance should be maintained between toilet and tube-well	PIU, LINIC
Water supply (Tube well)	(-)	-Noise, dust and soil pollution during the construction but short- term	-The digging of soil should follow the proper design to avoid the pollution and water logging -The outlet of tube well should be connected with soak pit to existing drain. -A person has been engaged for cleaning and maintenance of Tube well. -One set of maintenance equipment of Tube well is kept with LINIC selected person.	PIU, LINIC
Footpath/connecting Road	(-)	-Dust and noise pollution from construction work	-Watering to reduce dust -Tree plantation on the footpath/road slope	PIU, LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the construction workers	-LINIC and all workers will be required to undergo EMP implementation including waste management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labor laws, applicable environmental laws, etc. - Provided training on use of TW, toilet, solar panel and tree plantation etc. during preparation of Community Action Plan (CAP) -Training is a continuous process by Capacity Development Fund of Pourashava. It is financed by IUGIP-III-AF.	Pourashava PRAP budget

- (Construction Phase (For any "negative" impacts "Environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

(ii) Operation Phase/Post-Construction

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water logging in drains and footpaths	(-)	Run-off from debris/ sediments from repair and maintenance of Footpath and drain which may cause siltation and reduction in the quality of adjacent bodies of water. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	- Take all precautions to prevent run-off into streams, water courses, or irrigation system. Install temporary silt traps or sedimentation basins along drainage leading to the water bodies. - Remove all debris/sediments immediately. - Dispose debris/sediments at a designated site such as landfill.	PIU, LINIC

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water quality monitoring (Arsenic, Iron, Chloride, Manganese etc.) (twice a year)	(-)	Due to polluted water, people may suffer from dangerous diseases like cholera, dysentery, diarrhea, Gastrointestinal disease and jaundice etc.	Necessary test will be performed occasionally by testing water sample from the tube wells (Pourashava PRAP budget)	PIU, LINIC
Solid Waste management	(-)	-Due to open dumping ambient environment will be polluted and will be breeding place of flies -Threat to human health and/or the environment -Due to bad odor, nuisance to sensitive receptors	- There is an existing sanitary landfill (SLF) of the Pourashava under IUGIP-III/AF and the waste management system will be connected with this system obviously. - The waste will soon be carried to the proposed SLF by Pourashava SWM system - Develop rodent and fly control plan - Ensure residual waste is not left in bins and allowed to decompose for a long time	PIU/LINIC
Community H & S - Walkway/drain - Toilet conditions - Drinking water quality (Tube well)	(-)	- The inhabitants may dump waste on the walkway - Bricks used in BFS, may be stolen when CC will wear out with the passage of time - Inadequate supply of water to toilet may spread bad odor - Improper use may spread germ - Irregular cleaning may create unhygienic condition - Epidemic may spread due to deteriorated quality of water	- Awareness to the inhabitants to discourage dumping of waste on the walkway - Ensure routine maintenance by the LINIC - Continuous supply of water will be provided - Awareness to user for proper use of latrine - LINIC will engage a person to clean and maintenance of Toilet and tube well regularly - Periodic maintenance of Tube well and Toilet will be done by Pourashava PRAP budget -Inspect soak pit periodically to determine filling levels. -Scheduled Dislodging: Arrange timely desludging before overflow occurs. --Use mechanical desludging systems instead of manual entry.Follow confined-space entry protocols if entry is unavoidable. -Train workers on safe handling of human waste and emergency procedures. - -Transport and dispose of sludge only at approved treatment facilities	PIU/LINIC
Dustbin	(-)	- Improper use of dustbins - Irregular cleaning of dustbin may create bad odor and birth place of flies	- Awareness to the LIN dwellers for proper use of dustbins - LINIC will engage a person who will monitor the cleaning the dustbin regularly	PIU/LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the community	-Twice a year Training/workshop/ meeting for maintenance of TW, Toilet, Planted Tree and Solar panel will be organized by LINIC/PIU and financed by Pourashava PRAP fund. -Provided training on maintenance of TW, toilet and Planted Tree, solar panel during preparation of Community Action Plan (CAP) Inventory Management: Keep records of all solar street light components (panels, batteries, controllers). -Proper Storage: Store damaged or expired components safely in designated areas. -Authorized Disposal: Send batteries, panels, and electronic parts to licensed e-waste recyclers; do not burn or dump. -Staff Training: Train maintenance personnel on the safe handling, segregation, and reporting of e-waste.	Pourashava PRAP budget

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
			-Replacement Plan: Establish a system for replacing non-functional components and managing them as e-waste. -Regular maintenance of planted tree by LIN dwellers	

- (Operation Phase (For any "negative" impacts "environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

g. Environmental Management Plan (EMP)

(i) Monitoring Plan (Construction and Operation Period)

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Water quality	-Contamination (Arsenic, Iron, Chloride, Manganese etc.) or degrading of water quality of drinking water well -Contamination (DO, BOD, COD, TDS, TSS, Turbidity etc.) or degrading of water quality of surface water	-Water quality of tube well will be tested after installation/construction by LINIC and it is included in engineering estimate (Item LGED rate schedule) -Water quality of Tube well will be monitored periodically and DoE standard will be maintained properly. -The outlet of household waste water would be connected with Pourashava existing drain -PIU/LINIC will strongly monitoring the performance of the interventions	Twice a year/Yearly Operation /completion work	Pourashava
Dust from drains, footpaths, toilets, street light, dustbins and tube well	-Air and noise pollution may occur due to construction/operation -Irregular cleaning may damage the interventions	-Use tarpaulins to cover soils, sand and other loose material. -Water will be sprayed to control the dust when necessary -Regular maintenance/cleaning -PIU/LINIC will strongly monitoring the performance of the interventions	As per necessary	PIU/LINIC
Acoustic environment	Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	Plan activities in consultation with Pourashava local authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	No need for noise quality monitoring due to short-term project	Pourashava
Biodiversity	Activities in the built-up area of Pourashava. There are no protected areas in or around Sub-project sites, and no known areas of ecological interest.	• No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission. • Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal).	No need for monitoring due to short-term project	Pourashava
Existing provisions for pedestrians and other forms of transport	Footpath closure is not anticipated. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	• Maintain safe passage for pedestrians during maintenance activities. • Notify affected sensitive receptors by providing sign boards informing nature and duration of maintenance activities and contact numbers for concerns/complaints. • Leave spaces for access between mounds of soil.	Duration of construction works	Pourashava

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
		• Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.		
Worker's health and safety	Workers need to be mindful of the occupational hazards working in confined spaces such as closed drains. Potential impacts are negative and long-term but reversible by mitigation measures.	• Comply with requirements of Government of Bangladesh Labor Law of 2006, Labor Law services rule 2015 and all applicable laws and standards on workers H&S. • Ensure adequate safety and provisions as per the Annex 8 in relation to the COVID-19. • Ensure that all site personnel have a basic level of H&S training. • Produce and implement a O&M and H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training for all site personnel; (iv) providing fire extinguisher at construction site • Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances • Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	Duration of construction works	Pourashava/LINIC

h. Public Consultations

20. A public consultation meeting was held at Bhabaniganj Hindu Para LIN on 13 October 2022. A total of 20 participants attended the meeting where 20 were female. SIC members, teachers, counselors, farmers, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of IUGIP visited the slum of the Paurashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the slums. The meeting was presided over by the Assistant Engineer of Bhabaniganj Paurashava.

Time of Public Consultation

Site : Hindu Para LIN

Time : 09:00 AM

21. Participants of the meeting exchanged views with the safeguarding team about their sufferings and the remedial measures to be taken to overcome them. At present, the slum dwellers use hanging and pit latrines, which is a threat to public health and un-hygienic as well. They insisted on community latrines to overcome it. The drinking water was the burning issue. The water available at the slum was inadequate and non-potable due to impurities (e.g., excessive iron, arsenic, and manganese). They urged for sufficient potable water at their doorstep. Water logging was an additional problem in the LINs. Their yard inundates during the rainy season. It creates an un-hygienic condition of living. They wanted immediate relief from it through the installation of a proper drainage system. Inadequate internal road communication made their livelihood slower. A proper footpath would ease their safe movement. They asked for a proper footpath system in their slum. There is inadequate/no dustbin in or around the slums. As such, they cannot dump the waste properly, especially the kitchen waste. It creates bad odor and un-hygienic conditions in and around the LIN. They wanted the installation of dustbins. Inadequate light during nighttime is an additional problem. Social nuisance creates it. Pilferage and unsocial activities are promoted in the dark. The slum dwellers urged for street lighting systems in and around the LINs.
22. Experts discussed regarding safeguard issues; focusing the sub-project components with its importance including socio economic and health hazard. Also discussed, environmental and social impacts and mitigation measures about air, dust, water pollution and waste management.
23. As per discussion and feedback from the Paurashava staff and all SIC members, the slums were selected through consultation with the local leader/councilors living in the Paurashava area. According to the discussion, the participants appreciated the proposed slum improvement components, as it will improve the health and sanitation conditions of the LIN, which will provide a positive socio-economic impact.
24. The LIN dwellers demanded for more latrines and tube wells and also demanded separate latrines for women. The chairman of the meeting in his concluding speech mentioned that as per allocation of fund, elements of the proposed sub-project have been selected by the LIN dwellers. The sites have been selected based on the available space spreading all over the LIN. However, maximum old sites will be used and nobody will be affected. The toilet designs have considered separate unit for the women and it would not be possible to provide individual tube wells and individual toilets. He requested co-operation from the LIN dwellers during construction activities. The meeting was concluded with thanks from the chair to the participants. (Appendix 3).

i. Grievance Redress Mechanism

25. Grievance redress mechanism (GRM) has been established in the Pourashava to redress quickly social, environmental and any other project related grievances from the affected or any aggrieved person/ party with the creation of grievance redress cell (GRC) comprising of:
26. Affected or aggrieved persons will have the flexibility of conveying grievances/ suggestions in writing and dropping them in complaints/suggestion boxes that have already been installed

in the Pourashava or through telephones, e-mails, by post or by writing in the complaint register in the Pourashava office. The cost related to environmental grievance redress are included in social and resettlement cost estimates.

(i) Grievance Redresses Process

27. **1st Level Grievance:** Names and contact phone numbers of the PIU safeguard focal person will be posted on the construction site at visible location (construction site signboard) to provide first level of contact for quick resolution of the grievances. The LINIC and the PIU safeguard focal person can immediately resolve on-site the grievances in consultation with each other within 7 days of receipt of a complaint/ grievance.

28. **2nd Level Grievance:** The grievances that cannot be redressed within 7 days at field/ ward level will be reviewed by the grievance redress cell (GRC) with support from PIU designated safeguard focal person and MDSC regional environment and resettlement specialists. The GRC will attempt to resolve the complaints/ grievances within 15 days.

29. **3rd Level Grievance**: The PIU designated safeguard focal person will refer the unresolved or, the major issues to the PMU safeguard officer and MDSC safeguard specialists. The PMU, in consultation with the above-mentioned officer/ specialists, will resolve the issues within 30 days. Despite project GRM, an aggrieved person shall have access to the country's legal system at any stage, and assessing can go parallel.

30. If the GRM cannot resolve the issues, the affected person also can use the ADB Accountability Mechanism (AM) through directly contacting (in writing) the Complaint Receiving Officer (CRO) at ADB headquarters or the ADB Bangladesh Resident Mission (BRM) in any of the official languages of ADB.

31. **Recordkeeping:** Records all grievances including date of receive and detailed contract address of complainant, nature of grievance, agreed corrective actions, and the dates these were affected and final outcomes will be kept by PIU. The grievances recorded and resolved and the outcomes will be displayed/ disclosed in the PMU office, Pourashava office, on the web and reported in the semi-annual monitoring reports.

32. **Periodic review and documentation of lessons learnt:** The PMU safeguard officer will periodically review the functioning of the GRM in each Pourashava and record information on the effectiveness of the mechanism.

j. Conclusion

33. So, there will be no negative impact for the implementation of the sub-project and if there is any that would be very minimum most of which are construction related, localized and for short-term. Moreover, there will be a lot of positive impacts such as: Moreover, there will be a lot of positive impacts such as:

- Environmental & sanitation conditions will be improved.
- LIN dwellers will have comfortable walkway and improved drainage.
- Water-logging will be removed which will eliminate the mosquito breeding resulting the reduction of many diseases including waterborne diseases.
- LIN dwellers will have facilities for pure drinking water and facilities for solid waste disposal.
- There will be savings in the medical treatment cost. Thus, health conditions will be improved etc.

Chand Para North South Para LIN (Lot-02)

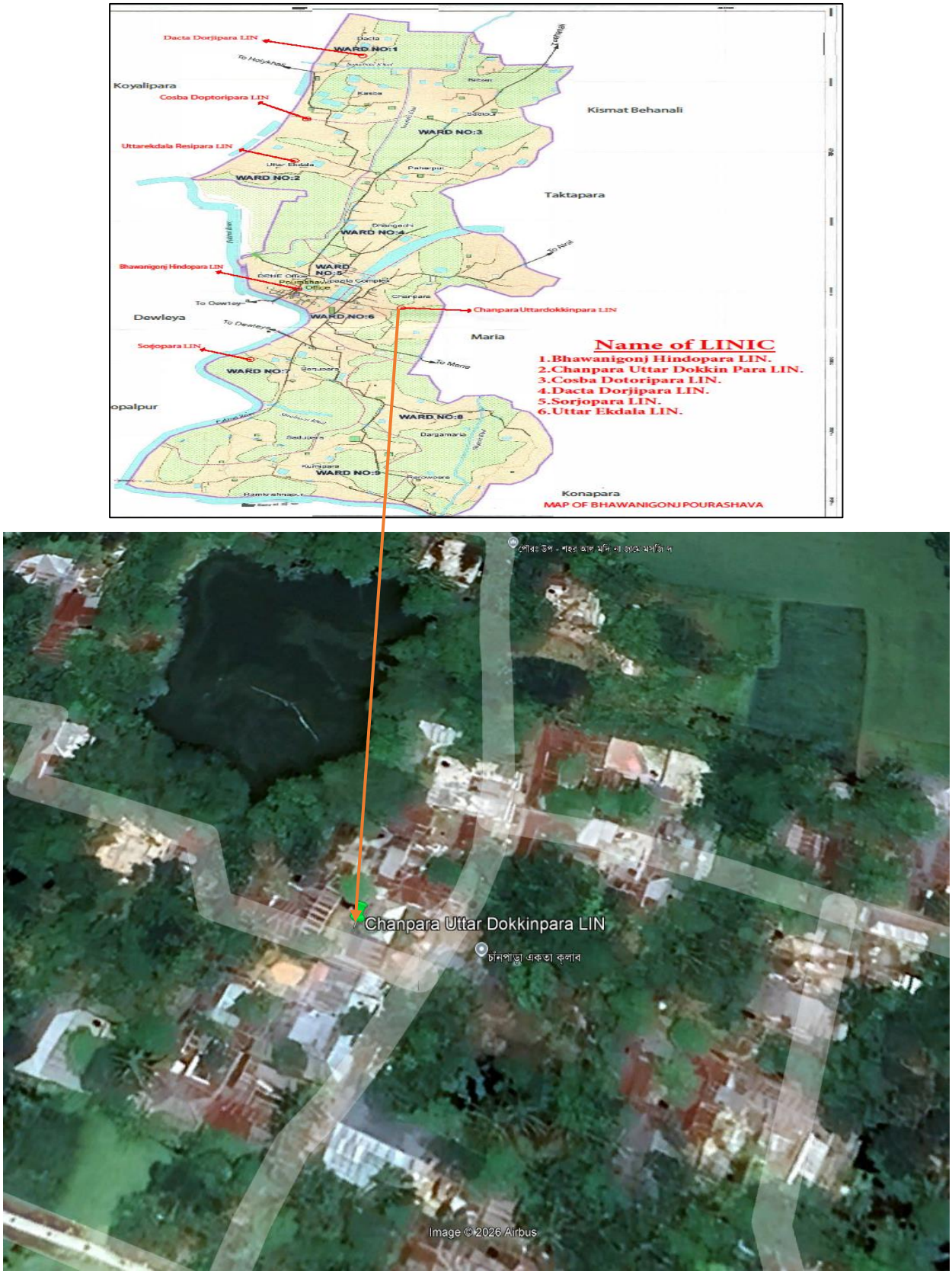
Package No: IUGIP/BHAW/SI/02-06/2023 (Lot-02)

34. The LIN is situated in ward no. 06. There are 99 families with 398 members, of which 194 are males, and 204 are females. The land area is 0.9 acres, and the government & local people own the land. Most of the LIN dwellers earn their livelihood by physical labor. The average income per head per month is less than BDT 3000.00. Almost all families live in katcha, semi-pucca and tin-shed houses. They are deprived of most of the needed basic services. This LIN has an acute problem of inadequate sanitary latrines, inadequate facilities for drinking water, inadequate and deteriorating internal roads/footpaths/walkways, street lighting, dustbins, community space, etc.

a. Location of the LIN

1. The Chand Para North South Para LIN is situated in ward no. 06 under Bhabaniganj Paurashava of Rajshai District;for the location of the LIN in the Bhabaniganj Paurashava map is attached below.

Figure V: Location of Chandpara Uttar Dokkin Para LIN



b. Description of Interventions

Description of the proposed interventions for the is given in Table-2.

Table 2: Description of Proposed Interventions of Chandpara North South Para LIN

Improving Urban Governance and Infrastructure Program (IUGIP)
LIN Improvement Sub-project Package
Pourashava: Bhawaniganj, District: Rajshahi.

Sl. No.	Name of Package	Financial Year		Name and Number/ Length of Scheme	Unit (m/nos)	Amount TK/ (nos/m)	Quantity	Engineer's Estimated Amount (TK)	Remarks
				Name of LIN: Chand Para North South para (Lot-02)					
				Name of works: Construction of 24 Nos Single unit (type-B) toilets with 48 Nos soak pits, 120 meter of Footpath, 200 meter Brick Drain, 05 numbers of solar street light, 10 numbers hand tubewell with 10 Nos soak pits, 1 Nos Dustbin and 100 Nos Tree Plantation in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.					
1	IUGIP/BHAW/SI/01-06/2023 (Lot-02)	2025-2026	a)	Construction of 24 Nos. Single unit (type-B) Toilet with 48 nos soak pit in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	245500.34	24	5,892,008.16	
2			b)	Construction of 01 Nos. Dustbin in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	15248.10	1	15,248.10	
3			c)	Construction of 120 m meter footpath in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.	m	6779.21	120	813,505.12	
4			d)	Construction of 200 m Brick drain with top slab in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.	m	6064.29	200	1,212,858.53	
5			e)	Installation of 05 Number solar street light in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	94481.79	5	472,408.95	
6			f)	Installation of 10 number tube well with 10 Nos soak pits in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	66925.45	10	669,254.50	
7			g)	Plantation of 100 nos. Tree in Chand Para North South para LIN, at Ward no.-06 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	495.00	100	49,500.00	
				Total (Lot-02) Amount =				9,124,783.36	

Md. Thoufikul Islam, Sub-Assistant Engineer (Civil), Bhawaniganj Pourashava, Rajshahi. 16-09-25
Md. Razanuzzaman, Municipal Engineer-10, Bhawanigonj Pourashava, Rajshahi 16-09-25
Liton Miah, Assistant Engineer, Shawanigong Pourashava, Rajshahi. 16/09/25
Mohammad Mehedi Hassan, Administrator, Bhawanigonj Pourashava, Rajshahi 21/10/25
Dr. Khondokar Abu Z, Team Leader, MDS Consultants, IU, LGED, Dhaka
Md. Mamun, Assistant Engineer, LKSS, SIP, LGED HQ, Dhaka 21.10.25
Ria Khanam Ria, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka. 27/10/25
Mohd. Golam Sarwar, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka
Md. Nasir Uddin, Deputy Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka. 27/10/25
Tofail Ahamed, Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka.

c. Present Condition (Baseline Environment)

(i) Flooding/Water-clogging

35. Water-clogging persists in this LIN, especially in the monsoon season. The existing drains are earthen and are not functioning. Water logging condition occurs due to moderate and heavy rainfall. Rain water in the monsoon and the water coming out from bathing and washing round the year are stagnant there. As such water logging becomes a common feature there. Construction of drain is necessary in this LIN.

(ii) Water Source/Level/Quality/Tube well

36. At present, the LIN people experience problems with the availability of safe drinking water. Adequate tube wells and piped water supply lines are not available in the LIN. Additionally, the bore-log records indicate that the aquifer contains groundwater with iron, manganese, arsenic, hardness, and chloride concentrations etc.

(iii) Sanitations

37. There is insufficient toilets facility in the LIN area. LIN dwellers have no enough hygienic sanitation. There are 24 nos proposal sanitation improvement within the LIN area.

(iv) Access Roads/Footpaths

38. A CC (cement concrete) access road exists within the LIN area. However, there are no paved (pucca) walkways inside the LIN. LIN dwellers wanted footpath for their communication within the LIN area. A 120 m long CC footpath is proposed under this subproject. LIN area is

connected by Pourashava roads. The proposed Footpaths have been designed with cement concrete (CC) crushed stone chips and over Single Layer Brick Flat Soling (BFS). LIN area is connected by Pourashava roads. Images of existing access roads of the LIN are shown in Figure VI. Typical design of footpath is given in Appendix-1.

Figure VI: Existing Situation at Chand Para North South Para

Chand Para North South Para

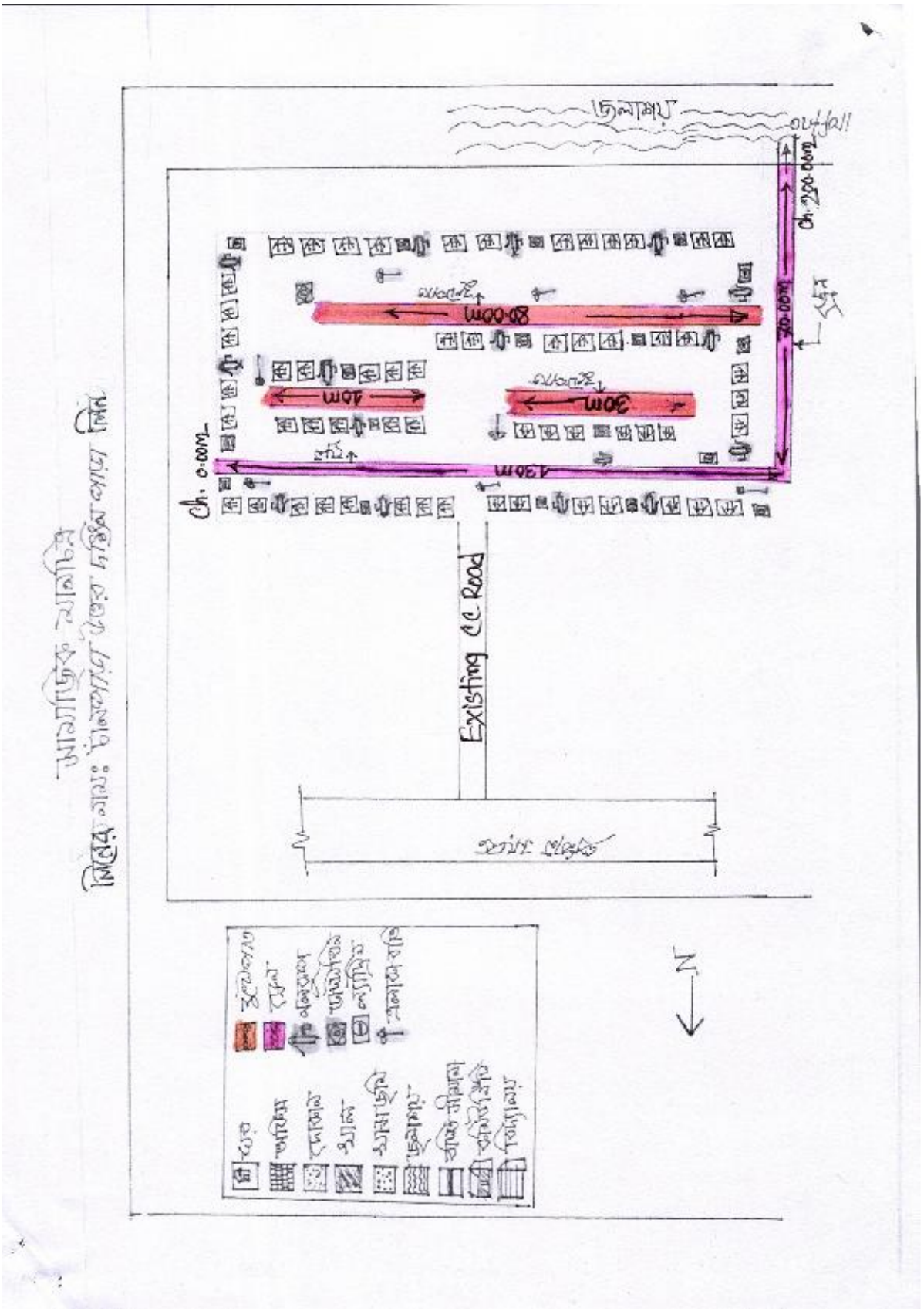
(v) Solar Street Lights

39. There are insufficient numbers of street light in this LIN area therefore 05 nos provisions of light are proposed under this package.

(vi) Drain

40. The existing drains are earthen and are inactive. So, the LIN dwellers experience water logging especially during rainy season. The out fall of proposed drain is Pourashava existing drain (site map) and the coming water to the proposed drain 200m is only from rainfall run-off or household waste water. The drain have been designed to be built by RCC. But well-defined slopes and outfalls have been ensured. The U-type drains have been designed considering the constraint in land availability. The design life has been considered as 20 years. Integration/connection of Road side drains with the town drainage system has been considered and considering the possibilities of increased precipitation owing to probable climate change, the sections have been designed keeping allowance to accommodate 10% additional flow. Typical Design of drains is given in Appendix-1.

d. Site Map of Chand Para North South Para LIN Area



e. Baseline Information

All LINS fall under a single Pourashava, so their baseline profiles are nearly identical, differing only in aspects of Physical Cultural Resources.

41. The key baseline information on the LIN area is depicted in below table:

Sl	Key environmental and social aspects	Key baseline information
1	Noise	Noise is not a major impediment for the quality of the environment in the study area. Vehicles such as motorcycle, tempo, mini truck, votvoti, and tractor trailer etc. move on the road during day and night. These vehicles generate noise in the sub-project area but within tolerable limit in most cases. No other perceptible sources of noise generation such as factories, industries, etc. are found near by the sub-project area.
2	Air	Ambient air quality data were not available for the project area. In general, the ambient air quality within the LIN area of Bhawaniganj Pourashava is considered to be good, as there are no major industrial establishments, thermal power plants, brick kilns within the immediate project area, or other significant stationary sources of air pollution. Limited vehicular emissions are generated from occasional inter-Pourashava traffic, including motorcycles, auto-rickshaws, trucks, and other light vehicles using the regional and local road network. Traffic volume within the Pourashava is generally low to moderate; however, emissions increase temporarily during market hours and at road intersections where traffic congestion occasionally occurs. Fugitive dust is generated from unpaved or deteriorated road surfaces, particularly during the dry season, as well as from localized construction activities. Open burning of household waste and emissions from the use of local woods for cooking also produce localized smoke and odour. However, these activities are sporadic and are not expected to significantly affect the overall ambient air quality within the LIN area.
3	Ground water	The quality of groundwater extracted from shallow aquifers is generally poor, as many shallow tube wells contain arsenic concentrations, while elevated iron concentrations are common throughout the area. Consequently, groundwater from shallow aquifers is often unsuitable for drinking without appropriate treatment. The lower deep aquifer is found at a depth of 80 m to 120 m. Fresh groundwater from deep aquifers is extracted to meet the water demand of the inhabitants of the Pourashava.

Sl	Key environmental and social aspects	Key baseline information
4	Surface water	Rivers, canals (khals), and ponds occupy approximately 232.427 acres (7.41%) of the total land area of Bhawaniganj Pourashava. The canal network is hydraulically connected to the adjacent Rani River and plays an important role in local drainage and irrigation. During the dry season, water levels in the canals decline considerably, and some canal sections are used for agricultural cultivation. During the rainy season, the canals overflow and inundate low-lying areas of the Pourashava. There are numerous ponds, ditches, and four canals in Bhawaniganj Pourashava that serve as sources of surface water. Surface water quality is influenced by runoff from surrounding agricultural lands. The use of insecticides and chemical fertilizers in crop fields results in the transport of agrochemicals into nearby canals and ponds during rainfall events, contributing to localized surface water pollution. In addition, domestic wastewater, solid waste disposal, and other human activities may also affect the quality of surface water bodies in certain locations.
5	Ecological Resources and Protected Area (PA)	The sub-project components are located within the Bhawaniganj Pourashava urban area and its immediate built-up surroundings. Common flora identified in the area includes Mango (*Mangifera indica*), Jackfruit (*Artocarpus heterophyllus*), Kalojam (*Syzygium cumini*), Betel nut palm (*Areca catechu*), Coconut palm (*Cocos nucifera*), Guava (*Psidium guajava*), Neem (*Azadirachta indica*), Raintree (*Samanea saman*) etc. Common terrestrial fauna includes local birds (myna, house crow), small mammals (squirrels, bats), and common reptiles and amphibians. Aquatic resources are centered around the Barasia River, canals and ponds, supporting common freshwater fish species (Ruhi, Katla, Shing, Magur). There are no declared Ecologically Critical Areas (ECAs), National Parks, Wildlife Sanctuaries, Ramsar sites, or critical breeding grounds within or adjacent to the project site. No rare, endemic, or endangered species of flora or fauna have been recorded in the area.

SI	Key environmental and social aspects	Key baseline information
6	Physical and Cultural Resources	There is no accurate information about the naming of Bhabaniganj Pourashava. The Pourashava was previously a Union Parishad which was converted into a Pourashava in 2000. The Pourashava. is located on the banks of the Rani River. There is no amusement park, playground, cinema hall for entertainment in the Pourashava. The Pourashava consists of nine wards.

f. Environmental Impact Assessment and Mitigation

42. (The review process will be greatly facilitated by comprehensive and detailed answers in this section. When completing this section, please state a specific reason [i.e., "there will be no impacts to environment because this project will not involve any disturbance"] and cite a source [i.e., local master plan, previous environmental assessment, correspondence with Pourashava Office, etc.] to support a response of "no impact (-)" or "potential to impact (+)."')

43. The LIN toilets are being considered with two types of design: (i) Type A, and (ii) Type B. Type A is considered with septic tank whereas Type B considered with pit along with soak pit. The note from the Pourashava engineers taken that in many of the LIN area there is shortage of space for constructing septic tank where soak pit is designed with the pit. However, such soak pit has mitigation measure for ground or surface water contamination (e.g., sand and brick chips envelope on the bottom of pit). Moreover, municipality will ensure good maintenance for such toilets having soak pit.
44. The demolition, construction, and waste management activities in the LIN area may generate several short-term and localized environmental impacts. Dust from demolition, debris movement, and broken footpaths can impair air quality, while demolition and temporary camps may create unhygienic conditions. Noise from demolition is minimal. Since project activities are scattered and not near water bodies, the likelihood of surface or groundwater pollution is low. Pollution from construction work yards is minimal, requiring only limited environmental monitoring. Finally, urban construction activities such as excavation and earthmoving carry inherent occupational safety risks, particularly related to working at heights or in excavated areas, though these risks are reversible with proper mitigation.

(i) Pre-construction and Construction Phase

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
Demolition of existing infrastructure: - Dust from demolition - Noise from demolition - Waste from demolition - Un-hygiene of demolition	(-)	-Different activities regarding the demolishing the existing structure (part) and broken footpath generate dust which impair the air quality -Unhygienic/unsanitary environment due to demolition of old/poor infrastructure and construction of camps in the development site -Creation of noise from demolition is negligible	-Water will be sprayed to control the dust, which is the main way to suppress dust in the working site as per necessary Appendix-2 EMP cost. -Apply water to disturbed soils after demolition is completed or at the end of each day of cleanup. -Transport/handle debris from demolished infrastructures in a hygienic manner. -Tree plantation at the LIN boundary/open space/slope on the basis of space availability -Collection of construction debris and dispose in a hygienic way by LINIC and it is included in engineering estimate item (LGED rate schedule) -PIU/LINIC will strongly monitoring the construction activity and instant action will take.	PIU, LINIC
Dust Management	(-)	-Moving debris/sediments may create dusts during dry season. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures	- Use tarpaulins to cover soils, sand and other loose material. -Water will be sprayed to control the dust when necessary	PIU, LINIC
Community facilities and services - Blockage to access roads - Fire & Safety	(-)	- Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. Poor safety signage and lack of barriers at work site and trenches will create hazard to pedestrians and children. - Chances of fire only from open cooking in the area which may create major loss of property to the residence in the LIN.	- Provide safety signage at all sites visible to public that is monitored by PIU/LINIC and it will be confirmed in semi-annual monitoring report - Provide safety barriers near any trenches, and cover trenches with planks during non-work hours. - LINIC's activities and movement of staff will be restricted to designated construction areas. - Consult with Pourashava local authority on the designated areas for stockpiling of, soils, gravel, and other construction materials. - If the LINIC chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner. - Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged. - Workers need to be made aware of the following general rules: (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction workers are to make use of the facilities provided for them, as opposed to ad hoc alternatives (e.g. fires for cooking, the use of surrounding bushes as a toilet facility); (iv) no fires permitted on site except if needed for the construction works; (v) other than pre-approved security staff, no workers shall be permitted to live on the construction site; and (vi) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do. - Bucket filled with sand will be kept at the construction zone.	PIU, LINIC
Air/water/noise quality monitoring	(-)	- Component of works are scattered in the LIN area, which are not located near-by any water stream/canal. There stands little probability of	- No need for Air/water/noise quality monitoring in construction area by test due to short-term effect. - Water will be sprayed to control the dust when necessary, it will be visually observed	Not required

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
		surface and ground water pollution, as nothing like gasoline, oil, road salts and chemicals are dumped on the adjoining ground. - Construction work yards are located in small areas and its activities are also minimum. Here the intensity of pollution from air/dust/ noise is also very low and short-term. As such little monitoring of water/air/noise pollution parameters is needed at the surroundings work place.		
Drainage congestion/water logging	(-)	- Clogging/stagnation of flow in the storm drain, source of waste water is LIN dweller used water (bathing and washing) - Backflow of water through drain (e.g. due to high water level at downstream discharge point, such as khal/ river) - Drainage congestion/water logging due to cross road/construction activity	-Designing drain considering the downstream discharge point; adequate slope and x-section; RCC cover for drain, where appropriate - Not allowing direct connection to drain from toilet -The out fall of proposed drain is Pourashava existing drain	PIU, LINIC
Waste Management	(-)	- Uncollected wastes blocked the drainage and sewage system. - Air, water and soil pollution during the waste collection - Smoke from the open burning of uncollected waste. - The loading and unloading of waste at transfer station pollutes the air and soil. - Odor from waste disposal site and composting system. - Contamination of ground water by leachate.	- Follow the waste management plan given in Appendix 4 during construction period. - Encourage 3R (reduce, reuse, and recycle) - Encourage composting of kitchen waste on the basis of land availability otherwise transfer waste by hand trolley/van that is available in Pourashava and it is inspired by EMP implementation training - Adequate distance between waste bin and water body. - Adequate distance should be maintained between the waste collection point and house - Coordinate with the municipality for collection of domestic waste and disposal at the designated site	PIU, LINIC
Workers H & S	(-)	-There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.	- Comply with requirements of GoB Labor Law of 2006, Labor law and services rules 2015 and all applicable laws and standards on workers H & S. - Ensure adequate safety and provisions as per the Appendix 5 in relation to the COVID-19. - Produce and implement a site health and safety (H&S) plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use PPE at all times; (iii) providing (H&S) training for all site personnel; (iv) Providing fire extinguisher at construction site (v) documenting procedures to be followed for all site activities; and (vi) maintaining accident reports and records. - Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances.	PIU, LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
			- Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times. - Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;	
Sanitation/excreta management	(-)	- Noise and soil pollution during the construction but short- term - Microbial contamination to the ground water from the pit latrine. - Waste during loading of sewage from the sanitary communal containers. - Odor	- Design and installation of sanitary toilet to stop the microbial contamination to the ground water. - Adequate height with proper ventilation. - Water supply and hand wash facility - Regular cleaning and monitoring - 5-10m distance should be maintained between toilet and tube-well	PIU, LINIC
Water supply (Tube well)	(-)	- Noise, dust and soil pollution during the construction but short- term	- The digging of soil should follow the proper design to avoid the pollution and water logging - The outlet of tube well should be connected with soak pit to existing drain. - A person has been engaged for cleaning and maintenance of Tube well. - One set of maintenance equipment of Tube well is kept with LINIC selected person.	PIU, LINIC
Footpath/connecting Road	(-)	- Dust and noise pollution from construction work	- Watering to reduce dust - Tree plantation on the footpath/road slope	PIU, LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the construction workers	-LINIC and all workers will be required to undergo EMP implementation including waste management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labor laws, applicable environmental laws, etc. - Provided training on use of TW, toilet, solar panel and tree plantation etc. during preparation of Community Action Plan (CAP) -Training is a continuous process by Capacity Development Fund of Pourashava. It is financed by IUGIP-III.	Pourashava PRAP budget

- (Construction Phase (For any "negative" impacts "environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

(ii) Operation Phase/Post-Construction

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water logging in drains and footpaths	(-)	Run-off from debris/ sediments from repair and maintenance of Footpath and drain which may cause siltation and reduction in the quality of adjacent bodies of water. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	- Take all precautions to prevent run-off into streams, water courses, or irrigation system. Install temporary silt traps or sedimentation basins along drainage leading to the water bodies. - Remove all debris/sediments immediately. - Dispose debris/sediments at a designated site such as landfill.	PIU/ LINIC
Water quality monitoring (Arsenic, Iron, Chloride, Manganese etc.) (twice a year)	(-)	Due to polluted water people may suffers from dangerous diseases like cholera, dysentery, diarrhea, Gastrointestinal disease and jaundice etc.	Necessary test will be performed occasionally by testing water sample from the tube wells (Pourashava PRAP budget)	PIU/LINIC
Solid Waste management	(-)	-Due to open dumping ambient environment will be polluted and will be breeding place of flies -Threat to human health and/or the environment -Due to bad odor nuisance to sensitive receptors	-There is an existing sanitary landfill (SLF) of the Pourashava under CRDP and the waste management system will be connected with this system obviously. -The waste will soon be carried to the existing SLF by Pourashava SWM system -Develop rodent and fly control plan -Ensure residual waste is not left in bins and allowed to decompose for a long time	PIU/LINIC
Community H & S - Walkway - Toilet conditions - Drinking water quality (Tube well)	(-)	-The inhabitants may dump waste on the walkway -Bricks used in BFS, may be stolen when CC will wear out with the passage of time -Inadequate supply of water to toilet may spread bad odor -Improper use may spread germ -Irregular cleaning may create unhygienic condition -Epidemic may spread due to deteriorated quality of water	-Awareness to the inhabitants to discourage dumping of waste on the walkway -Ensure routine maintenance by the LINIC -Continuous supply of water will be provided -Awareness to user for proper use of latrine -LINIC will engage a person to clean and maintenance of Toilet and tube well regularly -Periodic maintenance of Tube well and Toilet will be done by Pourashava PRAP budget -Inspect soak pits periodically to determine filling levels. -Scheduled Dislodging: Arrange timely desludging before overflow occurs. --Use mechanical desludging systems instead of manual entry. Follow confined-space entry protocols if entry is unavoidable. -Train workers on safe handling of human waste and emergency procedures. --Transport and dispose of sludge only at approved treatment facilities.	PIU/LINIC
Dustbin	(-)	- Improper use of dustbins - Irregular cleaning of dustbin may create bad odor and birth place of flies	- Awareness to the LIN dwellers for proper use of dustbins - LINIC will engage a person who will monitor the cleaning the dustbin regularly	PIU/LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the community	-Twice a year Training/workshop/ meeting for maintenance of TW, Toilet, Planted Tree and Solar panel will be organized by LINIC/PIU and financed by Pourashava PRAP fund. -Provided training on maintenance of TW, toilet and Planted Tree, solar panel during preparation of Community Action Plan (CAP)	Pourashava PRAP budget

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
			-Inventory Management: Keep records of all solar street light components (panels, batteries, controllers). -Proper Storage: Store damaged or expired components safely in designated areas. -Authorized Disposal: Send batteries, panels, and electronic parts to licensed e-waste recyclers; do not burn or dump. -Staff Training: Train maintenance personnel on the safe handling, segregation, and reporting of e-waste. -Replacement Plan: Establish a system for replacing non-functional components and managing them as e-waste. -Regular maintenance of planted tree by LIN dwellers.	

- (Operation Phase (For any "negative" impacts "environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

g. Environmental Management Plan (EMP)

(i) Monitoring Plan (Construction and Operation Period)

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Water quality	-Contamination (Arsenic, Iron, Chloride, Manganese etc.) or degrading of water quality of drinking water well	-Water quality of tube well will be tested after installation/construction by LINIC and it is included in engineering estimate (Item LGED rate schedule) -Water quality of Tube well will be monitored periodically and DoE standard will be maintained properly. -The outlet of household waste water would be connected with Pourashava existing drain -PIU/LINIC will strongly monitoring the performance of the interventions	Twice a year/Yearly Operation /completion work	Pourashava
Dust from drains, footpaths, toilets, street light, dustbins and tube well	-Air and noise pollution may occur due to construction/operation -Irregular cleaning may damage the interventions	-Use tarpaulins to cover soils, sand and other loose material. -Water will be sprayed to control the dust when necessary -Regular maintenance/cleaning -PIU/LINIC will strongly monitoring the performance of the interventions	As per necessary	PIU/LINIC
Acoustic environment	Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	Plan activities in consultation with Pourashava local authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	No need for noise quality monitoring due to short-term project	Pourashava

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Biodiversity	Activities in the built-up area of Pourashava. There are no protected areas in or around Sub-project sites, and no known areas of ecological interest.	●No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission. ● Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal).	No need for monitoring due to short-term project	Pourashava
Existing provisions for pedestrians and other forms of transport	Footpath closure is not anticipated. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	●Maintain safe passage for pedestrians during maintenance activities. ●Notify affected sensitive receptors by providing sign boards informing nature and duration of maintenance activities and contact numbers for concerns/complaints. ●Leave spaces for access between mounds of soil. ●Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.	Duration of construction works	Pourashava
Worker's health and safety	Workers need to be mindful of the occupational hazards working in confined spaces such as closed drains. Potential impacts are negative and long-term but reversible by mitigation measures.	●Comply with requirements of Government of Bangladesh Labor Law of 2006, Labor Law services rule 2015 and all applicable laws and standards on workers H&S. ●Ensure adequate safety and provisions as per the Annex 8 in relation to the COVID-19. ●Ensure that all site personnel have a basic level of H&S training. ●Produce and implement a O&M and H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training for all site personnel; (iv) providing fire extinguisher at construction site ●Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances ●Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	Duration of construction works	Pourashava/LINIC

h. Public Consultations

45. A public consultation meeting was held at Chand Para North South Para LIN on 13 October 2022. A total of 20 participants attended the meeting where 20 were female. SIC members, teachers, farmers, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of IUGIP visited the slum of the Paurashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the slums. The meeting was presided over by the Assistant Engineer of Bhabaniganj Paurashava.

Time of Public Consultation

Site : Chand Para North South Para LIN

Time : 10:00 AM

46. Participants of the meeting exchanged views with the safeguard team about their sufferings and the remedial measures to be taken to overcome it. At present the LIN dwellers use hanging and pit latrine, which is a threat to public health and un-hygienic as well. They insisted for a community latrine to overcome it. The drinking water was the burning issue. The water available at the LIN was inadequate and non-potable due to impurities (e.g., excessive iron). They urged for sufficient potable water at their door step. Water logging was an additional problem of the LINs. Their yard inundates during rainy season. It creates an un-hygienic condition of living. They wanted immediate relief from it, through an installation of proper drainage system. Inadequate internal road communication made their livelihood slower. A proper footpath would ease their safe movement. They asked for a proper footpath system in their LIN. There is inadequate dustbin in or around the LINs. As such they cannot dump the waste specially the kitchen waste properly. It creates bad odor and un-hygienic condition in and around the LIN. They wanted installation of dustbins. Inadequate light during night time is an additional problem. Social nuisance creates at it. Pilferage and unsocial activities promote in the dark. The LIN dwellers urged for street lighting system in and around the LINs.
47. Experts discussed regarding safeguard issues; focusing the sub-project components with its importance including socio economic and health hazard. Also discussed, environmental and social impacts and mitigation measures about air, dust, water pollution and waste management.
48. As per discussion and feedback from the SDO and all LINIC members, the LINs were selected through consultation with the local leader/councilors living in the Pourashava area. According to the discussion, the participants appreciated the proposed LIN improvement components, as it will improve the health and sanitation conditions of the LIN which will provide positive socio-economic impact.
49. The LIN dwellers demanded for more latrines and tube wells and also demanded separate latrines for women. The chairman of the meeting in his concluding speech mentioned that as per allocation of fund, elements of the proposed sub-project have been selected by the LIN dwellers. The sites have been selected based on the available space spreading all over the LIN. However, maximum old sites will be used and nobody will be affected. The toilet designs have considered separate unit for the women and it would not be possible to provide individual tube wells and individual toilets. He requested co-operation from the LIN dwellers during construction activities. The meeting was concluded with thanks from the chair to the participants. (Appendix 3).

i. Grievance Redress Mechanism

50. Grievance redress mechanism (GRM) has been established in the Pourashava to redress quickly social, environmental and any other project related grievances from the affected or any aggrieved person/ party with the creation of grievance redress cell (GRC) comprising of:

46. Affected or aggrieved persons will have the flexibility of conveying grievances/ suggestions in writing and dropping them in complaints/suggestion boxes that have already been installed in the Pourashava or through telephones, e-mails, by post or by writing in the complaint register in the Pourashava office. The cost related to environmental grievance redress are included in social and resettlement cost estimates.

Grievance Redresses Process:

1st Level Grievance: Names and contact phone numbers of the PIU safeguard focal person will be posted on the construction site at visible location (construction site signboard) to provide first level of contact for quick resolution of the grievances. The LINIC and the PIU safeguard focal person can immediately resolve on-site the grievances in consultation with each other within 7 days of receipt of a complaint/ grievance.

2nd Level Grievance: The grievances that cannot be redressed within 7 days at field/ ward level will be reviewed by the grievance redress cell (GRC) with support from PIU designated safeguard focal person and MDSC regional environment and resettlement specialists. The GRC will attempt to resolve the complaints/ grievances within 15 days.

3rd Level Grievance: The PIU designated safeguard focal person will refer the unresolved or, the major issues to the PMU safeguard officer and MDSC safeguard specialists. The PMU, in consultation with the above-mentioned officer/ specialists, will resolve the issues within 30 days. Despite project GRM, an aggrieved person shall have access to the country's legal system at any stage, and assessing can go parallel.

51. If the GRM cannot resolve the issues, the affected person also can use the ADB Accountability Mechanism (AM) through directly contacting (in writing) the Complaint Receiving Officer (CRO) at ADB headquarters or the ADB Bangladesh Resident Mission (BRM) in any of the official languages of ADB.
52. **Recordkeeping:** Records all grievances including date of receive and detailed contract address of complainant, nature of grievance, agreed corrective actions, and the dates these were affected and final outcomes will be kept by PIU. The grievances recorded and resolved and the outcomes will be displayed/ disclosed in the PMU office, Pourashava office, on the web and reported in the semi-annual monitoring reports.
53. **Periodic review and documentation of lessons learnt:** The PMU safeguard officer will periodically review the functioning of the GRM in each Pourashava and record information on the effectiveness of the mechanism.

j. Conclusion

54. So, there will be no negative impact for the implementation of the sub-project and if there is any that would be very minimum most of which are construction related, localized and for short-term. Moreover, there will be a lot of positive impacts such as:

- Environmental & sanitation conditions will be improved.
- LIN dwellers will have comfortable walkway and improved drainage.
- Water-logging will be removed which will eliminate the mosquito breeding resulting the reduction of many diseases including waterborne diseases.
- LIN dwellers will have facilities for pure drinking water and facilities for solid waste disposal.
- There will be savings in the medical treatment cost. Thus, health conditions will be improved etc.

Kosba Doptori Para LIN (Lot-03) (Ward no.01)

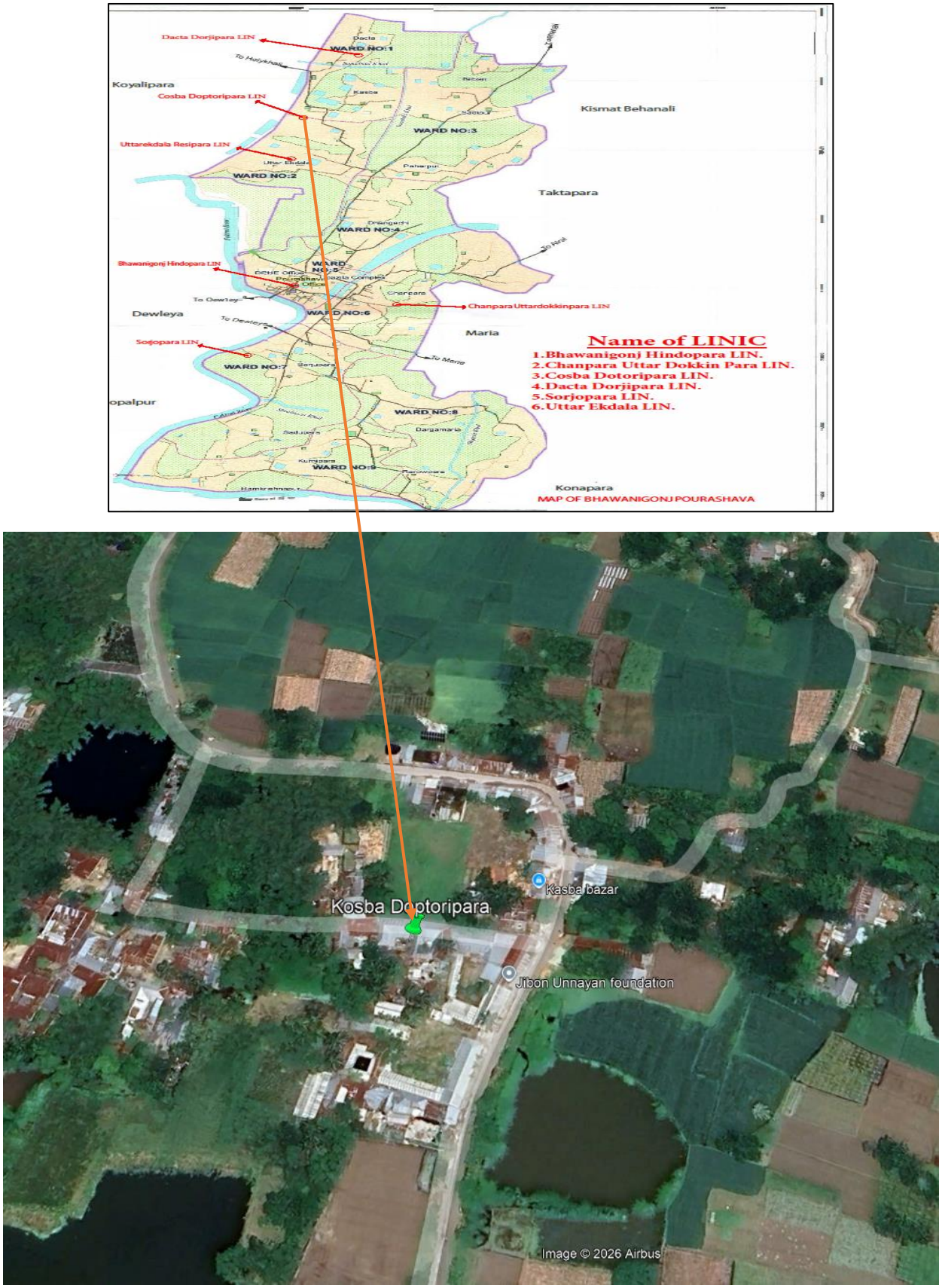
Package No: IUGIP/BHAW/SI/03-05/2023 (Lot-03)

55. The LIN is situated in ward no. 01. There are 63 families with 177 members, of which 89 are males, and 88 are females. The land area is 0.45 acres, and the government & local people own the land. Most of the LIN dwellers earn their livelihood by physical labor. The average income per head per month is less than BDT 5000.00. Almost all families live in tin-shed houses. They are deprived of most of the needed basic services. This LIN has an acute problem of inadequate sanitary latrines, inadequate facilities for drinking water, inadequate and deteriorating internal roads/footpaths/walkways, street lighting, dustbins, community space, etc.

a. Location of the LIN

56. The LIN Kosba Doptori Para is situated in ward no. 01 under Bhabaniganj Paurashava of Rajshai District; for the location of the slum in the Bhabaniganj Paurashava map in given below.

Figure VII: Location of Kosba Doptori Para LIN



b. Description of Interventions

57. A description of the proposed interventions Kosba Doptori Para LIN is given in Table 3.

Table 3: Description of Proposed Interventions of Kosba Doptori Para LIN

Improving Urban Governance and Infrastructure Program (IUGIP)
LIN Improvement Sub-project Package
Pourashava: Bhawaniganj, District: Rajshahi.

Sl. No.	Name of Package	Financial Year		Name and Number/ Length of Scheme	Unit (m/nos)	Amount TK/ (nos/m)	Quantity	Engineer's Estimated Amount (TK)	Remarks
				Name of LIN: Kosba Doptori Para (Lot-03)					
				Name of works: Construction of 19 Nos Single unit (type-B) toilets with 38 Nos soak pits, 230 meter of Footpath, 300 meter Brick Drain, 05 numbers of solar street light, 06 numbers hand tubewell with 06 Nos soak pits, 1 Nos Dustbin and 100 Nos Tree Plantation in Kosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.					
1	IUGIP/BHAW/SI/01-06/2023 (Lot-03)	2025-2026	a)	Construction of 19 Nos. Single unit (type-B) Toilet with 38 nos soak pit in Kosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	245500.34	19	4,664,506.46	
2			b)	Construction of 01 Nos. Dustbin in Kosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	15248.10	1	15,248.10	
3			c)	Construction of 230m footpath in Kosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	m	7197.46	230	1,655,416.39	
4			d)	Construction of 300m Brick drain with top slab in Kosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	m	6011.46	300	1,803,437.61	
5			e)	Installation of 05 Number solar street light in KKosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	94481.79	5	472,408.95	
6			f)	Installation of 06 number tube well with 06 Nos soak pits in Kosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	66925.45	6	401,552.70	
7			g)	Plantation of 100 nos. Tree in Kosba Doptori Para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	495.00	100	49,500.00	
				Total (Lot-03) Amount =				**9,062,070.21**	

Md. Thoufikul Islam, Sub-Assistant Engineer (Civil), Bhawanigonj Pourashava, Rajshahi. 16.09.25
Liton Mia, Assistant Engineer, Bhawanigong Pourashava, Rajshahi.
Md. Razanuzzaman, Municipal Engineer-10, Bhawanigonj Pourashava, Rajshahi. 16-09-25
Mohammad Mehedi Hassan, Administrator, Bhawanigonj Pourashava, Rajshahi
Dr. Khondokar Abu Zafor, Team Leader, MDS Consultants, IUGIP, LGED, Dhaka
Md. Mamun, Sub-Assistant Engineer, LGSS, IUGIP, LGED HQ, Dhaka. 21.10.25
Ria Khanam Ria, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka.
Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka.
Md. Nasir Uddin, Deputy Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka.
Tofail Ahamed, Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka

c. Present Condition (Baseline Environment)

I. Flooding/Water-clogging

Water-clogging persists in this LIN, especially in the monsoon season. The existing drains are earthen and are not functioning. Water logging condition occurs due to moderate and heavy rainfall. Rain water in the monsoon and the water coming out from bathing and washing round the year are stagnant there. As such water logging becomes a common feature there. Construction of drain is necessary in this LIN.

II. Water Source/Level/Quality/Tube well

At present, the LIN people experience problems with the availability of safe drinking water. Adequate tube wells and piped water supply lines are not available in the LIN. Additionally, the bore-log records indicate that the aquifer contains groundwater with iron, manganese, arsenic, hardness, and chloride concentrations etc.

III. Sanitations

There is insufficient toilets facility in the LIN area. LIN dwellers do not have enough hygienic sanitation. There is 19 nos proposal sanitation improvement within the LIN area.

IV. Access Roads/Footpaths

A CC (cement concrete) access road exists within the LIN area. However, there are no paved (pucca) walkways inside the LIN. LIN dwellers wanted footpath for their communication within the

LIN area. A 120 m long CC footpath is proposed under this subproject. LIN area is connected by Pourashava roads. The proposed Footpaths have been designed with cement concrete (CC) crushed stone chips and over Single Layer Brick Flat Soling (BFS). LIN area is connected by Pourashava roads. Images of existing access roads of the LIN are shown in Figure VIII. Typical design of footpath is given in Appendix-1.

V. Street Lights

There are insufficient numbers of street light in this LIN area therefore 05 nos provisions of light are proposed under this package.

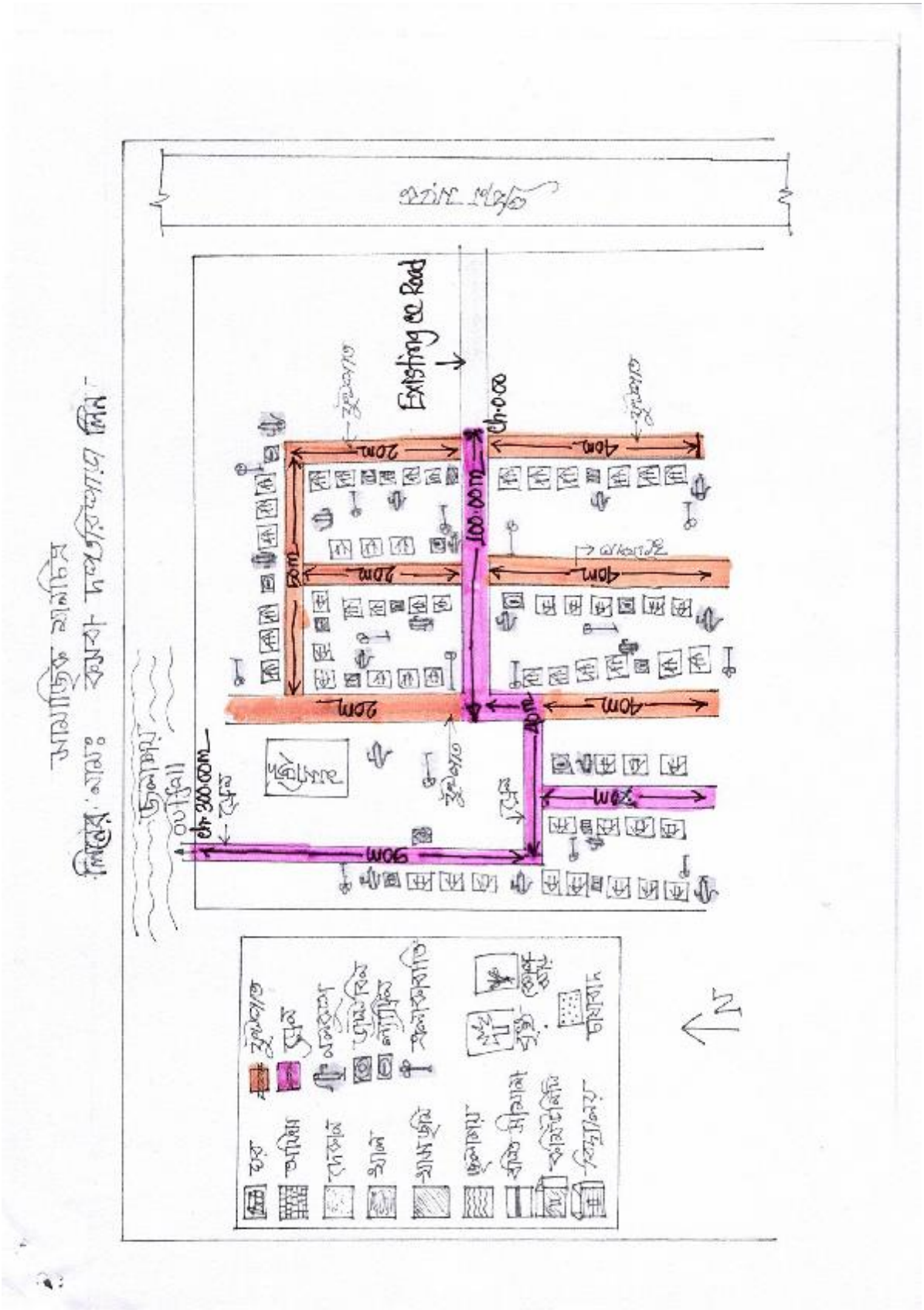
VI. Drain

The existing drains are earthen and are inactive. So, the LIN dwellers experience water logging especially during rainy season. The out fall of proposed drain is Khal (site map). The drain (total 150 m long) has been designed to be constructed using RCC and brick masonry. Proper longitudinal slopes and adequate outfalls have been ensured. The U-type drains have been designed considering the constraint in land availability. The design life has been considered as 20 years. Integration/connection of Road side drains with the town drainage system has been considered and considering the possibilities of increased precipitation owing to probable climate change, the sections have been designed keeping allowance to accommodate 10% additional flow.

Figure VIII: Existing Situation at Kosba Doptori Para LIN

Kosba Doptori Para LIN

d. Site Map of the Kosba Doptori Para LIN



e. Baseline information

All LINS fall under a single pourashava, so their baseline profiles are nearly identical, differing only in aspects of Physical Cultural Resources.

58. The key baseline information on the LIN area is depicted in below table:

Sl	Key environmental and social aspects	Key baseline information
1	Noise	Noise is not a major impediment for the quality of the environment in the study area. Vehicles such as electric rickshaw, motor cycle, van, tempo, mini truck, votvoti, and tractor trailer etc. move on the road during day and night. Particular areas adjacent to the main road have some noise pollution created by movement of heavy vehicles near LIN. These vehicles generate noise in the LIN area but within tolerable limit in most cases. No other perceptible sources of noise generation such as factories, industries, etc. are found near by the LIN area.
2	Air	Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or damages the natural environment, into the atmosphere. Here quality of air in LIN area of Bhawaniganj Pourashava appears to be clean but due to poor condition of road surface, dust is generated, especially during the movement of vehicles that causes air pollution and may affect sensitive groups. The air quality in LIN area of Bhawaniganj (and Bangladesh more broadly) is mainly caused by particulate matter (PM2.5 and PM10) from brick kilns, vehicle emissions, construction dust, and industrial activity. The Final Master Plan of the Pourashava shows that air pollution is quite a serious environmental consideration having adverse impacts within many parts of the LIN area of Bhawaniganj Pourashava. Operations of shallow engine driven vehicles (Nochiman/ Kariman) that are unfriendly to the environment are responsible for air pollution. Diesel particulate matter (DPM) includes diesel soot and aerosols such as ash particulates, metallic abrasion particles, sulfates, and silicates. Air pollution also occurs by the odor from the open municipal garbage. People are not aware to dispose their solid garbage in to those dustbins rather than open ground. As a result, open garbage disposal is common and it creates serious odor which ultimately affects the surrounding air.
3	Ground water	Ground water pollution also exists in the Bhawaniganj Pourashava. Presence of iron and arsenic as pollutants in ground water are the

SI	Key environmental and social aspects	Key baseline information
		reasons for such pollution. Ground water quality in the Pourashava is influenced by arsenic and iron. Water in most shallow aquifer is arsenic and all are contaminated with iron, not suitable for drinking purposes. The lower deep aquifer is found at a depth of 80 m to 120 m. Deep aquifers with fresh water in the Pourashava are exploited to meet the demand of water for inhabitants.
4	Surface water	River, Canal/Khal and ponds are occupying 7.41% (232.427 acres) land of the Bhawaniganj Pourashava. The canals are linked with the adjacent Rani River. In dry season, the canal uses as agriculture land and in the rainy season the canal submerges lowlands of the Pourashava. The ponds are located around the Pourashava. In dry season, ponds water is using for bathing and washing purposes. Canal water generally uses for irrigation purposes. In Bhawaniganj Pourashava, there are many ponds, ditches and 4 canals as sources of surface water. Surface water pollution originating from the use of insecticide and chemical fertilizers in crop fields. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Cattle bathing and flow of waste water from domestic use discharge into the ponds, khals and river have also identified as reasons for surface water contamination. The Paurashava authority has yet not taken any initiatives to control surface water pollution.[1]
5	Ecological Resources and Protected Area (PA)	The sub-project components are located within the Bhawaniganj Pourashava urban area and its immediate built-up surroundings. Common flora identified in the area includes Mango (*Mangifera indica*), Jackfruit (*Artocarpus heterophyllus*), Kalojam (*Syzygium cumini*), Betel nut palm (*Areca catechu*), Coconut palm (*Cocos nucifera*), Guava (*Psidium guajava*), Neem (*Azadirachta indica*), Raintree (*Samanea saman*) etc. Common terrestrial fauna includes local birds (myna, house crow), small mammals (squirrels, bats), and common reptiles and amphibians. Aquatic resources are centered around the Barasia River, canals and ponds, supporting common freshwater fish species (Ruhi, Katla, Shing, Magur). There are no declared Ecologically Critical Areas (ECAs), National Parks, Wildlife Sanctuaries, Ramsar sites, or critical breeding grounds within

[1] BHAWANIGANJ PAURASHAVA MASTER PLAN: 2011-2031

SI	Key environmental and social aspects	Key baseline information
		or adjacent to the project site. No rare, endemic, or endangered species of flora or fauna have been recorded in the area.
6	Physical Cultural Resources	There is no accurate information about the naming of Bhabaniganj Pourashava. The Pourashava. was previously a Union Parishad which was converted into a Pourashava. in 2000. The Pourashava. is located on the banks of the Rani River. There is no amusement park, playground, cinema hall for entertainment in the Pourashava. The Pourashava. consists of nine wards.

f. Environmental Impact Assessment and Mitigation

59. (The review process will be greatly facilitated by comprehensive and detailed answers in this section. When completing this section, please state a specific reason [i.e., “there will be no impacts to environment because this project will not involve any disturbance”] and cite a source [i.e., local master plan, previous environmental assessment, correspondence with Pourashava Office, etc.] to support a response of “no impact (-)” or “potential to impact (+).”)
60. The LIN toilets are being considered with two types of design: (i) Type A, and (ii) Type B. Type A is considered with septic tank whereas Type B considered with pit along with soak pit. The note from the Pourashava engineers taken that in many of the LIN area there is shortage of space for constructing septic tank where soak pit is designed with the pit. However, such soak pit has mitigation measure for ground or surface water contamination (e.g., sand and brick chips envelope on the bottom of pit). Moreover, municipality will ensure good maintenance for such toilets having soak pit.
61. The demolition, construction, and waste management activities in the LIN area may generate several short-term and localized environmental impacts. Dust from demolition, debris movement, and broken footpaths can impair air quality, while demolition and temporary camps may create unhygienic conditions. Noise from demolition is minimal. Since project activities are scattered and not near water bodies, the likelihood of surface or groundwater pollution is low. Pollution from construction work yards is minimal, requiring only limited environmental monitoring. Finally, urban construction activities such as excavation and earthmoving carry inherent occupational safety risks, particularly related to working at heights or in excavated areas, though these risks are reversible with proper mitigation.

(ii) Pre-construction and Construction Phase

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
Demolition of existing infrastructure: - Dust from demolition - Noise from demolition - Waste from demolition -Un-hygiene of demolition	(-)	-Different activities regarding the demolishing the existing structure (part) and broken footpath generate dust which impair the air quality -Unhygienic/unsanitary environment due to demolition of old/poor infrastructure and construction of camps in the development site -Creation of noise from demolition is negligible	-Water will be sprayed to control the dust, which is the main way to suppress dust in the working site as per necessary Appendix-2 EMP cost. -Apply water to disturbed soils after demolition is completed or at the end of each day of cleanup. - Transport/handle debris from demolished infrastructures in a hygienic manner. -Tree plantation at the LIN boundary/open space/slope on the basis of space availability -Collection of construction debris and dispose in a hygienic way by LINIC and it is included in engineering estimate item (LGED rate schedule) -PIU/LINIC will strongly monitoring the construction activity and instant action will take.	PIU, LINIC
Dust Management	(-)	-Moving debris/sediments may create dusts during dry season. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures	- Use tarpaulins to cover soils, sand and other loose material. - Water will be sprayed to control the dust when necessary	PIU, LINIC
Community facilities and services - Blockage to access roads - Fire & Safety	(-)	- Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. Poor safety signage and lack of barriers at work site and trenches will create hazard to pedestrians and children. - Chances of fire only from open cooking in the area which may create major loss of property to the residence in the LIN.	-Provide safety signage at all sites visible to public that is monitored by PIU/LINIC and it will be confirmed in semi-annual monitoring report -Provide safety barriers near any trenches, and cover trenches with planks during non-work hours. -LINIC's activities and movement of staff will be restricted to designated construction areas. -Consult with Pourashava local authority on the designated areas for stockpiling of, soils, gravel, and other construction materials. -If the LINIC chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner. -Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged. -Workers need to be made aware of the following general rules: (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction workers are to make use of the facilities provided for them; (iv) no fires permitted on site except if needed for the construction works; and (v) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do. - Bucket filled with sand will be kept at the construction zone.	PIU, LINIC
Air/water/noise quality monitoring	(-)	- Component of works are scattered in the LIN area, which are not located near-by any water stream/canal. There stands little probability of surface and ground water pollution, as nothing like gasoline, oil, road salts and chemicals are dumped on the adjoining ground.	- No need for Air/water/noise quality monitoring in construction area by test due to short-term effect. - Water will be sprayed to control the dust, when necessary, it will be visually observed	Not required

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
		- Construction work yards are located in small areas and its activities are also minimum. Here the intensity of pollution from air/dust/ noise is also very low and short-term. As such little monitoring of water/air/noise pollution parameters is needed at the surroundings work place.		
Drainage congestion/water logging	(-)	- Clogging/stagnation of flow in the storm drain, source of waste water is LIN dweller used water (bathing and washing) - Backflow of water through drain (e.g., due to high water level at downstream discharge point, such as khal/ river) - Drainage congestion/water logging due to cross road/construction activity	-Designing drain considering the downstream discharge point; adequate slope and x-section; RCC cover for drain, where appropriate - Not allowing direct connection to drain from toilet -The out fall of proposed drain is primary to secondary drain and water quality will be monitoring as per necessary (in Appendix-2 EMP cost)	PIU, LINIC
Waste Management	(-)	- Uncollected wastes blocked the drainage and sewage system. - Air, water and soil pollution during the waste collection - Smoke from the open burning of uncollected waste. - The loading and unloading of waste at transfer station pollutes the air and soil. - Odor from waste disposal site and composting system. - Contamination of ground water by leachate.	- Follow the waste management plan given in Appendix 4 during construction period. - Encourage 3R (reduce, reuse, and recycle) - Encourage composting of kitchen waste on the basis of land availability otherwise transfer waste by hand trolley/van that is available in Pourashava and it is inspired by EMP implementation training - Adequate distance between waste bin and water body. - Adequate distance should be maintained between the waste collection point and house - Coordinate with the municipality for collection of domestic waste and disposal at the designated site	PIU/LINIC
Workers H & S	(-)	-There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.	- Comply with requirements of GoB Labor Law of 2006, Labor law and services rules 2015 and all applicable laws and standards on workers H & S. - Ensure adequate safety and provisions as per the Appendix 5 in relation to the COVID-19. - Produce and implement a site health and safety (H&S) plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use PPE at all times; (iii) providing (H&S) training for all site personnel; (iv) Providing fire extinguisher at construction site (v) documenting procedures to be followed for all site activities; and (vi) maintaining accident reports and records. - Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances. -Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.	PIU, LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
			- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;	
Sanitation/excreta management	(-)	-Noise and soil pollution during the construction but short- term -Microbial contamination to the ground water from the pit latrine. -Waste during loading of sewage from the sanitary communal containers. -Odor	-Design and installation of sanitary toilet to stop the microbial contamination to the ground water. -Adequate height with proper ventilation. -Water supply and hand wash facility -Regular cleaning and monitoring -5-10m distance should be maintained between toilet and tube-well	PIU, LINIC
Water supply (Tube well)	(-)	-Noise, dust and soil pollution during the construction but short- term	-The digging of soil should follow the proper design to avoid the pollution and water logging -The outlet of tube well should be connected with soak pit to existing drain. -A person has been engaged for cleaning and maintenance of Tube well. -One set of maintenance equipment of Tube well is kept with LINIC selected person.	PIU, LINIC
Footpath/connecting Road	(-)	-Dust and noise pollution from construction work	-Watering to reduce dust -Tree plantation on the footpath/road slope	PIU, LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the construction workers	-LINIC and all workers will be required to undergo EMP implementation including waste management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labor laws, applicable environmental laws, etc. - Provided training on use of TW, toilet, solar panel and tree plantation etc. during preparation of Community Action Plan (CAP) Inventory Management: Keep records of all solar street light components (panels, batteries, controllers). -Proper Storage: Store damaged or expired components safely in designated areas. -Authorized Disposal: Send batteries, panels, and electronic parts to licensed e-waste recyclers; do not burn or dump. -Staff Training: Train maintenance personnel on the safe handling, segregation, and reporting of e-waste. -Replacement Plan: Establish a system for replacing non-functional components and managing them as e-waste. -Training is a continuous process by Capacity Development Fund of Pourashava. It is financed by IUGIP-III-AF.	Pourashava PRAP budget

- (Construction Phase (For any "negative" impacts "Environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

(iii) Operation Phase/Post-Construction

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water logging in drains and footpaths	(-)	Run-off from debris/ sediments from repair and maintenance of Footpath and drain which may cause siltation and reduction in the quality of adjacent bodies of water. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	- Take all precautions to prevent run-off into streams, water courses, or irrigation system. Install temporary silt traps or sedimentation basins along drainage leading to the water bodies. - Remove all debris/sediments immediately. - Dispose debris/sediments at a designated site such as landfill.	PIU, LINIC
Water quality monitoring (Arsenic, Iron, Chloride, Manganese etc.) (twice a year)	(-)	Due to polluted water, people may suffer from dangerous diseases like cholera, dysentery, diarrhea, Gastrointestinal disease and jaundice etc.	Necessary test will be performed occasionally by testing water sample from the tube wells (Pourashava PRAP budget)	PIU, LINIC
Solid Waste management	(-)	-Due to open dumping ambient environment will be polluted and will be breeding place of flies -Threat to human health and/or the environment -Due to bad odor, nuisance to sensitive receptors	- There is an existing sanitary landfill (SLF) of the Pourashava under IUGIP-III/AF and the waste management system will be connected with this system obviously. - The waste will soon be carried to the proposed SLF by Pourashava SWM system - Develop rodent and fly control plan - Ensure residual waste is not left in bins and allowed to decompose for a long time	PIU/LINIC
Community H & S - Walkway/drain - Toilet conditions - Drinking water quality (Tube well)	(-)	- The inhabitants may dump waste on the walkway - Bricks used in BFS, may be stolen when CC will wear out with the passage of time - Inadequate supply of water to toilet may spread bad odor - Improper use may spread germ - Irregular cleaning may create unhygienic condition - Epidemic may spread due to deteriorated quality of water	- Awareness to the inhabitants to discourage dumping of waste on the walkway - Ensure routine maintenance by the LINIC - Continuous supply of water will be provided - Awareness to user for proper use of latrine - LINIC will engage a person to clean and maintenance of Toilet and tube well regularly - Periodic maintenance of Tube well and Toilet will be done by Pourashava PRAP budget -Inspect soak pit periodically to determine filling levels. -Scheduled Dislodging: Arrange timely desludging before overflow occurs. --Use mechanical desludging systems instead of manual entry. Follow confined-space entry protocols if entry is unavoidable. -Train workers on safe handling of human waste and emergency procedures. - -Transport and dispose of sludge only at approved treatment facilities	PIU/LINIC
Dustbin	(-)	- Improper use of dustbins - Irregular cleaning of dustbin may create bad odor and birth place of flies	- Awareness to the LIN dwellers for proper use of dustbins - LINIC will engage a person who will monitor the cleaning the dustbin regularly	PIU/LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well,	(+)	-Increase environmental awareness among the community	-Twice a year Training/workshop/ meeting for maintenance of TW, Toilet, Planted Tree and Solar panel will be organized by LINIC/PIU and financed by Pourashava PRAP fund.	Pourashava PRAP budget

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Toilet, Planted Tree, Solar Panel)			-Provided training on maintenance of TW, toilet and Planted Tree, solar panel during preparation of Community Action Plan (CAP) Inventory Management: Keep records of all solar street light components (panels, batteries, controllers). -Proper Storage: Store damaged or expired components safely in designated areas. -Authorized Disposal: Send batteries, panels, and electronic parts to licensed e-waste recyclers; do not burn or dump. -Staff Training: Train maintenance personnel on the safe handling, segregation, and reporting of e-waste. -Replacement Plan: Establish a system for replacing non-functional components and managing them as e-waste. -Regular maintenance of planted tree by LIN dwellers	

- (Operation Phase (For any "negative" impacts "environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

g. Environmental Management Plan (EMP)

(iv)Monitoring Plan (Construction and Operation Period)

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Water quality	-Contamination (Arsenic, Iron, Chloride, Manganese etc.) or degrading of water quality of drinking water well -Contamination (DO, BOD, COD, TDS, TSS, Turbidity etc.) or degrading of water quality of surface water	-Water quality of tube well will be tested after installation/construction by LINIC and it is included in engineering estimate (Item LGED rate schedule) -Water quality of Tube well will be monitored periodically and DoE standard will be maintained properly. -The outlet of household waste water would be connected with Pourashava existing drain -PIU/LINIC will strongly monitoring the performance of the interventions	Twice a year/Yearly Operation /completion work	Pourashava
Dust from drains, footpaths, toilets, street light, dustbins and tube well	-Air and noise pollution may occur due to construction/operation -Irregular cleaning may damage the interventions	-Use tarpaulins to cover soils, sand and other loose material. -Water will be sprayed to control the dust when necessary -Regular maintenance/cleaning -PIU/LINIC will strongly monitoring the performance of the interventions	As per necessary	PIU/LINIC
Acoustic environment	Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a	Plan activities in consultation with Pourashava local authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	No need for noise quality monitoring due to short-term project	Pourashava

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
	relatively small area and reversible by mitigation measures.			
Biodiversity	Activities in the built-up area of Pourashava. There are no protected areas in or around Sub-project sites, and no known areas of ecological interest.	• No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission. • Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal).	No need for monitoring due to short-term project	Pourashava
Existing provisions for pedestrians and other forms of transport	Footpath closure is not anticipated. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	• Maintain safe passage for pedestrians during maintenance activities. • Notify affected sensitive receptors by providing sign boards informing nature and duration of maintenance activities and contact numbers for concerns/complaints. • Leave spaces for access between mounds of soil. • Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.	Duration of construction works	Pourashava
Worker's health and safety	Workers need to be mindful of the occupational hazards working in confined spaces such as closed drains. Potential impacts are negative and long-term but reversible by mitigation measures.	• Comply with requirements of Government of Bangladesh Labor Law of 2006, Labor Law services rule 2015 and all applicable laws and standards on workers H&S. • Ensure adequate safety and provisions as per the Annex 8 in relation to the COVID-19. • Ensure that all site personnel have a basic level of H&S training. • Produce and implement a O&M and H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training for all site personnel; (iv) providing fire extinguisher at construction site • Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances • Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	Duration of construction works	Pourashava/LINIC

h. Public Consultations

62. A public consultation meeting was held at Kosba Doptori Para LIN on 13 October 2022. A total of 20 participants attended the meeting where 20 were female. SIC members, counselors, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of IUGIP visited the slum of the Paurashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the slums. The meeting was presided over by the Assistant Engineer of Bhabaniganj Paurashava

Time of Public Consultation

Site : Kosba Doptori Para LIN

Time : 03.00PM

63. Participants of the meeting exchanged views with the safeguard team about their sufferings and the remedial measures to be taken to overcome it. At present the LIN dwellers use hanging and pit latrine, which is a threat to public health and un-hygienic as well. They insisted for a community latrine to overcome it. The drinking water was the burning issue. The water available at the LIN was inadequate and non-potable due to impurities (e.g., excessive iron). They urged for sufficient potable water at their door step. Water logging was an additional problem of the LINs. Their yard inundates during rainy season. It creates an un-hygienic condition of living. They wanted immediate relief from it, through an installation of proper drainage system. Inadequate internal road communication made their livelihood slower. A proper footpath would ease their safe movement. They asked for a proper footpath system in their LIN. There is inadequate dustbin in or around the LINs. As such they cannot dump the waste specially the kitchen waste properly. It creates bad odor and un-hygienic condition in and around the LIN. They wanted installation of dustbins. Inadequate light during night time is an additional problem. Social nuisance creates at it. Pilferage and unsocial activities promote in the dark. The LIN dwellers urged for street lighting system in and around the LINs.
64. Experts discussed regarding safeguard issues; focusing the sub-project components with its importance including socio economic and health hazard. Also discussed, environmental and social impacts and mitigation measures about air, dust, water pollution and waste management.
65. As per discussion and feedback from the SDO and all LINIC members, the LINs were selected through consultation with the local leader/councilors living in the Pourashava area. According to the discussion, the participants appreciated the proposed LIN improvement components, as it will improve the health and sanitation conditions of the LIN which will provide positive socio-economic impact.
66. The LIN dwellers demanded for more latrines and tube wells and also demanded separate latrines for women. The chairman of the meeting in his concluding speech mentioned that as per allocation of fund, elements of the proposed sub-project have been selected by the LIN dwellers. The sites have been selected based on the available space spreading all over the LIN. However, maximum old sites will be used and nobody will be affected. The toilet designs have considered separate unit for the women and it would not be possible to provide individual tube wells and individual toilets. He requested co-operation from the LIN dwellers during construction activities. The meeting was concluded with thanks from the chair to the participants. (Appendix 3).

i. Grievance Redress Mechanism

67. Grievance redress mechanism (GRM) has been established in the Pourashava to redress quickly social, environmental and any other project related grievances from the affected or any aggrieved person/ party with the creation of grievance redress cell (GRC) comprising of:

68. Affected or aggrieved persons will have the flexibility of conveying grievances/ suggestions in writing and dropping them in complaints/suggestion boxes that have already been installed in the Pourashava or through telephones, e-mails, by post or by writing in the complaint

register in the Pourashava office. The cost related to environmental grievance redress are included in social and resettlement cost estimates.

(v) Grievance Redresses Process

69. **1st Level Grievance:** Names and contact phone numbers of the PIU safeguard focal person will be posted on the construction site at visible location (construction site signboard) to provide first level of contact for quick resolution of the grievances. The LINIC and the PIU safeguard focal person can immediately resolve on-site the grievances in consultation with each other within 7 days of receipt of a complaint/ grievance.

70. **2nd Level Grievance:** The grievances that cannot be redressed within 7 days at field/ ward level will be reviewed by the grievance redress cell (GRC) with support from PIU designated safeguard focal person and MDSC regional environment and resettlement specialists. The GRC will attempt to resolve the complaints/ grievances within 15 days.

71. **3rd Level Grievance**: The PIU designated safeguard focal person will refer the unresolved or, the major issues to the PMU safeguard officer and MDSC safeguard specialists. The PMU, in consultation with the above-mentioned officer/ specialists, will resolve the issues within 30 days. Despite project GRM, an aggrieved person shall have access to the country's legal system at any stage, and assessing can go parallel.

72. If the GRM cannot resolve the issues, the affected person also can use the ADB Accountability Mechanism (AM) through directly contacting (in writing) the Complaint Receiving Officer (CRO) at ADB headquarters or the ADB Bangladesh Resident Mission (BRM) in any of the official languages of ADB.

Recordkeeping:

73. Records all grievances including date of receive and detailed contract address of complainant, nature of grievance, agreed corrective actions, and the dates these were affected and final outcomes will be kept by PIU. The grievances recorded and resolved and the outcomes will be displayed/ disclosed in the PMU office, Pourashava office, on the web and reported in the semi-annual monitoring reports.

Periodic review and documentation of lessons learnt:

74. The PMU safeguard officer will periodically review the functioning of the GRM in each Pourashava and record information on the effectiveness of the mechanism.

j. Conclusion

So, there will be no negative impact for the implementation of the sub-project and if there is any that would be very minimum most of which are construction related, localized and for short-term. Moreover, there will be a lot of positive impacts such as: Moreover, there will be a lot of positive impacts such as:

- Environmental & sanitation conditions will be improved.
- LIN dwellers will have comfortable walkway and improved drainage.
- Water-logging will be removed which will eliminate the mosquito breeding resulting the reduction of many diseases including waterborne diseases.
- LIN dwellers will have facilities for pure drinking water and facilities for solid waste disposal.
- There will be savings in the medical treatment cost. Thus, health conditions will be improved etc.

Dacta Dorji Para (Lot-04): (Ward No. 01)

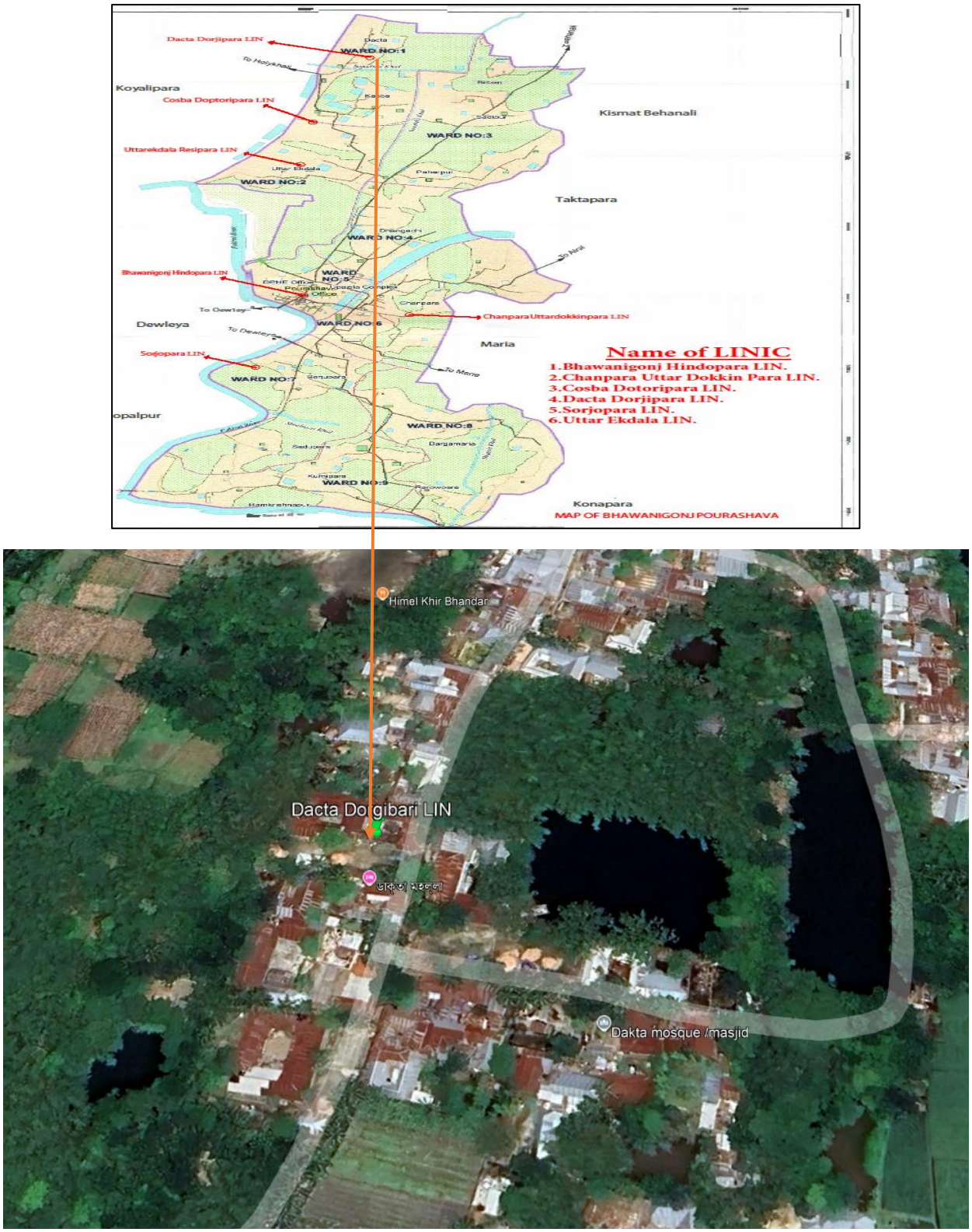
Package No: IUGIP/BHAW/SI/04-06/2023 (Lot-04)

78. The LIN is situated in ward no. 01. There are 84 families with 294 members, of which 157 are males, and 137 are females. The land area is 0.5 acres, and the government & local people own the land. Most of LIN dwellers earn their livelihood by physical labor. The average income per head per month is less than BDT 5000.00. Most of the families live in Tin-shed houses. They are deprived of most of the needed basic services. This LIN has an acute problem of inadequate sanitary latrines, inadequate facilities for drinking water, inadequate and deteriorating internal roads/footpaths/walkways, dustbins, street lighting, drains etc.

a. Location of the LIN

75. The Dacta Dorji Para LIN (Lot-04) is situated in ward no. 01 under Bjawaniganj Pourashava. The location of the LIN in the Bhabaniganj Paurashava map is given below.

Figure IX: Location of Dacta Dorjipara LIN



b. Description of Interventions

76. A description of the proposed interventions for Dacta Dorji Para LIN (Lot-04) LIN is given in Table-4.

Table 4: Description of Proposed Interventions of Dacta Dorji Para LIN

Improving Urban Governance and Infrastructure Program (IUGIP)
LIN Improvement Sub-project Package
Pourashava: Bhawaniganj, District: Rajshahi.

Sl. No.	Name of Package	Financial Year		Name and Number/ Length of Scheme	Unit (m/nos)	Amount TK/ (nos/m)	Quantity	Engineer's Estimated Amount (TK)	Remarks
				Name of LIN: Dorji para (Lot-04)					
				Name of works: Construction of 25 Nos Single unit (type-B) toilets with 50 Nos soak pits,120 meter of Footpath, 210 meter Brick Drain, 04 numbers of solar street light, 09 numbers hand tubewell with 09 Nos soak pits, 1 Nos Dustbin and 100 Nos Tree Plantation in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.					
1	IUGIP/BHAW/SI/01-06/2023 (Lot-04)	2025-2026	a)	Construction of 25 Nos. Single unit (type-B) Toilet with 50 nos soak pit in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	245500.34	25	6,137,508.50	
2			b)	Construction of 01 Nos. Dustbin in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	15248.10	1	15,248.10	
3			c)	Construction of 120 m footpath in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	m	6968.78	120	836,253.35	
4			d)	Construction of 210 m Brick drain with top slab in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	m	6116.05	210	1,284,370.17	
5			e)	Installation of 04 Number solar street light in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	94481.79	4	377,927.16	
6			f)	Installation of 09 number tube well with 09 Nos soak pits in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	66925.45	9	602,329.05	
7			g)	Plantation of 100 nos. Tree in Dorji para LIN, at Ward no.-01 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	495.00	100	49,500.00	
				Total (Lot-04) Amount =				9,303,136.33	

Md. Tholiqul Islam, Sub-Assistant Engineer (Civil), Bhawaniganj Pourashava, Rajshahi. | Md. Mamun, Sub Assistant Engineer, LKSS, IUGIP, LGED HQ, Dhaka | Md. Razanuzzaman, Municipal Engineer-10, Bhawaniganj Pourashava, Rajshahi | Liton Miah, Assistant Engineer, Bhawaniganj Pourashava, Rajshahi. | Mohammad Mehedi Hassan, Administrator, Bhawaniganj Pourashava, Rajshahi | Dr. Khondokar Abu Zafor, Team Leader, MDS Consultants, IUGIP, LGED, Dhaka | Ria Khanam Ria, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka | Md. Sarwar, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka | Md. Nasir Uddin, Deputy Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka | Tofail Ahamed, Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka

C. Present Condition (Baseline Environment)

I. Flooding/Water-clogging

Water-clogging persists in this LIN, especially in the monsoon season. The existing drains are earthen and are not functioning. Water logging condition occurs due to moderate and heavy rainfall. Rain water in the monsoon and the water coming out from bathing and washing round the year are stagnant there. As such water logging becomes a common feature there. Construction of drain is necessary in this LIN.

II. Water Source/Level/Quality/Tube well

At present, the LIN people experience problems with the availability of safe drinking water. Adequate tube wells and piped water supply lines are not available in the LIN. Additionally, the bore-log records indicate that the aquifer contains groundwater with iron, manganese, arsenic, hardness, and chloride concentrations etc.

III. Sanitations

There is insufficient toilets facility in the LIN area. LIN dwellers do not have enough hygienic sanitation. There is 25 nos proposal sanitation improvement within the LIN area.

IV. Access Roads/Footpaths

A Uni-block access road exists within the LIN area. However, there are no paved (pucca) walkways inside the LIN. LIN dwellers wanted footpath for their communication within the LIN area. A 120 m long CC footpath is proposed under this subproject. LIN area is connected by

Pourashava roads. The proposed Footpaths have been designed with cement concrete (CC) crushed stone chips and over Single Layer Brick Flat Soling (BFS). LIN area is connected by Pourashava roads. Images of existing access roads of the LIN are shown in Figure-X. Typical design of footpath is given in Appendix-1.

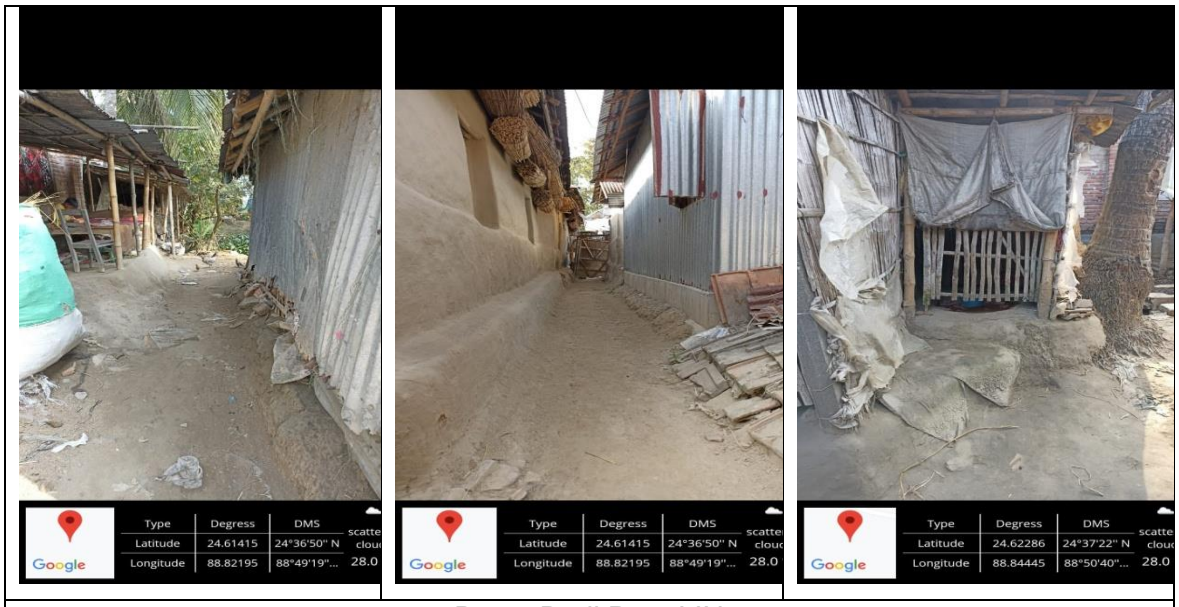
V. Street Lights

There are insufficient numbers of street light in this LIN area therefore 04 nos provisions of light are proposed under this package.

VI. Drain

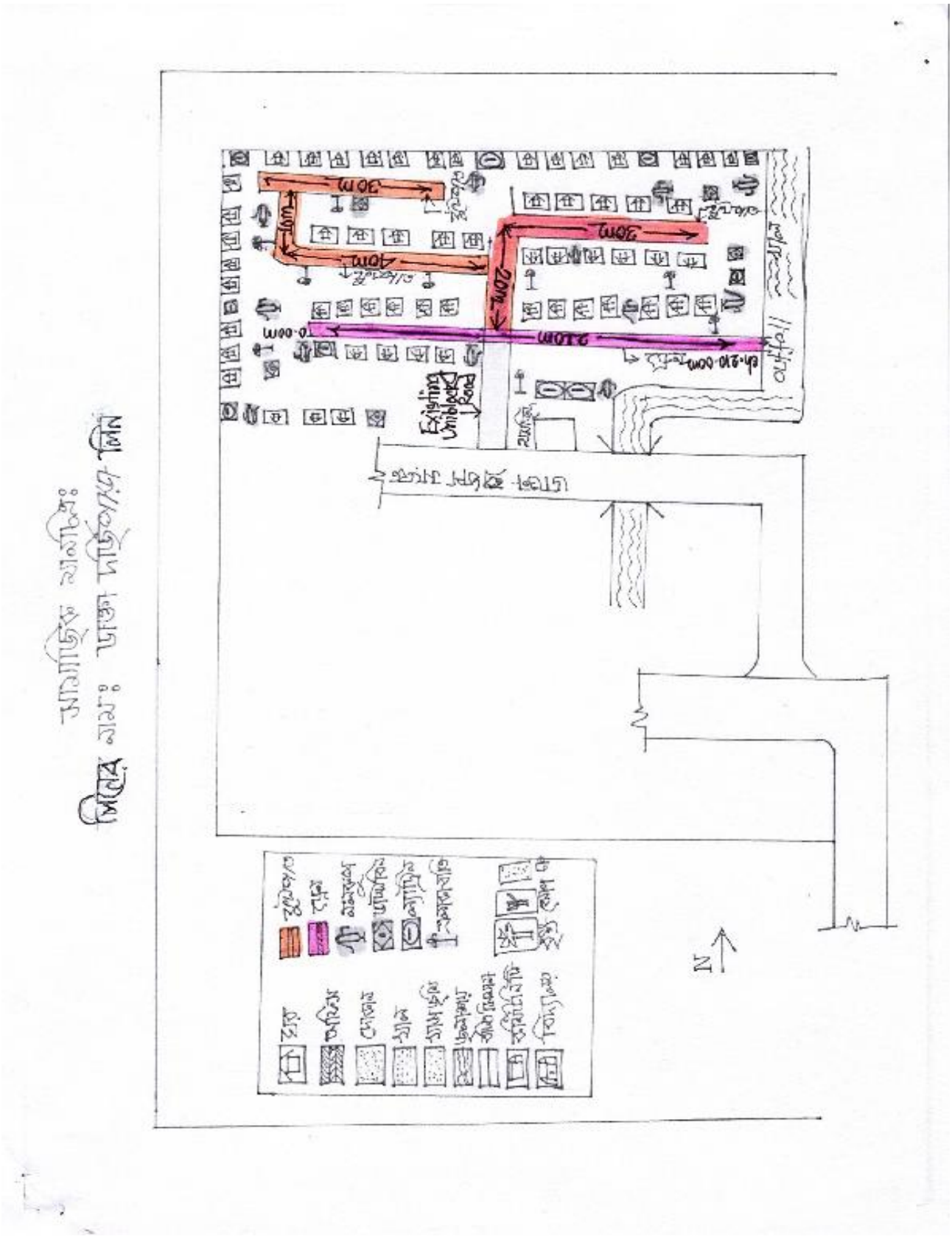
The existing drains are earthen and are inactive. So, the LIN dwellers experience water logging especially during rainy season. The out fall of proposed drain is Khal (Section-3 site map). The drain (total 210 m long) has been designed to be constructed using RCC and brick masonry. Proper longitudinal slopes and adequate outfalls have been ensured. The U-type drains have been designed considering the constraint in land availability. The design life has been considered as 20 years. Integration/connection of Road side drains with the town drainage system has been considered and considering the possibilities of increased precipitation owing to probable climate change, the sections have been designed keeping allowance to accommodate 10% additional flow.

Figure X: Existing Situation at Dacta Dorji Para LIN



Dacta Dorji Para LIN

d. Site Map of Dacta Dorji Para LIN



e. Baseline Information

All LINS fall under a single pourashava, so their baseline profiles are nearly identical, differing only in aspects of Physical Cultural Resources.

77. The key baseline information on the LIN area is depicted in below table:

Sl	Key environmental and social aspects	Key baseline information
1	Noise	Noise is not a major impediment for the quality of the environment in the study area. Vehicles such as electric rickshaw, motor cycle, van, tempo, mini truck, votvoti, and tractor trailer etc. move on the road during day and night. Particular areas adjacent to the main road have some noise pollution created by movement of heavy vehicles near LIN. These vehicles generate noise in the LIN area but within tolerable limit in most cases. No other perceptible sources of noise generation such as factories, industries, etc. are found near by the LIN area.
2	Air	Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or damages the natural environment, into the atmosphere. Here quality of air in LIN area of Bhawaniganj Pourashava appears to be clean but due to poor condition of road surface, dust is generated, especially during the movement of vehicles that causes air pollution and may affect sensitive groups. The air quality in LIN area of Bhawaniganj (and Bangladesh more broadly) is mainly caused by particulate matter (PM2.5 and PM10) from brick kilns, vehicle emissions, construction dust, and industrial activity. The Final Master Plan of the Pourashava shows that air pollution is quite a serious environmental consideration having adverse impacts within many parts of the LIN area of Bhawaniganj Pourashava. Operations of shallow engine driven vehicles (Nochiman/ Kariman) that are unfriendly to the environment are responsible for air pollution. Diesel particulate matter (DPM) includes diesel soot and aerosols such as ash particulates, metallic abrasion particles, sulfates, and silicates. Air pollution also occurs by the odor from the open municipal garbage. People are not aware to dispose their solid garbage in to those dustbins rather than open ground. As a result, open garbage disposal is common and it creates serious odor which ultimately affects the surrounding air.
3	Ground water	Ground water pollution also exists in the Bhawaniganj Pourashava. Presence of iron and arsenic as pollutants in ground water are the reasons for such pollution. Ground water quality in the Pourashava is influenced by arsenic and

SI	Key environmental and social aspects	Key baseline information
		iron. Water in most shallow aquifer is arsenic and all are contaminated with iron, not suitable for drinking purposes. The lower deep aquifer is found at a depth of 80 m to 120 m. Deep aquifers with fresh water in the Pourashava are exploited to meet the demand of water for inhabitants.
4	Surface water	River, Canal/Khal and ponds are occupying 7.41% (232.427 acres) land of the Bhawaniganj Pourashava. The canals are linked with the adjacent Rani River. In dry season, the canal uses as agriculture land and in the rainy season the canal submerges lowlands of the Pourashava. The ponds are located around the Pourashava. In dry season, ponds water is using for bathing and washing purposes. Canal water generally uses for irrigation purposes. In Bhawaniganj Pourashava, there are many ponds, ditches and 4 canals as sources of surface water. Surface water pollution originating from the use of insecticide and chemical fertilizers in crop fields. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Cattle bathing and flow of waste water from domestic use discharge into the ponds, khals and river have also identified as reasons for surface water contamination. The Paurashava authority has yet not taken any initiatives to control surface water pollution.[2]
5	Ecological Resources and Protected Area (PA)	The sub-project components are located within the Bhawaniganj Pourashava urban area and its immediate built-up surroundings. Common flora identified in the area includes Mango (*Mangifera indica*), Jackfruit (*Artocarpus heterophyllus*), Kalojam (*Syzygium cumini*), Betel nut palm (*Areca catechu*), Coconut palm (*Cocos nucifera*), Guava (*Psidium guajava*), Neem (*Azadirachta indica*), Raintree (*Samanea saman*) etc. Common terrestrial fauna includes local birds (myna, house crow), small mammals (squirrels, bats), and common reptiles and amphibians. Aquatic resources are centered around the Barasia River, canals and ponds, supporting common freshwater fish species (Ruhi, Katla, Shing, Magur). There are no declared Ecologically Critical Areas (ECAs), National Parks, Wildlife Sanctuaries, Ramsar sites, or critical breeding grounds within or adjacent to the project site. No rare, endemic,

[2] BHAWANIGANJ PAURASHAVA MASTER PLAN: 2011-2031

SI	Key environmental and social aspects	Key baseline information
		or endangered species of flora or fauna have been recorded in the area.
6	Physical Cultural Resources	There is no accurate information about the naming of Bhabaniganj Pourashava. The Pourashava. was previously a Union Parishad which was converted into a Pourashava. in 2000. The Pourashava. is located on the banks of the Rani River. There is no amusement park, playground, cinema hall for entertainment in the Pourashava. The Pourashava. consists of nine wards.

f. Environmental Impact Assessment and Mitigation

78. (The review process will be greatly facilitated by comprehensive and detailed answers in this section. When completing this section, please state a specific reason [i.e., "there will be no impacts to environment because this project will not involve any disturbance"] and cite a source [i.e., local master plan, previous environmental assessment, correspondence with Pourashava Office, etc.] to support a response of "no impact (-)" or "potential to impact (+).")
79. The LIN toilets are being considered with two types of design: (i) Type A, and (ii) Type B. Type A is considered with septic tank whereas Type B considered with pit along with soak pit. The note from the Pourashava engineers taken that in many of the LIN area there is shortage of space for constructing septic tank where soak pit is designed with the pit. However, such soak pit has mitigation measure for ground or surface water contamination (e.g., sand and brick chips envelope on the bottom of pit). Moreover, municipality will ensure good maintenance for such toilets having soak pit.
80. The demolition, construction, and waste management activities in the LIN area may generate several short-term and localized environmental impacts. Dust from demolition, debris movement, and broken footpaths can impair air quality, while demolition and temporary camps may create unhygienic conditions. Noise from demolition is minimal. Since project activities are scattered and not near water bodies, the likelihood of surface or groundwater pollution is low. Pollution from construction work yards is minimal, requiring only limited environmental monitoring. Finally, urban construction activities such as excavation and earthmoving carry inherent occupational safety risks, particularly related to working at heights or in excavated areas, though these risks are reversible with proper mitigation.

(vi) Pre-construction and Construction Phase

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
Demolition of existing infrastructure: - Dust from demolition - Noise from demolition - Waste from demolition -Un-hygiene of demolition	(-)	-Different activities regarding the demolishing the existing structure (part) and broken footpath generate dust which impair the air quality -Unhygienic/unsanitary environment due to demolition of old/poor infrastructure and construction of camps in the development site -Creation of noise from demolition is negligible	-Water will be sprayed to control the dust, which is the main way to suppress dust in the working site as per necessary Appendix-2 EMP cost. -Apply water to disturbed soils after demolition is completed or at the end of each day of cleanup. - Transport/handle debris from demolished infrastructures in a hygienic manner. -Tree plantation at the LIN boundary/open space/slope on the basis of space availability -Collection of construction debris and dispose in a hygienic way by LINIC and it is included in engineering estimate item (LGED rate schedule) -PIU/LINIC will strongly monitoring the construction activity and instant action will take.	PIU, LINIC
Dust Management	(-)	-Moving debris/sediments may create dusts during dry season. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures	- Use tarpaulins to cover soils, sand and other loose material. - Water will be sprayed to control the dust when necessary	PIU, LINIC
Community facilities and services - Blockage to access roads - Fire & Safety	(-)	- Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. Poor safety signage and lack of barriers at work site and trenches will create hazard to pedestrians and children. - Chances of fire only from open cooking in the area which may create major loss of property to the residence in the LIN.	-Provide safety signage at all sites visible to public that is monitored by PIU/LINIC and it will be confirmed in semi-annual monitoring report -Provide safety barriers near any trenches, and cover trenches with planks during non-work hours. -LINIC's activities and movement of staff will be restricted to designated construction areas. -Consult with Pourashava local authority on the designated areas for stockpiling of, soils, gravel, and other construction materials. -If the LINIC chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner. -Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged. -Workers need to be made aware of the following general rules: (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction workers are to make use of the facilities provided for them; (iv) no fires permitted on site except if needed for the construction works; and (v) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do. - Bucket filled with sand will be kept at the construction zone.	PIU, LINIC
Air/water/noise quality monitoring	(-)	- Component of works are scattered in the LIN area, which are not located near-by any water stream/canal. There stands little probability of surface and ground water pollution, as nothing like gasoline, oil, road salts and chemicals are dumped on the adjoining ground.	- No need for Air/water/noise quality monitoring in construction area by test due to short-term effect. - Water will be sprayed to control the dust, when necessary, it will be visually observed	Not required

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
		- Construction work yards are located in small areas and its activities are also minimum. Here the intensity of pollution from air/dust/ noise is also very low and short-term. As such little monitoring of water/air/noise pollution parameters is needed at the surroundings work place.		
Drainage congestion/water logging	(-)	- Clogging/stagnation of flow in the storm drain, source of waste water is LIN dweller used water (bathing and washing) - Backflow of water through drain (e.g., due to high water level at downstream discharge point, such as khal/ river) - Drainage congestion/water logging due to cross road/construction activity	-Designing drain considering the downstream discharge point; adequate slope and x-section; RCC cover for drain, where appropriate - Not allowing direct connection to drain from toilet -The out fall of proposed drain is primary to secondary drain and water quality will be monitoring as per necessary (in Appendix-2 EMP cost)	PIU, LINIC
Waste Management	(-)	- Uncollected wastes blocked the drainage and sewage system. - Air, water and soil pollution during the waste collection - Smoke from the open burning of uncollected waste. - The loading and unloading of waste at transfer station pollutes the air and soil. - Odor from waste disposal site and composting system. - Contamination of ground water by leachate.	- Follow the waste management plan given in Appendix 4 during construction period. - Encourage 3R (reduce, reuse, and recycle) - Encourage composting of kitchen waste on the basis of land availability otherwise transfer waste by hand trolley/van that is available in Pourashava and it is inspired by EMP implementation training - Adequate distance between waste bin and water body. - Adequate distance should be maintained between the waste collection point and house - Coordinate with the municipality for collection of domestic waste and disposal at the designated site	PIU/LINIC
Workers H & S	(-)	-There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.	- Comply with requirements of GoB Labor Law of 2006, Labor law and services rules 2015 and all applicable laws and standards on workers H & S. - Ensure adequate safety and provisions as per the Appendix 5 in relation to the COVID-19. - Produce and implement a site health and safety (H&S) plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use PPE at all times; (iii) providing (H&S) training for all site personnel; (iv) Providing fire extinguisher at construction site (v) documenting procedures to be followed for all site activities; and (vi) maintaining accident reports and records. - Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances. -Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.	PIU, LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
			- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;	
Sanitation/excreta management	(-)	-Noise and soil pollution during the construction but short- term -Microbial contamination to the ground water from the pit latrine. -Waste during loading of sewage from the sanitary communal containers. -Odor	-Design and installation of sanitary toilet to stop the microbial contamination to the ground water. -Adequate height with proper ventilation. -Water supply and hand wash facility -Regular cleaning and monitoring -5-10m distance should be maintained between toilet and tube-well	PIU, LINIC
Water supply (Tube well)	(-)	-Noise, dust and soil pollution during the construction but short- term	-The digging of soil should follow the proper design to avoid the pollution and water logging -The outlet of tube well should be connected with soak pit to existing drain. -A person has been engaged for cleaning and maintenance of Tube well. -One set of maintenance equipment of Tube well is kept with LINIC selected person.	PIU, LINIC
Footpath/connecting Road	(-)	-Dust and noise pollution from construction work	-Watering to reduce dust -Tree plantation on the footpath/road slope	PIU, LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the construction workers	-LINIC and all workers will be required to undergo EMP implementation including waste management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labor laws, applicable environmental laws, etc. - Provided training on use of TW, toilet, solar panel and tree plantation etc. during preparation of Community Action Plan (CAP) -Training is a continuous process by Capacity Development Fund of Pourashava. It is financed by IUGIP-III-AF.	Pourashava PRAP budget

- (Construction Phase (For any "negative" impacts "Environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

(vii)Operation Phase/Post-Construction

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water logging in drains and footpaths	(-)	Run-off from debris/ sediments from repair and maintenance of Footpath and drain which may cause siltation and reduction in the quality of adjacent bodies of water. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	- Take all precautions to prevent run-off into streams, water courses, or irrigation system. Install temporary silt traps or sedimentation basins along drainage leading to the water bodies. - Remove all debris/sediments immediately. - Dispose debris/sediments at a designated site such as landfill.	PIU, LINIC

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water quality monitoring (Arsenic, Iron, Chloride, Manganese etc.) (twice a year)	(-)	Due to polluted water, people may suffer from dangerous diseases like cholera, dysentery, diarrhea, Gastrointestinal disease and jaundice etc.	Necessary test will be performed occasionally by testing water sample from the tube wells (Pourashava PRAP budget)	PIU, LINIC
Solid Waste management	(-)	-Due to open dumping ambient environment will be polluted and will be breeding place of flies -Threat to human health and/or the environment -Due to bad odor, nuisance to sensitive receptors	- There is an existing sanitary landfill (SLF) of the Pourashava under IUGIP-III/AF and the waste management system will be connected with this system obviously. - The waste will soon be carried to the proposed SLF by Pourashava SWM system - Develop rodent and fly control plan - Ensure residual waste is not left in bins and allowed to decompose for a long time	PIU/LINIC
Community H & S - Walkway/drain - Toilet conditions - Drinking water quality (Tube well)	(-)	- The inhabitants may dump waste on the walkway - Bricks used in BFS, may be stolen when CC will wear out with the passage of time - Inadequate supply of water to toilet may spread bad odor - Improper use may spread germ - Irregular cleaning may create unhygienic condition - Epidemic may spread due to deteriorated quality of water	- Awareness to the inhabitants to discourage dumping of waste on the walkway - Ensure routine maintenance by the LINIC - Continuous supply of water will be provided - Awareness to user for proper use of latrine - LINIC will engage a person to clean and maintenance of Toilet and tube well regularly - Periodic maintenance of Tube well and Toilet will be done by Pourashava PRAP budget -Inspect soak pitl periodically to determine filling levels. -Scheduled Dislodging: Arrange timely desludging before overflow occurs. --Use mechanical desludging systems instead of manual entry.Follow confined-space entry protocols if entry is unavoidable. -Train workers on safe handling of human waste and emergency procedures. - -Transport and dispose of sludge only at approved treatment facilities	PIU/LINIC
Dustbin	(-)	- Improper use of dustbins - Irregular cleaning of dustbin may create bad odor and birth place of flies	- Awareness to the LIN dwellers for proper use of dustbins - LINIC will engage a person who will monitor the cleaning the dustbin regularly	PIU/LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the community	-Twice a year Training/workshop/ meeting for maintenance of TW, Toilet, Planted Tree and Solar panel will be organized by LINIC/PIU and financed by Pourashava PRAP fund. -Provided training on maintenance of TW, toilet and Planted Tree, solar panel during preparation of Community Action Plan (CAP) -Inventory Management: Keep records of all solar street light components (panels, batteries, controllers). -Proper Storage: Store damaged or expired components safely in designated areas. -Authorized Disposal: Send batteries, panels, and electronic parts to licensed e-waste recyclers; do not burn or dump. -Staff Training: Train maintenance personnel on the safe handling, segregation, and reporting of e-waste.	Pourashava PRAP budget

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
			-Replacement Plan: Establish a system for replacing non-functional components and managing them as e-waste. -Regular maintenance of planted tree by LIN dwellers	

- (Operation Phase (For any "negative" impacts "environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

g. Environmental Management Plan (EMP)

(viii) Monitoring Plan (Construction and Operation Period)

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Water quality	-Contamination (Arsenic, Iron, Chloride, Manganese etc.) or degrading of water quality of drinking water well -Contamination (DO, BOD, COD, TDS, TSS, Turbidity etc.) or degrading of water quality of surface water	-Water quality of tube well will be tested after installation/construction by LINIC and it is included in engineering estimate (Item LGED rate schedule) -Water quality of Tube well will be monitored periodically and DoE standard will be maintained properly. -The outlet of household waste water would be connected with Pourashava existing drain -PIU/LINIC will strongly monitoring the performance of the interventions	Twice a year/Yearly Operation /completion work	Pourashava
Dust from drains, footpaths, toilets, street light, dustbins and tube well	-Air and noise pollution may occur due to construction/operation -Irregular cleaning may damage the interventions	-Use tarpaulins to cover soils, sand and other loose material. -Water will be sprayed to control the dust when necessary -Regular maintenance/cleaning -PIU/LINIC will strongly monitoring the performance of the interventions	As per necessary	PIU/LINIC
Acoustic environment	Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	Plan activities in consultation with Pourashava local authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	No need for noise quality monitoring due to short-term project	Pourashava
Biodiversity	Activities in the built-up area of Pourashava. There are no protected areas in or around Sub-project sites, and no known areas of ecological interest.	• No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission. • Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal).	No need for monitoring due to short-term project	Pourashava
Existing provisions for pedestrians and other forms of transport	Footpath closure is not anticipated. The impacts are negative but short-term, site-	• Maintain safe passage for pedestrians during maintenance activities. • Notify affected sensitive receptors by providing sign boards informing nature and duration of maintenance activities and contact numbers for concerns/complaints.	Duration of construction works	Pourashava

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
	specific within a relatively small area and reversible by mitigation measures.	• Leave spaces for access between mounds of soil. • Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.		
Worker's health and safety	Workers need to be mindful of the occupational hazards working in confined spaces such as closed drains. Potential impacts are negative and long-term but reversible by mitigation measures.	• Comply with requirements of Government of Bangladesh Labor Law of 2006, Labor Law services rule 2015 and all applicable laws and standards on workers H&S. • Ensure adequate safety and provisions as per the Annex 8 in relation to the COVID-19. • Ensure that all site personnel have a basic level of H&S training. • Produce and implement a O&M and H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training for all site personnel; (iv) providing fire extinguisher at construction site • Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances • Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	Duration of construction works	Pourashava/LINIC

h. Public Consultations

81. A public consultation meeting was held at Dacta Dorji Para LIN on 13 October 2022. A total of 19 participants attended the meeting where 19 were female. SIC members, counselors, female workers and housewives were present in the meetings. The safeguarding team of IUGIP visited the slum of the Paurashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the slums. The meeting was presided over by the Executive Engineer of Bhabaniganj Paurashava.

Minutes of Public Consultation

Site : Dacta Dorji Para LIN

Time : 5:00 PM

82. Participants of the meeting exchanged views with the safeguard team about their sufferings and the remedial measures to be taken to overcome it. At present the LIN dwellers use hanging and pit latrine, which is a threat to public health and un-hygienic as well. They insisted for a community latrine to overcome it. The drinking water was the burning issue. The water available at the LIN was inadequate and non-potable due to impurities (e.g., excessive iron). They urged for sufficient potable water at their door step. Water logging was an additional problem of the LINs. Their yard inundates during rainy season. It creates an un-hygienic condition of living. They wanted immediate relief from it, through an installation of proper drainage system. Inadequate internal road communication made their livelihood slower. A proper footpath would ease their safe movement. They asked for a proper footpath system in their LIN. There is inadequate dustbin in or around the LINs. As such they cannot dump the waste specially the kitchen waste properly. It creates bad odor and un-hygienic condition in and around the LIN. They wanted installation of dustbins. Inadequate light during night time is an additional problem. Social nuisance creates at it. Pilferage and unsocial activities promote in the dark. The LIN dwellers urged for street lighting system in and around the LINs.
83. Experts discussed regarding safeguard issues; focusing the sub-project components with its importance including socio economic and health hazard. Also discussed, environmental and social impacts and mitigation measures about air, dust, water pollution and waste management.
84. As per discussion and feedback from the SDO and all LINIC members, the LINs were selected through consultation with the local leader/councilors living in the Pourashava area. According to the discussion, the participants appreciated the proposed LIN improvement components, as it will improve the health and sanitation conditions of the LIN which will provide positive socio-economic impact.
85. The LIN dwellers demanded for more latrines and tube wells and also demanded separate latrines for women. The chairman of the meeting in his concluding speech mentioned that as per allocation of fund, elements of the proposed sub-project have been selected by the LIN dwellers. The sites have been selected based on the available space spreading all over the LIN. However, maximum old sites will be used and nobody will be affected. The toilet designs have considered separate unit for the women and it would not be possible to provide individual tube wells and individual toilets. He requested co-operation from the LIN dwellers during construction activities. The meeting was concluded with thanks from the chair to the participants. (Appendix 3).

i. Grievance Redress Mechanism

86. Grievance redress mechanism (GRM) has been established in the Pourashava to redress quickly social, environmental and any other project related grievances from the affected or any aggrieved person/ party with the creation of grievance redress cell (GRC) comprising of:
87. Affected or aggrieved persons will have the flexibility of conveying grievances/ suggestions in writing and dropping them in complaints/suggestion boxes that have already been installed in the Pourashava or through telephones, e-mails, by post or by writing in the complaint register in the Pourashava office. The cost related to environmental grievance redress are included in social and resettlement cost estimates.

j. Grievance Redresses Process

88. **1st Level Grievance:** Names and contact phone numbers of the PIU safeguard focal person will be posted on the construction site at visible location (construction site signboard) to provide first level of contact for quick resolution of the grievances. The LINIC and the PIU safeguard focal person can immediately resolve on-site the grievances in consultation with each other within 7 days of receipt of a complaint/ grievance.

2nd Level Grievance: The grievances that cannot be redressed within 7 days at field/ ward level will be reviewed by the grievance redress cell (GRC) with support from PIU designated safeguard focal person and MDSC regional environment and resettlement specialists. The GRC will attempt to resolve the complaints/ grievances within 15 days.

3rd Level Grievance: The PIU designated safeguard focal person will refer the unresolved or, the major issues to the PMU safeguard officer and MDSC safeguard specialists. The PMU, in consultation with the above-mentioned officer/ specialists, will resolve the issues within 30 days. Despite project GRM, an aggrieved person shall have access to the country's legal system at any stage, and assessing can go parallel.

If the GRM cannot resolve the issues, the affected person also can use the ADB Accountability Mechanism (AM) through directly contacting (in writing) the Complaint Receiving Officer (CRO) at ADB headquarters or the ADB Bangladesh Resident Mission (BRM) in any of the official languages of ADB.

Recordkeeping:

89. Records all grievances including date of receive and detailed contract address of complainant, nature of grievance, agreed corrective actions, and the dates these were affected and final outcomes will be kept by PIU. The grievances recorded and resolved and the outcomes will be displayed/ disclosed in the PMU office, Pourashava office, on the web and reported in the semi-annual monitoring reports.

Periodic review and documentation of lessons learnt: The PMU safeguard officer will periodically review the functioning of the GRM in each Pourashava and record information on the effectiveness of the mechanism.

k. Conclusion

90. So, there will be no negative impact for the implementation of the sub-project and if there is any that would be very minimum most of which are construction related, localized and for short-term. Moreover, there will be a lot of positive impacts such as: Moreover, there will be a lot of positive impacts such as:

- Environmental & sanitation conditions will be improved.
- LIN dwellers will have comfortable walkway and improved drainage.
- Water-logging will be removed which will eliminate the mosquito breeding resulting the reduction of many diseases including waterborne diseases.
- LIN dwellers will have facilities for pure drinking water and facilities for solid waste disposal.
- There will be savings in the medical treatment cost. Thus, health conditions will be improved etc.

Surjo Para LIN (Lot-05) :(Ward No. 07)

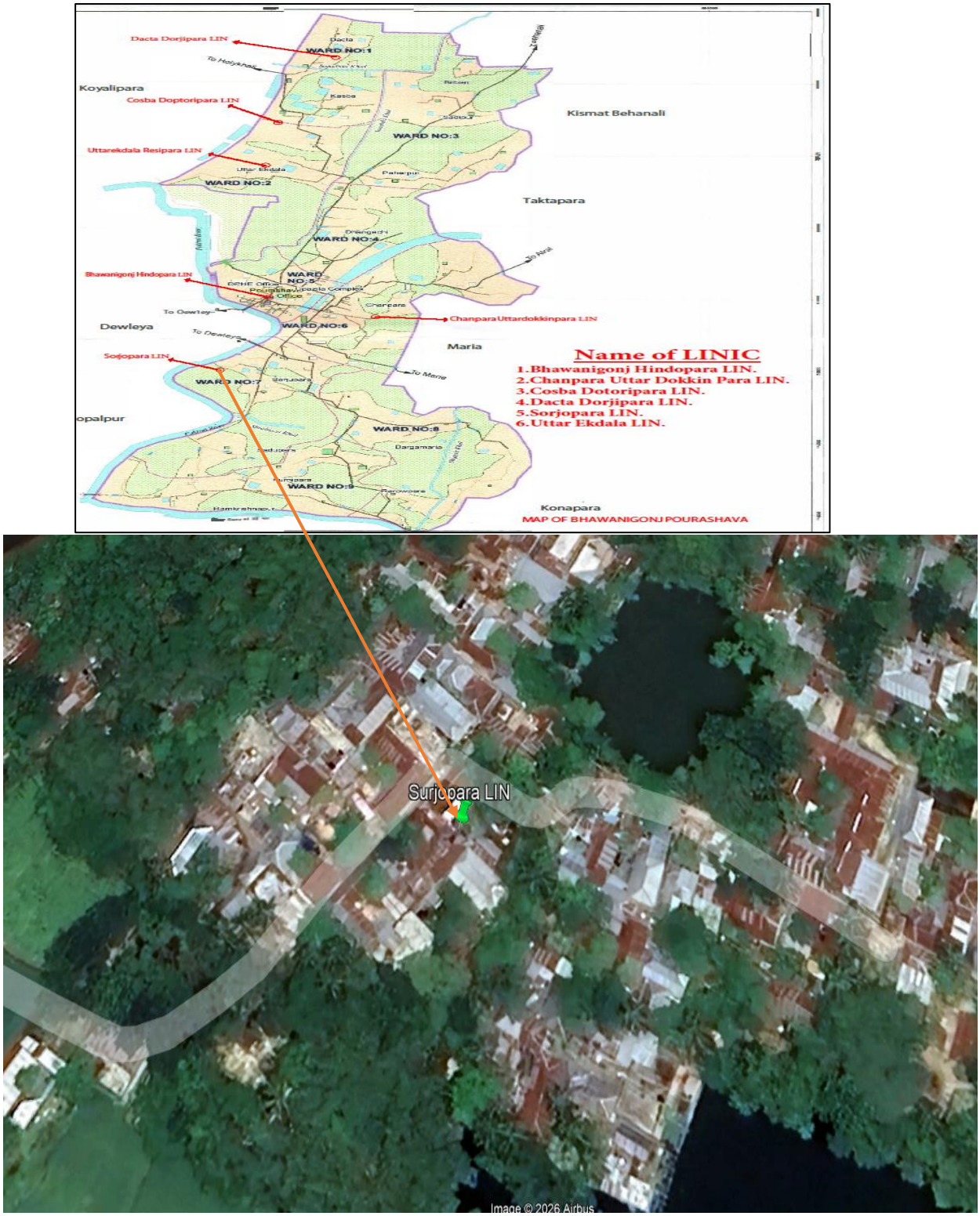
Package No IUGIP/BHAW/SI/05-06/2023 (Lot-05)

91. The LIN is situated in ward no. 07. There are 70 families with 216 members, of which 109 are males, and 112 are females. The land area is 0.6 acres, and the government & local people own the land. Most of LIN dwellers earn their livelihood by physical labor. The average income per head per month is less than BDT 5000.00. Most of the families live in katcha, Tin-shed and Semi-pucca houses. They are deprived of most of the needed basic services. This LIN has an acute problem of inadequate sanitary latrines, inadequate facilities for drinking water, inadequate and deteriorating internal roads/footpaths/walkways, dustbins, street lighting, drains, etc.

a.Location of the LIN

103. Surjo Para LIN is situated in ward no. 07 under Bhabaniganj Paurashava of Rajshai District; for the location of the slum in the Bhabaniganj Paurashava map is given below.

Figure XI: Location of Surjopara LIN



b. Description of Interventions

103. Description of the Surjo Para LIN proposed interventions for LIN is given in Table 6.

Table 5: Description of Proposed Interventions of Surjo Para LIN

Improving Urban Governance and Infrastructure Program (IUGIP)
LIN Improvement Sub-project Package
Pourashava: Bhawaniganj, District: Rajshahi.

Sl. No.	Name of Package	Financial Year		Name and Number/ Length of Scheme	Unit (m/nos)	Amount TK/ (nos/m)	Quantity	Engineer's Estimated Amount (TK)	Remarks
				Name of LIN: Surjo Para (Lot-05)					
				Name of works: Construction of 23 Nos Single unit (type-B) toilets with 46 Nos soak pits, 180 meter of Footpath, 210 meter Brick Drain, 05 numbers of solar street light,07 numbers hand tubewell with 07 Nos soak pits, 1 Nos Dustbin and 100 Nos Tree Plantation in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.					
1	IUGIP/BHAW/SI/01-06/2023 (Lot-05)	2025-2026	a)	Construction of 23 Nos. Single unit (type-B) Toilet with 46 nos soak pit in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	245500.34	23	5,646,507.82	
2			b)	Construction of 01 Nos. Dustbin in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	15248.10	1	15,248.10	
3			c)	Construction of 180 m footpath in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.	m	6262.32	180	1,127,218.43	
4			d)	Construction of 210 m Brick drain with top slab in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.	m	5931.94	210	1,245,707.78	
5			e)	Installation of 05 Number solar street light in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	94481.79	5	472,408.95	
6			f)	Installation of 07 number tube well with 07 Nos soak pits in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	66925.45	7	468,478.15	
7			g)	Plantation of 100 nos. Tree in Surjo Para LIN, at Ward no.-07 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	495.00	100	49,500.00	
				Total (Lot-05) Amount =				9,025,069.23	

Md. Thowfikul Islam, Sub-Assistant Engineer (Civil), Bhawaniganj Pourashava, Rajshahi. 16.09.25
Liton Miah, Assistant Engineer, Bhawanigong Pourashava, Rajshahi.
Md. Razanuzzaman, Municipal Engineer-10, Bhawanigonj Pourashava, Rajshahi 16-09-25
Mohammad Mehedi Hassan, Administrator, Bhawanigonj Pourashava, Rajshahi 24/10/25
Dr. Khondokar Abu Zafor, Team Leader, MDS Consultants, IUGIP, LGED, Dhaka
Md. Mamun, Sub Assistant Engineer, LKSS, IUGIP, LGED HQ, Dhaka 21.10.25
Ria Khanam Ria, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka 27/10/25
Mond Solaiman Sarwar, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka.
Md. Nasir Uddin, Deputy Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka 29/10/25
Tofail Ahamed, Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka.

C. Present Condition (Baseline Environment)

I. Flooding/Water-clogging

104. Flood does not usually occur in this slum. There exist no paved internal drainage systems in the LIN. The existing drains are earthen that are poorly functioning. As the slum areas are low-lying, heavy rainfall during the rainy season creates water logging temporary. Hence, the construction of drains is necessary to remove water logging conditions in these LIN.

II. Water Source/Level/Quality/Tube well

105. Currently, the slum people have been suffering from the acute problem of inadequate availability of drinking water. Hence, slum dwellers have demanded installing no tube well in their area; refer to Appendix 1 for the typical design of a tube well.

III. Sanitations

106. There is insufficient toilets facility in the LIN area. LIN dwellers do not have enough hygienic sanitation. There is a 23 Nos proposal sanitation improvement within the LIN area.

IV. Access Roads/Footpaths

107. A CC (cement concrete) access road exists within the LIN area. However, LIN dwellers wanted footpath for their communication within the LIN area. The proposed footpaths have been designed with cement concrete (CC) with crushed stone chips and over Single Layer Brick Flat Soling (BFS). 180m of footpaths are being proposed in this proposal.

V. Solar Street Lights

108. There are insufficient numbers of street light in this LIN area therefore 05 nos provisions of light are proposed under this package.

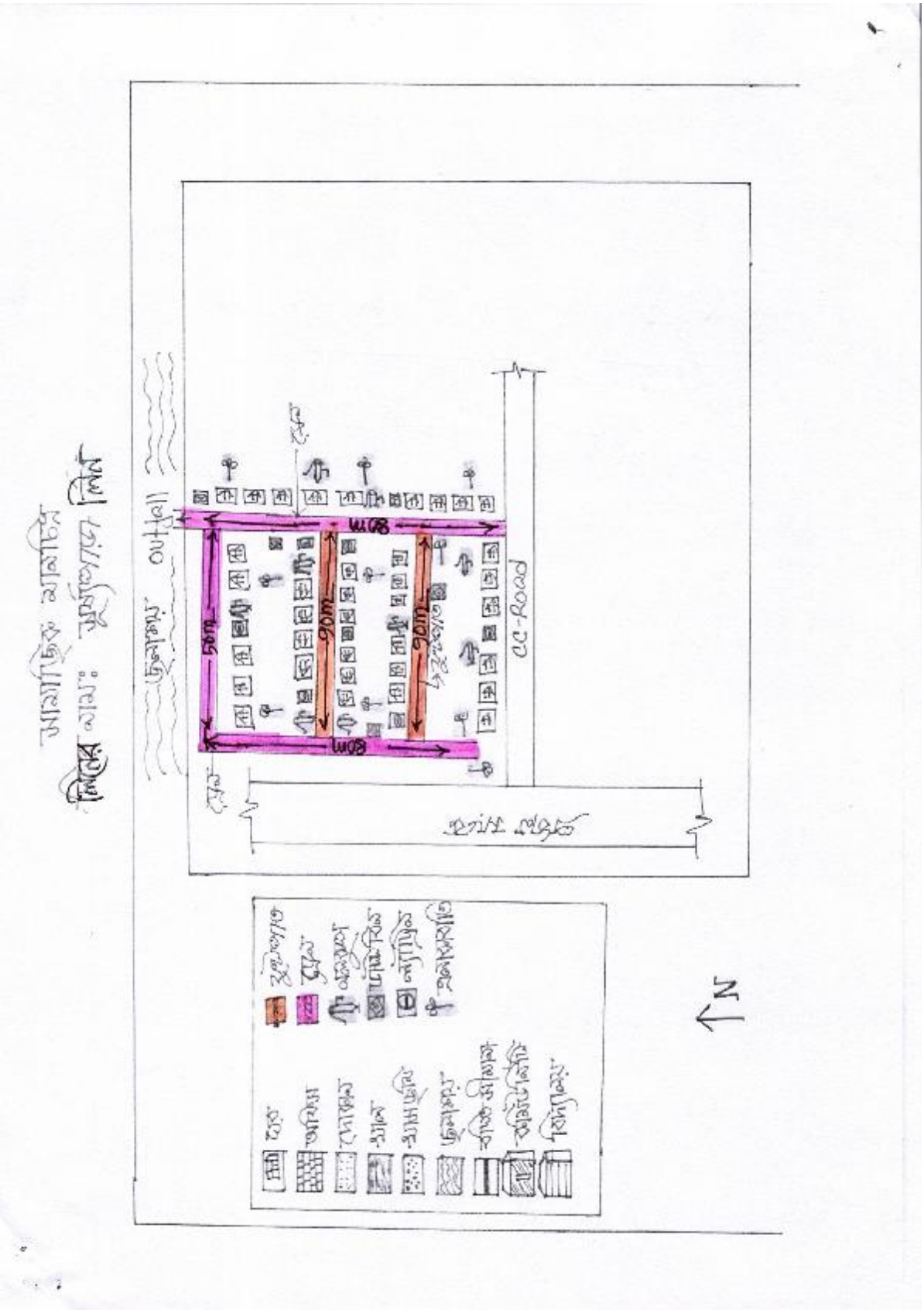
VI. Drain

109. The existing drains are earthen and are inactive. So, the LIN dwellers experience water logging especially during rainy season. The out fall of proposed drain is Poura secondary drain to primary drain (site map) and because as the coming water to the proposed drain is only from rainfall run-off or household waste water. All drains have been designed to be built by RCC/brick. But well-defined slopes and outfalls have been ensured. The U-type drains have been designed considering the constraint in land availability. The design life has been considered as 20 years. Integration/connection of Road side drains with the town drainage system has been considered and considering the possibilities of increased precipitation owing to probable climate change, the sections have been designed keeping allowance to accommodate 10% additional flow.

Figure XII: Existing Situation at Surjo Para LIN

Surjo Para LIN

d. Site Map of Surjo Para LIN



e. Baseline information:

All LINS fall under a single pourashava, so their baseline profiles are nearly identical, differing only in aspects of Physical Cultural Resources.

110. The key baseline information on the LIN area is depicted in below table:

Sl	Key environmental and social aspects	Key baseline information
1	Noise	Noise is not a major impediment for the quality of the environment in the study area. Vehicles such as electric rickshaw, motor cycle, van, tempo, mini truck, votvoti, and tractor trailer etc. move on the road during day and night. Particular areas adjacent to the main road have some noise pollution created by movement of heavy vehicles near LIN. These vehicles generate noise in the LIN area but within tolerable limit in most cases. No other perceptible sources of noise generation such as factories, industries, etc. are found near by the LIN area.
2	Air	Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or damages the natural environment, into the atmosphere. Here quality of air in LIN area of Bhawaniganj Pourashava appears to be clean but due to poor condition of road surface, dust is generated, especially during the movement of vehicles that causes air pollution and may affect sensitive groups. The air quality in LIN area of Bhawaniganj (and Bangladesh more broadly) is mainly caused by particulate matter (PM2.5 and PM10) from brick kilns, vehicle emissions, construction dust, and industrial activity. The Final Master Plan of the Pourashava shows that air pollution is quite a serious environmental consideration having adverse impacts within many parts of the LIN area of Bhawaniganj Pourashava. Operations of shallow engine driven vehicles (Nochiman/ Kariman) that are unfriendly to the environment are responsible for air pollution. Diesel particulate matter (DPM) includes diesel soot and aerosols such as ash particulates, metallic abrasion particles, sulfates, and silicates. Air pollution also occurs by the odor from the open municipal garbage. People are not aware to dispose their solid garbage in to those dustbins rather than open ground. As a result, open garbage disposal is common and it creates serious odor which ultimately affects the surrounding air.
3	Ground water	Ground water pollution also exists in the Bhawaniganj Pourashava. Presence of iron and arsenic as pollutants in ground water are the reasons for such pollution. Ground water quality

SI	Key environmental and social aspects	Key baseline information
		in the Pourashava is influenced by arsenic and iron. Water in most shallow aquifer is arsenic and all are contaminated with iron, not suitable for drinking purposes. The lower deep aquifer is found at a depth of 80 m to 120 m. Deep aquifers with fresh water in the Pourashava are exploited to meet the demand of water for inhabitants.
4	Surface water	River, Canal/Khal and ponds are occupying 7.41% (232.427 acres) land of the Bhawaniganj Pourashava. The canals are linked with the adjacent Rani River. In dry season, the canal uses as agriculture land and in the rainy season the canal submerges lowlands of the Pourashava. The ponds are located around the Pourashava. In dry season, ponds water is using for bathing and washing purposes. Canal water generally uses for irrigation purposes. In Bhawaniganj Pourashava, there are many ponds, ditches and 4 canals as sources of surface water. Surface water pollution originating from the use of insecticide and chemical fertilizers in crop fields. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Cattle bathing and flow of waste water from domestic use discharge into the ponds, khals and river have also identified as reasons for surface water contamination. The Paurashava authority has yet not taken any initiatives to control surface water pollution.[3]
5	Ecological Resources and Protected Area (PA)	The sub-project components are located within the Bhawaniganj Pourashava urban area and its immediate built-up surroundings. Common flora identified in the area includes Mango (*Mangifera indica*), Jackfruit (*Artocarpus heterophyllus*), Kalojam (*Syzygium cumini*), Betel nut palm (*Areca catechu*), Coconut palm (*Cocos nucifera*), Guava (*Psidium guajava*), Neem (*Azadirachta indica*), Raintree (*Samanea saman*) etc. Common terrestrial fauna includes local birds (myna, house crow), small mammals (squirrels, bats), and common reptiles and amphibians. Aquatic resources are centered around the Barasia River, canals and ponds, supporting common freshwater fish species (Ruhi, Katla, Shing, Magur). There are no declared Ecologically Critical Areas (ECAs), National Parks, Wildlife Sanctuaries, Ramsar sites, or critical breeding grounds within or adjacent to the project site. No rare, endemic,

[3] BHAWANIGANJ PAURASHAVA MASTER PLAN: 2011-2031

SI	Key environmental and social aspects	Key baseline information
		or endangered species of flora or fauna have been recorded in the area.
6	Physical Cultural Resources	There is no accurate information about the naming of Bhabaniganj Pourashava. The Pourashava. was previously a Union Parishad which was converted into a Pourashava. in 2000. The Pourashava. is located on the banks of the Rani River. There is no amusement park, playground, cinema hall for entertainment in the Pourashava. The Pourashava. consists of nine wards.

f. Environmental Impact Assessment and Mitigation

111. (The review process will be greatly facilitated by comprehensive and detailed answers in this section. When completing this section, please state a specific reason [i.e., "there will be no impacts to environment because this project will not involve any disturbance"] and cite a source [i.e., local master plan, previous environmental assessment, correspondence with Pourashava Office, etc.] to support a response of "no impact (-)" or "potential to impact (+)."

112. The LIN toilets are being considered with two types of design: (i) Type A, and (ii) Type B. Type A is considered with septic tank whereas Type B considered with pit along with soak pit. The note from the Pourashava engineers taken that in many of the LIN area there is shortage of space for constructing septic tank where soak pit is designed with the pit. However, such soak pit has mitigation measure for ground or surface water contamination (e.g., sand and brick chips envelope on the bottom of pit). Moreover, municipality will ensure good maintenance for such toilets having soak pit.

113. The demolition, construction, and waste management activities in the LIN area may generate several short-term and localized environmental impacts. Dust from demolition, debris movement, and broken footpaths can impair air quality, while demolition and temporary camps may create unhygienic conditions. Noise from demolition is minimal. Since project activities are scattered and not near water bodies, the likelihood of surface or groundwater pollution is low. Pollution from construction work yards is minimal, requiring only limited environmental monitoring. Finally, urban construction activities such as excavation and earthmoving carry inherent occupational safety risks, particularly related to working at heights or in excavated areas, though these risks are reversible with proper mitigation.

Pre-construction and Construction Phase

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
Demolition of existing infrastructure: - Dust from demolition - Noise from demolition - Waste from demolition -Un-hygiene of demolition	(-)	-Different activities regarding the demolishing the existing structure (part) and broken footpath generate dust which impair the air quality -Unhygienic/unsanitary environment due to demolition of old/poor infrastructure and construction of camps in the development site -Creation of noise from demolition is negligible	-Water will be sprayed to control the dust, which is the main way to suppress dust in the working site as per necessary Appendix-2 EMP cost. -Apply water to disturbed soils after demolition is completed or at the end of each day of cleanup. - Transport/handle debris from demolished infrastructures in a hygienic manner. -Tree plantation at the LIN boundary/open space/slope on the basis of space availability -Collection of construction debris and dispose in a hygienic way by LINIC and it is included in engineering estimate item (LGED rate schedule) -PIU/LINIC will strongly monitoring the construction activity and instant action will take.	PIU, LINIC
Dust Management	(-)	-Moving debris/sediments may create dusts during dry season. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures	- Use tarpaulins to cover soils, sand and other loose material. - Water will be sprayed to control the dust when necessary	PIU, LINIC
Community facilities and services - Blockage to access roads - Fire & Safety	(-)	- Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. Poor safety signage and lack of barriers at work site and trenches will create hazard to pedestrians and children. - Chances of fire only from open cooking in the area which may create major loss of property to the residence in the LIN.	-Provide safety signage at all sites visible to public that is monitored by PIU/LINIC and it will be confirmed in semi-annual monitoring report -Provide safety barriers near any trenches, and cover trenches with planks during non-work hours. -LINIC's activities and movement of staff will be restricted to designated construction areas. -Consult with Pourashava local authority on the designated areas for stockpiling of, soils, gravel, and other construction materials. -If the LINIC chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner. -Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged. -Workers need to be made aware of the following general rules: (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction workers are to make use of the facilities provided for them; (iv) no fires permitted on site except if needed for the construction works; and (v) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do. - Bucket filled with sand will be kept at the construction zone.	PIU, LINIC
Air/water/noise quality monitoring	(-)	- Component of works are scattered in the LIN area, which are not located near-by any water stream/canal. There stands little probability of surface and ground water pollution, as nothing like gasoline, oil, road salts and chemicals are dumped on the adjoining ground.	- No need for Air/water/noise quality monitoring in construction area by test due to short-term effect. - Water will be sprayed to control the dust, when necessary, it will be visually observed	Not required

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
		- Construction work yards are located in small areas and its activities are also minimum. Here the intensity of pollution from air/dust/ noise is also very low and short-term. As such little monitoring of water/air/noise pollution parameters is needed at the surroundings work place.		
Drainage congestion/water logging	(-)	- Clogging/stagnation of flow in the storm drain, source of waste water is LIN dweller used water (bathing and washing) - Backflow of water through drain (e.g., due to high water level at downstream discharge point, such as khal/ river) - Drainage congestion/water logging due to cross road/construction activity	-Designing drain considering the downstream discharge point; adequate slope and x-section; RCC cover for drain, where appropriate - Not allowing direct connection to drain from toilet -The out fall of proposed drain is primary to secondary drain and water quality will be monitoring as per necessary (in Appendix-2 EMP cost)	PIU, LINIC
Waste Management	(-)	- Uncollected wastes blocked the drainage and sewage system. - Air, water and soil pollution during the waste collection - Smoke from the open burning of uncollected waste. - The loading and unloading of waste at transfer station pollutes the air and soil. - Odor from waste disposal site and composting system. - Contamination of ground water by leachate.	- Follow the waste management plan given in Appendix 4 during construction period. - Encourage 3R (reduce, reuse, and recycle) - Encourage composting of kitchen waste on the basis of land availability otherwise transfer waste by hand trolley/van that is available in Pourashava and it is inspired by EMP implementation training - Adequate distance between waste bin and water body. - Adequate distance should be maintained between the waste collection point and house - Coordinate with the municipality for collection of domestic waste and disposal at the designated site	PIU/LINIC
Workers H & S	(-)	-There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.	- Comply with requirements of GoB Labor Law of 2006, Labor law and services rules 2015 and all applicable laws and standards on workers H & S. - Ensure adequate safety and provisions as per the Appendix 5 in relation to the COVID-19. - Produce and implement a site health and safety (H&S) plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use PPE at all times; (iii) providing (H&S) training for all site personnel; (iv) Providing fire extinguisher at construction site (v) documenting procedures to be followed for all site activities; and (vi) maintaining accident reports and records. - Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances. -Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.	PIU, LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
			- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;	
Sanitation/excreta management	(-)	-Noise and soil pollution during the construction but short- term -Microbial contamination to the ground water from the pit latrine. -Waste during loading of sewage from the sanitary communal containers. -Odor	-Design and installation of sanitary toilet to stop the microbial contamination to the ground water. -Adequate height with proper ventilation. -Water supply and hand wash facility -Regular cleaning and monitoring -5-10m distance should be maintained between toilet and tube-well	PIU, LINIC
Water supply (Tube well)	(-)	-Noise, dust and soil pollution during the construction but short- term	-The digging of soil should follow the proper design to avoid the pollution and water logging -The outlet of tube well should be connected with soak pit to existing drain. -A person has been engaged for cleaning and maintenance of Tube well. -One set of maintenance equipment of Tube well is kept with LINIC selected person.	PIU, LINIC
Footpath/connecting Road	(-)	-Dust and noise pollution from construction work	-Watering to reduce dust -Tree plantation on the footpath/road slope	PIU, LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the construction workers	-LINIC and all workers will be required to undergo EMP implementation including waste management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labor laws, applicable environmental laws, etc. - Provided training on use of TW, toilet, solar panel and tree plantation etc. during preparation of Community Action Plan (CAP) -Training is a continuous process by Capacity Development Fund of Pourashava. It is financed by IUGIP-III-AF.	Pourashava PRAP budget

- (Construction Phase (For any "negative" impacts "Environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

Operation Phase/Post-Construction

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water logging in drains and footpaths	(-)	Run-off from debris/ sediments from repair and maintenance of Footpath and drain which may cause siltation and reduction in the quality of adjacent bodies of water. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	- Take all precautions to prevent run-off into streams, water courses, or irrigation system. Install temporary silt traps or sedimentation basins along drainage leading to the water bodies. - Remove all debris/sediments immediately. - Dispose debris/sediments at a designated site such as landfill.	PIU, LINIC

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water quality monitoring (Arsenic, Iron, Chloride, Manganese etc.) (twice a year)	(-)	Due to polluted water, people may suffer from dangerous diseases like cholera, dysentery, diarrhea, Gastrointestinal disease and jaundice etc.	Necessary test will be performed occasionally by testing water sample from the tube wells (Pourashava PRAP budget)	PIU, LINIC
Solid Waste management	(-)	-Due to open dumping ambient environment will be polluted and will be breeding place of flies -Threat to human health and/or the environment -Due to bad odor, nuisance to sensitive receptors	- There is an existing sanitary landfill (SLF) of the Pourashava under IUGIP-III/AF and the waste management system will be connected with this system obviously. - The waste will soon be carried to the proposed SLF by Pourashava SWM system - Develop rodent and fly control plan - Ensure residual waste is not left in bins and allowed to decompose for a long time	PIU/LINIC
Community H & S - Walkway/drain - Toilet conditions - Drinking water quality (Tube well)	(-)	- The inhabitants may dump waste on the walkway - Bricks used in BFS, may be stolen when CC will wear out with the passage of time - Inadequate supply of water to toilet may spread bad odor - Improper use may spread germ - Irregular cleaning may create unhygienic condition - Epidemic may spread due to deteriorated quality of water	- Awareness to the inhabitants to discourage dumping of waste on the walkway - Ensure routine maintenance by the LINIC - Continuous supply of water will be provided - Awareness to user for proper use of latrine - LINIC will engage a person to clean and maintenance of Toilet and tube well regularly - Periodic maintenance of Tube well and Toilet will be done by Pourashava PRAP budget -Inspect soak pit periodically to determine filling levels. -Scheduled Dislodging: Arrange timely desludging before overflow occurs. --Use mechanical desludging systems instead of manual entry.Follow confined-space entry protocols if entry is unavoidable. -Train workers on safe handling of human waste and emergency procedures. - -Transport and dispose of sludge only at approved treatment facilities.	PIU/LINIC
Dustbin	(-)	- Improper use of dustbins - Irregular cleaning of dustbin may create bad odor and birth place of flies	- Awareness to the LIN dwellers for proper use of dustbins - LINIC will engage a person who will monitor the cleaning the dustbin regularly	PIU/LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the community	-Twice a year Training/workshop/ meeting for maintenance of TW, Toilet, Planted Tree and Solar panel will be organized by LINIC/PIU and financed by Pourashava PRAP fund. -Provided training on maintenance of TW, toilet and Planted Tree, solar panel during preparation of Community Action Plan (CAP) Inventory Management: Keep records of all solar street light components (panels, batteries, controllers). -Proper Storage: Store damaged or expired components safely in designated areas. -Authorized Disposal: Send batteries, panels, and electronic parts to licensed e-waste recyclers; do not burn or dump. -Staff Training: Train maintenance personnel on the safe handling, segregation, and reporting of e-waste.	Pourashava PRAP budget

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
			-Replacement Plan: Establish a system for replacing non-functional components and managing them as e-waste. -Regular maintenance of planted tree by LIN dwellers	

- (Operation Phase (For any "negative" impacts "environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

g. Environmental Management Plan (EMP)

(ix)Monitoring Plan (Construction and Operation Period)

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Water quality	-Contamination (Arsenic, Iron, Chloride, Manganese etc.) or degrading of water quality of drinking water well -Contamination (DO, BOD, COD, TDS, TSS, Turbidity etc.) or degrading of water quality of surface water	-Water quality of tube well will be tested after installation/construction by LINIC and it is included in engineering estimate (Item LGED rate schedule) -Water quality of Tube well will be monitored periodically and DoE standard will be maintained properly. -The outlet of household waste water would be connected with Pourashava existing drain -PIU/LINIC will strongly monitoring the performance of the interventions	Twice a year/Yearly Operation /completion work	Pourashava
Dust from drains, footpaths, toilets, street light, dustbins	-Air and noise pollution may occur due to construction/operation -Irregular cleaning may damage the interventions	-Use tarpaulins to cover soils, sand and other loose material. -Water will be sprayed to control the dust when necessary -Regular maintenance/cleaning -PIU/LINIC will strongly monitoring the performance of the interventions	As per necessary	PIU/LINIC
Acoustic environment	Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	Plan activities in consultation with Pourashava local authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	No need for noise quality monitoring due to short-term project	Pourashava
Biodiversity	Activities in the built-up area of Pourashava. There are no protected areas in or around Sub-project sites, and no known areas of ecological interest.	• No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission. • Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal).	No need for monitoring due to short-term project	Pourashava
Existing provisions for pedestrians and other forms of transport	Footpath closure is not anticipated. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	• Maintain safe passage for pedestrians during maintenance activities. • Notify affected sensitive receptors by providing sign boards informing nature and duration of maintenance activities and contact numbers for concerns/complaints. • Leave spaces for access between mounds of soil.	Duration of construction works	Pourashava

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
		• Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.		
Worker's health and safety	Workers need to be mindful of the occupational hazards working in confined spaces such as closed drains. Potential impacts are negative and long-term but reversible by mitigation measures.	• Comply with requirements of Government of Bangladesh Labor Law of 2006, Labor Law services rule 2015 and all applicable laws and standards on workers H&S. • Ensure adequate safety and provisions as per the Annex 8 in relation to the COVID-19. • Ensure that all site personnel have a basic level of H&S training. • Produce and implement a O&M and H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training for all site personnel; (iv) providing fire extinguisher at construction site • Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances • Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	Duration of construction works	Pourashava/LINIC

h. Public Consultations

114. A public consultation meeting was held at Surjo Para on 13 October 2022. A total of 20 participants attended the meeting where 20 were female. SIC members, Counselors, workers, housewives and small business holders were present in the meetings. The safeguarding team of IUGIP visited the slum of the Paurashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the slums. The meeting was presided over by the Assistant Engineer of Bhabaniganj Paurashava.

Time of Public Consultation

Site : Surjo Para LIN

Time : 12:00 PM

115. Participants of the meeting exchanged views with the safeguard team about their sufferings and the remedial measures to be taken to overcome it. At present the LIN dwellers use hanging and pit latrine, which is a threat to public health and un-hygienic as well. They insisted for a community latrine to overcome it. The drinking water was the burning issue. The water available at the LIN was inadequate and non-potable due to impurities (e.g., excessive iron). They urged for sufficient potable water at their door step. Water logging was an additional problem of the LINs. Their yard inundates during rainy season. It creates an un-hygienic condition of living. They wanted immediate relief from it, through an installation of proper drainage system. Inadequate internal road communication made their livelihood slower. A proper footpath would ease their safe movement. They asked for a proper footpath system in their LIN. There is inadequate dustbin in or around the LINs. As such they cannot dump the waste specially the kitchen waste properly. It creates bad odor and un-hygienic condition in and around the LIN. They wanted installation of dustbins. Inadequate light during night time is an additional problem. Social nuisance creates at it. Pilferage and unsocial activities promote in the dark. The LIN dwellers urged for street lighting system in and around the LINs.

Experts discussed regarding safeguard issues; focusing the sub-project components with its importance including socio economic and health hazard. Also discussed, environmental and social impacts and mitigation measures about air, dust, water pollution and waste management.

As per discussion and feedback from the SDO and all LINIC members, the LINs were selected through consultation with the local leader/councilors living in the Pourashava area. According to the discussion, the participants appreciated the proposed LIN improvement components, as it will improve the health and sanitation conditions of the LIN which will provide positive socio-economic impact.

The LIN dwellers demanded for more latrines and also demanded separate latrines for women. The chairman of the meeting in his concluding speech mentioned that as per allocation of fund, elements of the proposed sub-project have been selected by the LIN dwellers. The sites have been selected based on the available space spreading all over the LIN. However, maximum old sites will be used and nobody will be affected. The toilet designs have considered separate unit for the women and it would not be possible to provide individual toilets. He requested co-operation from the LIN dwellers during construction activities. The meeting was concluded with thanks from the chair to the participants. (Appendix 3).

Grievance Redress Mechanism

116. Grievance redress mechanism (GRM) has been established in the Pourashava to redress quickly social, environmental and any other project related grievances from the affected or any aggrieved person/ party with the creation of grievance redress cell (GRC) comprising of:

117. Affected or aggrieved persons will have the flexibility of conveying grievances/ suggestions in writing and dropping them in complaints/suggestion boxes that have already been installed in the Pourashava or through telephones, e-mails, by post or by writing in the complaint register in

the Pourashava office. The cost related to environmental grievance redress are included in social and resettlement cost estimates.

i. Grievance Redresses Process

118. **1st Level Grievance**: Names and contact phone numbers of the PIU safeguard focal person will be posted on the construction site at visible location (construction site signboard) to provide first level of contact for quick resolution of the grievances. The LINIC and the PIU safeguard focal person can immediately resolve on-site the grievances in consultation with each other within 7 days of receipt of a complaint/ grievance.

2nd Level Grievance: The grievances that cannot be redressed within 7 days at field/ ward level will be reviewed by the grievance redress cell (GRC) with support from PIU designated safeguard focal person and MDSC regional environment and resettlement specialists. The GRC will attempt to resolve the complaints/ grievances within 15 days.

3rd Level Grievance: The PIU designated safeguard focal person will refer the unresolved or, the major issues to the PMU safeguard officer and MDSC safeguard specialists. The PMU, in consultation with the above-mentioned officer/ specialists, will resolve the issues within 30 days. Despite project GRM, an aggrieved person shall have access to the country's legal system at any stage, and assessing can go parallel.

119. If the GRM cannot resolve the issues, the affected person also can use the ADB Accountability Mechanism (AM) through directly contacting (in writing) the Complaint Receiving Officer (CRO) at ADB headquarters or the ADB Bangladesh Resident Mission (BRM) in any of the official languages of ADB.

j. Recordkeeping:

120. Records all grievances including date of receive and detailed contract address of complainant, nature of grievance, agreed corrective actions, and the dates these were affected and final outcomes will be kept by PIU. The grievances recorded and resolved and the outcomes will be displayed/ disclosed in the PMU office, Pourashava office, on the web and reported in the semi-annual monitoring reports.

Periodic review and documentation of lessons learnt: The PMU safeguard officer will periodically review the functioning of the GRM in each Pourashava and record information on the effectiveness of the mechanism.

Uttarekdala Rishipara LIN (Lot-06) :(Ward No. 02)

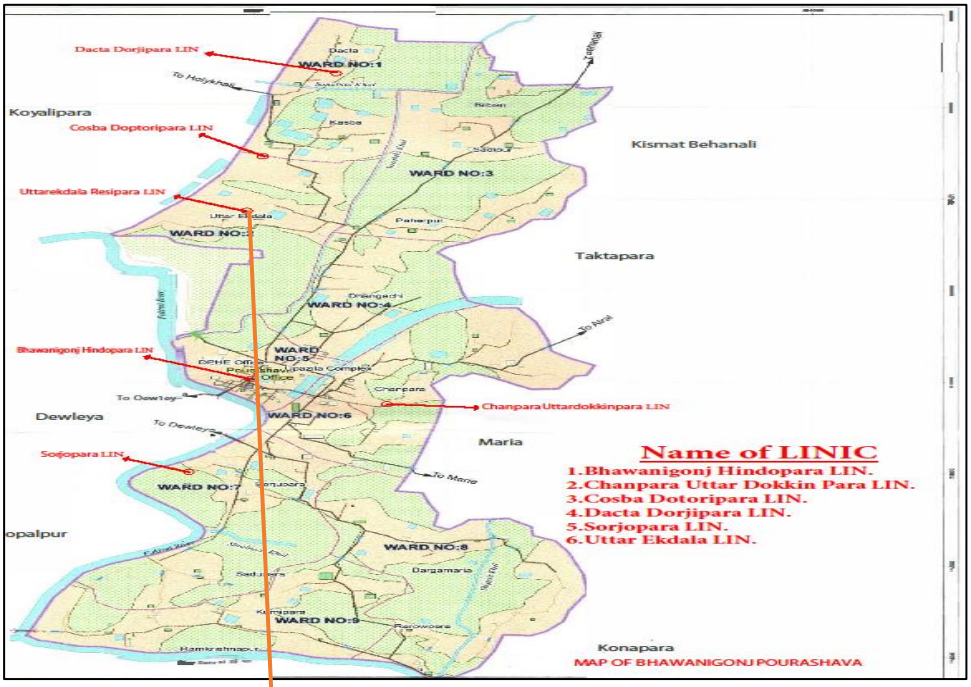
Package No IUGIP/BHAW/SI/06-06/2023 (Lot-06)

92. The LIN is situated in ward no. 02. There are 77 families with 285 members, of which 146 are males, and 139 are females. The land area is 0.4 acres, and the government & local people own the land. Most of LIN dwellers earn their livelihood by physical labor. The average income per head per month is less than BDT 5000.00. Most of the families live in katcha, Tin-shed and Semi-pucca houses. They are deprived of most of the needed basic services. This LIN has an acute problem of inadequate sanitary latrines, inadequate facilities for drinking water, inadequate and deteriorating internal roads/footpaths/walkways, dustbins, street lighting, drains, etc.

a. Location of the LIN

103. Uttarekdala Rishipara LIN is situated in ward no. 02 under Bhabaniganj Paurashava of Rajshai District; for the location of the slum in the Bhabaniganj Paurashava map is given below.

Figure XIII: Location of Uttarekdala Rishipara LIN



b. description of Interventions

103. Description of the Uttarekdala Rishipara LIN proposed interventions for LIN is given in Table-6.

Table 6: Description of Proposed Interventions of Uttarekdala Rishipara LIN

Improving Urban Governance and Infrastructure Program (IUGIP)
LIN Improvement Sub-project Package
Pourashava: Bhawaniganj, District: Rajshahi.

Sl. No.	Name of Package	Financial Year		Name and Number/ Length of Scheme	Unit (m/nos)	Amount TK/ (nos/m)	Quantity	Engineer's Estimated Amount (TK)	Remarks
				Name of LIN: Uttar Ekdala Rishi para (Lot-06)					
	IUGIP/BHAW/SI/01-06/2023 (Lot-06)	2025-2026		Name of works: Construction of 26 Nos Single unit (type-B) toilets with 52 Nos soak pits & 1 nos. double unit (type-B) toilet with 04 Nos soak pits, 160 meter of Footpath, 120 meter Brick Drain, 03 numbers of solar street light,08 numbers hand tubewell with 08 Nos soak pits, 1 Nos Dustbin and 100 Nos Tree Plantation in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.					
1			a)	Construction of 25 Nos. Single unit (type-B) Toilet with 50 nos soak pit in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	245500.34	25	6,137,508.50	
2			b)	Construction of 01 Nos. Dustbin in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	15248.10	1	15,248.10	
3			c)	Construction of 160 m footpath in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.	m	7045.12	160	1,127,218.43	
4			d)	Construction of 120 m Brick drain with top slab in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.	m	5866.39	120	703,966.41	
5			e)	Installation of 04 Number solar street light in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	94481.79	4	377,927.16	
6			f)	Installation of 08 number tube well with 08 Nos soak pits in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	66925.45	8	535,403.60	
7			g)	Plantation of 100 nos. Tree in Uttar Ekdala Rishi para LIN, at Ward no.-02 under Pourashava:Bhawaniganj, District: Rajshahi.	nos	495.00	100	49,500.00	
				Total (Lot-06) Amount =				8,946,772.20	
				Grand Total Package (Lot-01+Lot-02+Lot-03+Lot-04+Lot-5+Lot-6) Amount =				54,628,440.18	

Md. Thoufikul Islam, Sub-Assistant Engineer (Civil), Bhawaniganj Pourashava, Rajshahi
Md. Mamun, Sub Assistant Engineer, LKSS, IUGIP, LGED HQ, Dhaka
Md. Razanuzzaman, Municipal Engineer-10, Bhawaniganj Pourashava, Rajshahi
Liton Miah, Assistant Engineer, Bhawaniganj Pourashava, Rajshahi
Mohammad Mehedi Hassan, Administrator, Bhawaniganj Pourashava, Rajshahi
Dr. Khondokar Abu Zafo, Team Leader, MDS Consultants, IUGI, LGED, Dhaka
Ria Khanam Ria, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka
Mohd. Golam Sarwar, Assistant Engineer, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka
Md. Nasir Uddin, Deputy Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka
Tofail Ahamed, Project Director, Improving Urban Governance and Infrastructure Project (IUGIP), LGED HQ, Dhaka.

c. Present Condition (Baseline Environment)

I. Flooding/Water-clogging

104. Flood does not usually occur in this slum. There exist no paved internal drainage systems in the LIN. The existing drains are earthen that are poorly functioning. As the slum areas are low-lying, heavy rainfall during the rainy season creates water logging temporary. Hence, the construction of drains is necessary to remove water logging conditions in these LIN.

II. Water Source/Level/Quality/Tube well

105. Currently, the slum people have been suffering from the acute problem of inadequate availability of drinking water. Hence, slum dwellers have demanded installing no tube well in their area; refer to Appendix 1 for the typical design of a tube well.

III. Sanitations

106. There is insufficient toilets facility in the LIN area. LIN dwellers do not have enough hygienic sanitation. There is a 26 Nos proposal sanitation improvement within the LIN area.

IV. Access Roads/Footpaths

107. A CC (cement concrete) access road exists within the LIN area. However, LIN dwellers wanted footpath for their communication within the LIN area. The proposed footpaths have been designed with cement concrete (CC) with crushed stone chips and over Single Layer Brick Flat Soling (BFS). 160m of footpaths are being proposed in this proposal.

V. Solar Street Lights

108. There are insufficient numbers of street light in this LIN area therefore 04 nos provisions of light are proposed under this package.

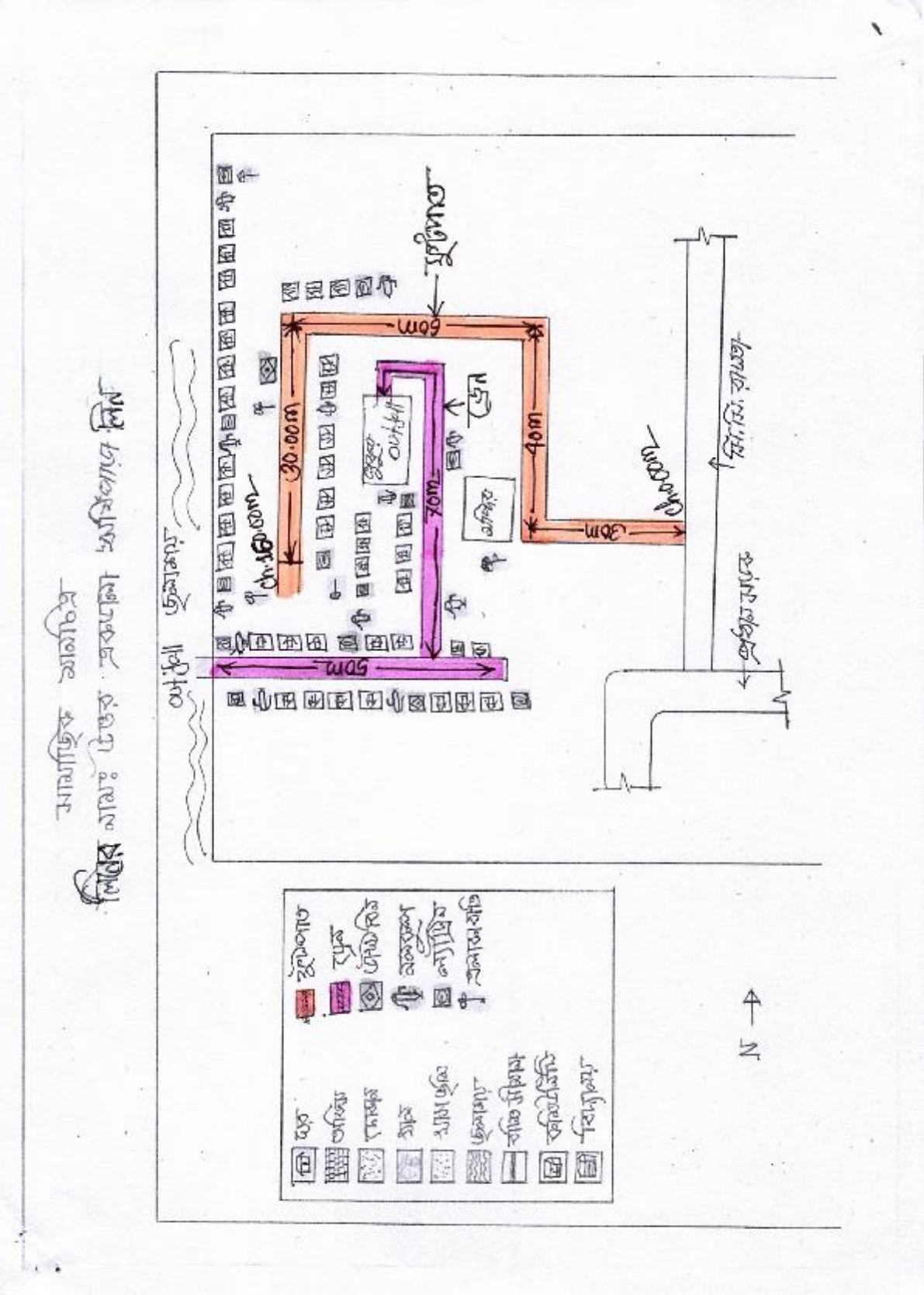
VI. Drain

109. The existing drains are earthen and are inactive. So, the LIN dwellers experience water logging especially during rainy season. The out fall of proposed drain is Poura secondary drain to primary drain (site map) and because as the coming water to the proposed drain is only from rainfall run-off or household waste water. All drains have been designed to be built by RCC/brick. But well-defined slopes and outfalls have been ensured. The U-type drains have been designed considering the constraint in land availability. The design life has been considered as 20 years. Integration/connection of Road side drains with the town drainage system has been considered and considering the possibilities of increased precipitation owing to probable climate change, the sections have been designed keeping allowance to accommodate 10% additional flow.

Figure XIV: Existing Situation at Uttarekdala Rishipara LIN

Uttarekdala Rishipara LIN

d. Site Map of Uttarekdala Rishipara LIN



e. Baseline information:

All LINS fall under a single Pourashava, so their baseline profiles are nearly identical, differing only in aspects of Physical Cultural Resources.

116. The key baseline information on the LIN area is depicted in below table:

Sl	Key environmental and social aspects	Key baseline information
1	Noise	Noise is not a major impediment for the quality of the environment in the study area. Vehicles such as electric rickshaw, motor cycle, van, tempo, mini truck, votvoti, and tractor trailer etc. move on the road during day and night. Particular areas adjacent to the main road have some noise pollution created by movement of heavy vehicles near LIN. These vehicles generate noise in the LIN area but within tolerable limit in most cases. No other perceptible sources of noise generation such as factories, industries, etc. are found near by the LIN area.
2	Air	Air pollution is the introduction of chemicals, particulate matter, or biological materials that cause harm or discomfort to humans or other living organisms, or damages the natural environment, into the atmosphere. Here quality of air in LIN area of Bhawaniganj Pourashava appears to be clean but due to poor condition of road surface, dust is generated, especially during the movement of vehicles that causes air pollution and may affect sensitive groups. The air quality in LIN area of Bhawaniganj (and Bangladesh more broadly) is mainly caused by particulate matter (PM2.5 and PM10) from brick kilns, vehicle emissions, construction dust, and industrial activity. The Final Master Plan of the Pourashava shows that air pollution is quite a serious environmental consideration having adverse impacts within many parts of the LIN area of Bhawaniganj Pourashava. Operations of shallow engine driven vehicles (Nochiman/ Kariman) that are unfriendly to the environment are responsible for air pollution. Diesel particulate matter (DPM) includes diesel soot and aerosols such as ash particulates, metallic abrasion particles, sulfates, and silicates. Air pollution also occurs by the odor from the open municipal garbage. People are not aware to dispose their solid garbage in to those dustbins rather than open ground. As a result, open garbage disposal is common and it creates serious odor which ultimately affects the surrounding air.
3	Ground water	Ground water pollution also exists in the Bhawaniganj Pourashava. Presence of iron and arsenic as pollutants in ground water are the reasons for such pollution. Ground water quality

SI	Key environmental and social aspects	Key baseline information
		in the Pourashava is influenced by arsenic and iron. Water in most shallow aquifer is arsenic and all are contaminated with iron, not suitable for drinking purposes. The lower deep aquifer is found at a depth of 80 m to 120 m. Deep aquifers with fresh water in the Pourashava are exploited to meet the demand of water for inhabitants.
4	Surface water	River, Canal/Khal and ponds are occupying 7.41% (232.427 acres) land of the Bhawaniganj Pourashava. The canals are linked with the adjacent Rani River. In dry season, the canal uses as agriculture land and in the rainy season the canal submerges lowlands of the Pourashava. The ponds are located around the Pourashava. In dry season, ponds water is using for bathing and washing purposes. Canal water generally uses for irrigation purposes. In Bhawaniganj Pourashava, there are many ponds, ditches and 4 canals as sources of surface water. Surface water pollution originating from the use of insecticide and chemical fertilizers in crop fields. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Wash out by rain water from crop fields to nearest water sources with chemicals is causing water pollution. Cattle bathing and flow of waste water from domestic use discharge into the ponds, khals and river have also identified as reasons for surface water contamination. The Paurashava authority has yet not taken any initiatives to control surface water pollution.[4]
5	Ecological Resources and Protected Area (PA)	The sub-project components are located within the Bhawaniganj Pourashava urban area and its immediate built-up surroundings. Common flora identified in the area includes Mango (*Mangifera indica*), Jackfruit (*Artocarpus heterophyllus*), Kalojam (*Syzygium cumini*), Betel nut palm (*Areca catechu*), Coconut palm (*Cocos nucifera*), Guava (*Psidium guajava*), Neem (*Azadirachta indica*), Raintree (*Samanea saman*) etc. Common terrestrial fauna includes local birds (myna, house crow), small mammals (squirrels, bats), and common reptiles and amphibians. Aquatic resources are centered around the Barasia River, canals and ponds, supporting common freshwater fish species (Ruhi, Katla, Shing, Magur). There are no declared Ecologically Critical Areas (ECAs), National Parks, Wildlife Sanctuaries, Ramsar sites, or critical breeding grounds within or adjacent to the project site. No rare, endemic,

[4] BHAWANIGANJ PAURASHAVA MASTER PLAN: 2011-2031

SI	Key environmental and social aspects	Key baseline information
		or endangered species of flora or fauna have been recorded in the area.
6	Physical Cultural Resources	There is no accurate information about the naming of Bhabaniganj Pourashava. The Pourashava. was previously a Union Parishad which was converted into a Pourashava in 2000. The Pourashava. is located on the banks of the Rani River. There is no amusement park, playground, cinema hall for entertainment in the Pourashava. The Pourashava. consists of nine wards.

f. Environmental Impact Assessment and Mitigation

117. (The review process will be greatly facilitated by comprehensive and detailed answers in this section. When completing this section, please state a specific reason [i.e., "there will be no impacts to environment because this project will not involve any disturbance"] and cite a source [i.e., local master plan, previous environmental assessment, correspondence with Pourashava Office, etc.] to support a response of "no impact (-)" or "potential to impact (+)."

118. The LIN toilets are being considered with two types of design: (i) Type A, and (ii) Type B. Type A is considered with septic tank whereas Type B considered with pit along with soak pit. The note from the Pourashava engineers taken that in many of the LIN area there is shortage of space for constructing septic tank where soak pit is designed with the pit. However, such soak pit has mitigation measure for ground or surface water contamination (e.g., sand and brick chips envelope on the bottom of pit). Moreover, municipality will ensure good maintenance for such toilets having soak pit.

119. The demolition, construction, and waste management activities in the LIN area may generate several short-term and localized environmental impacts. Dust from demolition, debris movement, and broken footpaths can impair air quality, while demolition and temporary camps may create unhygienic conditions. Noise from demolition is minimal. Since project activities are scattered and not near water bodies, the likelihood of surface or groundwater pollution is low. Pollution from construction work yards is minimal, requiring only limited environmental monitoring. Finally, urban construction activities such as excavation and earthmoving carry inherent occupational safety risks, particularly related to working at heights or in excavated areas, though these risks are reversible with proper mitigation.

Pre-construction and Construction Phase

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
Demolition of existing infrastructure: - Dust from demolition - Noise from demolition - Waste from demolition -Un-hygiene of demolition	(-)	-Different activities regarding the demolishing the existing structure (part) and broken footpath generate dust which impair the air quality -Unhygienic/unsanitary environment due to demolition of old/poor infrastructure and construction of camps in the development site -Creation of noise from demolition is negligible	-Water will be sprayed to control the dust, which is the main way to suppress dust in the working site as per necessary Appendix-2 EMP cost. -Apply water to disturbed soils after demolition is completed or at the end of each day of cleanup. - Transport/handle debris from demolished infrastructures in a hygienic manner. -Tree plantation at the LIN boundary/open space/slope on the basis of space availability -Collection of construction debris and dispose in a hygienic way by LINIC and it is included in engineering estimate item (LGED rate schedule) -PIU/LINIC will strongly monitoring the construction activity and instant action will take.	PIU, LINIC
Dust Management	(-)	-Moving debris/sediments may create dusts during dry season. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures	- Use tarpaulins to cover soils, sand and other loose material. - Water will be sprayed to control the dust when necessary	PIU, LINIC
Community facilities and services - Blockage to access roads - Fire & Safety	(-)	- Construction works will impede the access of residents and businesses in limited cases. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures. Poor safety signage and lack of barriers at work site and trenches will create hazard to pedestrians and children. - Chances of fire only from open cooking in the area which may create major loss of property to the residence in the LIN.	-Provide safety signage at all sites visible to public that is monitored by PIU/LINIC and it will be confirmed in semi-annual monitoring report -Provide safety barriers near any trenches, and cover trenches with planks during non-work hours. -LINIC's activities and movement of staff will be restricted to designated construction areas. -Consult with Pourashava local authority on the designated areas for stockpiling of, soils, gravel, and other construction materials. -If the LINIC chooses to locate the work camp/storage area on private land, he must get prior permission from the environment management specialist and landowner. -Recycling and the provision of separate waste receptacles for different types of waste shall be encouraged. -Workers need to be made aware of the following general rules: (i) no alcohol/drugs on site; (ii) prevent excessive noise; (iii) construction workers are to make use of the facilities provided for them; (iv) no fires permitted on site except if needed for the construction works; and (v) no worker may be forced to do work that is potentially dangerous or that he/she is not trained to do. - Bucket filled with sand will be kept at the construction zone.	PIU, LINIC
Air/water/noise quality monitoring	(-)	- Component of works are scattered in the LIN area, which are not located near-by any water stream/canal. There stands little probability of surface and ground water pollution, as nothing like gasoline, oil, road salts and chemicals are dumped on the adjoining ground.	- No need for Air/water/noise quality monitoring in construction area by test due to short-term effect. - Water will be sprayed to control the dust, when necessary, it will be visually observed	Not required

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
		- Construction work yards are located in small areas and its activities are also minimum. Here the intensity of pollution from air/dust/ noise is also very low and short-term. As such little monitoring of water/air/noise pollution parameters is needed at the surroundings work place.		
Drainage congestion/water logging	(-)	- Clogging/stagnation of flow in the storm drain, source of waste water is LIN dweller used water (bathing and washing) - Backflow of water through drain (e.g., due to high water level at downstream discharge point, such as khal/ river) - Drainage congestion/water logging due to cross road/construction activity	-Designing drain considering the downstream discharge point; adequate slope and x-section; RCC cover for drain, where appropriate - Not allowing direct connection to drain from toilet -The out fall of proposed drain is primary to secondary drain and water quality will be monitoring as per necessary (in Appendix-2 EMP cost)	PIU, LINIC
Waste Management	(-)	- Uncollected wastes blocked the drainage and sewage system. - Air, water and soil pollution during the waste collection - Smoke from the open burning of uncollected waste. - The loading and unloading of waste at transfer station pollutes the air and soil. - Odor from waste disposal site and composting system. - Contamination of ground water by leachate.	- Follow the waste management plan given in Appendix 4 during construction period. - Encourage 3R (reduce, reuse, and recycle) - Encourage composting of kitchen waste on the basis of land availability otherwise transfer waste by hand trolley/van that is available in Pourashava and it is inspired by EMP implementation training - Adequate distance between waste bin and water body. - Adequate distance should be maintained between the waste collection point and house - Coordinate with the municipality for collection of domestic waste and disposal at the designated site	PIU/LINIC
Workers H & S	(-)	-There is invariably a safety risk when construction works such as excavation and earthmoving are conducted in urban areas. Workers need to be mindful of the occupational hazards which can arise from working in height and excavation works. Potential impacts are negative and long-term but reversible by mitigation measures.	- Comply with requirements of GoB Labor Law of 2006, Labor law and services rules 2015 and all applicable laws and standards on workers H & S. - Ensure adequate safety and provisions as per the Appendix 5 in relation to the COVID-19. - Produce and implement a site health and safety (H&S) plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use PPE at all times; (iii) providing (H&S) training for all site personnel; (iv) Providing fire extinguisher at construction site (v) documenting procedures to be followed for all site activities; and (vi) maintaining accident reports and records. - Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances. -Ensure (i) uncontaminated water for drinking, cooking and washing, (ii) clean eating areas where workers are not exposed to hazardous or noxious substances; and (iii) sanitation facilities are available at all times.	PIU, LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
			- Provide H&S orientation training to all new workers to ensure that they are apprised of the basic site rules of work at the site, personal protective protection, and preventing injuring to fellow workers;	
Sanitation/excreta management	(-)	-Noise and soil pollution during the construction but short- term -Microbial contamination to the ground water from the pit latrine. -Waste during loading of sewage from the sanitary communal containers. -Odor	-Design and installation of sanitary toilet to stop the microbial contamination to the ground water. -Adequate height with proper ventilation. -Water supply and hand wash facility -Regular cleaning and monitoring -5-10m distance should be maintained between toilet and tube-well	PIU, LINIC
Water supply (Tube well)	(-)	-Noise, dust and soil pollution during the construction but short- term	-The digging of soil should follow the proper design to avoid the pollution and water logging -The outlet of tube well should be connected with soak pit to existing drain. -A person has been engaged for cleaning and maintenance of Tube well. -One set of maintenance equipment of Tube well is kept with LINIC selected person.	PIU, LINIC
Footpath/connecting Road	(-)	-Dust and noise pollution from construction work	-Watering to reduce dust -Tree plantation on the footpath/road slope	PIU, LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Tube well, Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the construction workers	-LINIC and all workers will be required to undergo EMP implementation including waste management, Standard operating procedures (SOP) for construction works; health and safety (H&S), core labor laws, applicable environmental laws, etc. - Provided training on use of TW, toilet, solar panel and tree plantation etc. during preparation of Community Action Plan (CAP) -Training is a continuous process by Capacity Development Fund of Pourashava. It is financed by IUGIP-III-AF.	Pourashava PRAP budget

- (Construction Phase (For any "negative" impacts "Environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

Operation Phase/Post-Construction

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water logging in drains and footpaths	(-)	Run-off from debris/ sediments from repair and maintenance of Footpath and drain which may cause siltation and reduction in the quality of adjacent bodies of water. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	- Take all precautions to prevent run-off into streams, water courses, or irrigation system. Install temporary silt traps or sedimentation basins along drainage leading to the water bodies. - Remove all debris/sediments immediately. - Dispose debris/sediments at a designated site such as landfill.	PIU, LINIC

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
Water quality monitoring (Arsenic, Iron, Chloride, Manganese etc.) (twice a year)	(-)	Due to polluted water, people may suffer from dangerous diseases like cholera, dysentery, diarrhea, Gastrointestinal disease and jaundice etc.	Necessary test will be performed occasionally by testing water sample from the tube wells (Pourashava PRAP budget)	PIU, LINIC
Solid Waste management	(-)	-Due to open dumping ambient environment will be polluted and will be breeding place of flies -Threat to human health and/or the environment -Due to bad odor, nuisance to sensitive receptors	- There is an existing sanitary landfill (SLF) of the Pourashava under IUGIP-III/AF and the waste management system will be connected with this system obviously. - The waste will soon be carried to the proposed SLF by Pourashava SWM system - Develop rodent and fly control plan - Ensure residual waste is not left in bins and allowed to decompose for a long time	PIU/LINIC
Community H & S - Walkway/drain - Toilet conditions - Drinking water quality (Tube well)	(-)	- The inhabitants may dump waste on the walkway - Bricks used in BFS, may be stolen when CC will wear out with the passage of time - Inadequate supply of water to toilet may spread bad odor - Improper use may spread germ - Irregular cleaning may create unhygienic condition - Epidemic may spread due to deteriorated quality of water	- Awareness to the inhabitants to discourage dumping of waste on the walkway - Ensure routine maintenance by the LINIC - Continuous supply of water will be provided - Awareness to user for proper use of latrine - LINIC will engage a person to clean and maintenance of Toilet and tube well regularly - Periodic maintenance of Tube well and Toilet will be done by Pourashava PRAP budget -Inspect soak pit periodically to determine filling levels. -Scheduled Dislodging: Arrange timely desludging before overflow occurs. --Use mechanical desludging systems instead of manual entry.Follow confined-space entry protocols if entry is unavoidable. -Train workers on safe handling of human waste and emergency procedures. - -Transport and dispose of sludge only at approved treatment facilities.	PIU/LINIC
Dustbin	(-)	- Improper use of dustbins - Irregular cleaning of dustbin may create bad odor and birth place of flies	- Awareness to the LIN dwellers for proper use of dustbins - LINIC will engage a person who will monitor the cleaning the dustbin regularly	PIU/LINIC
Environmental awareness Training/workshop/meeting for the community (Maintenance of Toilet, Planted Tree, Solar Panel)	(+)	-Increase environmental awareness among the community	-Twice a year Training/workshop/ meeting for maintenance of TW, Toilet, Planted Tree and Solar panel will be organized by LINIC/PIU and financed by Pourashava PRAP fund. -Provided training on maintenance of TW, toilet and Planted Tree, solar panel during preparation of Community Action Plan (CAP) Inventory Management: Keep records of all solar street light components (panels, batteries, controllers). -Proper Storage: Store damaged or expired components safely in designated areas. -Authorized Disposal: Send batteries, panels, and electronic parts to licensed e-waste recyclers; do not burn or dump. -Staff Training: Train maintenance personnel on the safe handling, segregation, and reporting of e-waste.	Pourashava PRAP budget

Environmental issues/concerns/ components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
			-Replacement Plan: Establish a system for replacing non-functional components and managing them as e-waste. -Regular maintenance of planted tree by LIN dwellers	

- (Operation Phase (For any "negative" impacts "environmental mitigation measure" may be suggested. For any positive impacts environmental enhancement program may be carried out)

g. Environmental Management Plan (EMP)

(x) Monitoring Plan (Construction and Operation Period)

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Water quality	-Contamination (Arsenic, Iron, Chloride, Manganese etc.) or degrading of water quality of drinking water well -Contamination (DO, BOD, COD, TDS, TSS, Turbidity etc.) or degrading of water quality of surface water	-Water quality of tube well will be tested after installation/construction by LINIC and it is included in engineering estimate (Item LGED rate schedule) -Water quality of Tube well will be monitored periodically and DoE standard will be maintained properly. -The outlet of household waste water would be connected with Pourashava existing drain -PIU/LINIC will strongly monitoring the performance of the interventions	Twice a year/Yearly Operation /completion work	Pourashava
Dust from drains, footpaths, toilets, street light, dustbins	-Air and noise pollution may occur due to construction/operation -Irregular cleaning may damage the interventions	-Use tarpaulins to cover soils, sand and other loose material. -Water will be sprayed to control the dust when necessary -Regular maintenance/cleaning -PIU/LINIC will strongly monitoring the performance of the interventions	As per necessary	PIU/LINIC
Acoustic environment	Temporary increase in noise level and vibrations. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	Plan activities in consultation with Pourashava local authority so that activities with the greatest potential to generate noise are conducted during periods of the day which will result in least disturbance.	No need for noise quality monitoring due to short-term project	Pourashava
Biodiversity	Activities in the built-up area of Pourashava. There are no protected areas in or around Sub-project sites, and no known areas of ecological interest.	• No trees, shrubs, or groundcover may be removed or vegetation stripped without the prior permission. • Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna (animal).	No need for monitoring due to short-term project	Pourashava
Existing provisions for pedestrians and other forms of transport	Footpath closure is not anticipated. The impacts are negative but short-term, site-specific within a relatively small area and reversible by mitigation measures.	• Maintain safe passage for pedestrians during maintenance activities. • Notify affected sensitive receptors by providing sign boards informing nature and duration of maintenance activities and contact numbers for concerns/complaints. • Leave spaces for access between mounds of soil.	Duration of construction works	Pourashava

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
		• Ensure any damage to properties and utilities will be restored or compensated to pre-work conditions.		
Worker's health and safety	Workers need to be mindful of the occupational hazards working in confined spaces such as closed drains. Potential impacts are negative and long-term but reversible by mitigation measures.	• Comply with requirements of Government of Bangladesh Labor Law of 2006, Labor Law services rule 2015 and all applicable laws and standards on workers H&S. • Ensure adequate safety and provisions as per the Annex 8 in relation to the COVID-19. • Ensure that all site personnel have a basic level of H&S training. • Produce and implement a O&M and H&S plan which include measures as: (i) excluding the public from worksites; (ii) ensuring all workers are provided with and required to use personal protective equipment (reflectorized vests, footwear, gloves, goggles and masks) at all times; (iii) providing H&S training for all site personnel; (iv) providing fire extinguisher at construction site • Arrange for readily available first aid unit including an adequate supply of sterilized dressing materials and appliances • Disallow worker exposure to noise level greater than 85 dBA for duration of more than 8 hours per day without hearing protection. The use of hearing protection shall be enforced actively.	Duration of construction works	Pourashava/LINIC

h. Public Consultations

120. A public consultation meeting was held at Uttarekdala Rishipara on 13 October 2022. A total of 20 participants attended the meeting where 20 were female. SIC members, Counselors, housewives and small business holders were present in the meetings. The safeguarding team of IUGIP visited the slum of the Paurashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the slums. The meeting was presided over by the Assistant Engineer of Bhabaniganj Paurashava.

Time of Public Consultation

Site : Uttarekdala Rishipara LIN

Time : 10:00 AM

121. Participants of the meeting exchanged views with the safeguard team about their sufferings and the remedial measures to be taken to overcome it. At present the LIN dwellers use hanging and pit latrine, which is a threat to public health and un-hygienic as well. They insisted for a community latrine to overcome it. The drinking water was the burning issue. The water available at the LIN was inadequate and non-potable due to impurities (e.g., excessive iron). They urged for sufficient potable water at their door step. Water logging was an additional problem of the LINs. Their yard inundates during rainy season. It creates an un-hygienic condition of living. They wanted immediate relief from it, through an installation of proper drainage system. Inadequate internal road communication made their livelihood slower. A proper footpath would ease their safe movement. They asked for a proper footpath system in their LIN. There is inadequate dustbin in or around the LINs. As such they cannot dump the waste specially the kitchen waste properly. It creates bad odor and un-hygienic condition in and around the LIN. They wanted installation of dustbins. Inadequate light during night time is an additional problem. Social nuisance creates at it. Pilferage and unsocial activities promote in the dark. The LIN dwellers urged for street lighting system in and around the LINs.

122. Experts discussed regarding safeguard issues; focusing the sub-project components with its importance including socio economic and health hazard. Also discussed, environmental and social impacts and mitigation measures about air, dust, water pollution and waste management.

123. As per discussion and feedback from the SDO and all LINIC members, the LINs were selected through consultation with the local leader/councilors living in the Pourashava area. According to the discussion, the participants appreciated the proposed LIN improvement components, as it will improve the health and sanitation conditions of the LIN which will provide positive socio-economic impact.

124. The LIN dwellers demanded for more latrines and also demanded separate latrines for women. The chairman of the meeting in his concluding speech mentioned that as per allocation of fund, elements of the proposed sub-project have been selected by the LIN dwellers. The sites have been selected based on the available space spreading all over the LIN. However, maximum old sites will be used and nobody will be affected. The toilet designs have considered separate unit for the women and it would not be possible to provide individual toilets. He requested co-operation from the LIN dwellers during construction activities. The meeting was concluded with thanks from the chair to the participants. (Appendix 3).

i. Grievance Redress Mechanism

125. Grievance redress mechanism (GRM) has been established in the Pourashava to redress quickly social, environmental and any other project related grievances from the affected or any aggrieved person/ party with the creation of grievance redress cell (GRC) comprising of:

126. Affected or aggrieved persons will have the flexibility of conveying grievances/ suggestions in writing and dropping them in complaints/suggestion boxes that have already been installed in the Pourashava or through telephones, e-mails, by post or by writing in the complaint register in the Pourashava office. The cost related to environmental grievance redress are included in social and resettlement cost estimates.

j. Grievance Redresses Process

127. 1st Level Grievance: Names and contact phone numbers of the PIU safeguard focal person will be posted on the construction site at visible location (construction site signboard) to provide first level of contact for quick resolution of the grievances. The LINIC and the PIU safeguard focal person can immediately resolve on-site the grievances in consultation with each other within 7 days of receipt of a complaint/ grievance.

2nd Level Grievance: The grievances that cannot be redressed within 7 days at field/ ward level will be reviewed by the grievance redress cell (GRC) with support from PIU designated safeguard focal person and MDSC regional environment and resettlement specialists. The GRC will attempt to resolve the complaints/ grievances within 15 days.

3rd Level Grievance: The PIU designated safeguard focal person will refer the unresolved or, the major issues to the PMU safeguard officer and MDSC safeguard specialists. The PMU, in consultation with the above-mentioned officer/ specialists, will resolve the issues within 30 days. Despite project GRM, an aggrieved person shall have access to the country's legal system at any stage, and assessing can go parallel.

128. If the GRM cannot resolve the issues, the affected person also can use the ADB Accountability Mechanism (AM) through directly contacting (in writing) the Complaint Receiving Officer (CRO) at ADB headquarters or the ADB Bangladesh Resident Mission (BRM) in any of the official languages of ADB.

k. Recordkeeping:

129. Records all grievances including date of receive and detailed contract address of complainant, nature of grievance, agreed corrective actions, and the dates these were affected and final outcomes will be kept by PIU. The grievances recorded and resolved and the outcomes will be displayed/ disclosed in the PMU office, Pourashava office, on the web and reported in the semi-annual monitoring reports.

Periodic review and documentation of lessons learnt: The PMU safeguard officer will periodically review the functioning of the GRM in each Pourashava and record information on the effectiveness of the mechanism.

l. Conclusion

130. So, there will be no negative impact for the implementation of the sub-project and if there is any that would be very minimum most of which are construction related, localized and for short-term. Moreover, there will be a lot of positive impacts such as: Moreover, there will be a lot of positive impacts such as:

- Environmental & sanitation conditions will be improved.
- LIN dwellers will have comfortable walkway and improved drainage.
- Water-logging will be removed which will eliminate the mosquito breeding resulting the reduction of many diseases including waterborne diseases.
- LIN dwellers will have facilities for pure drinking water and facilities for solid waste disposal.
- There will be savings in the medical treatment cost. Thus, health conditions will be improved etc.

Appendix 1: Environmental screening and categorization Form

Eligibility & Categorization Form

Country/ Project No./ Project Title		Improving Urban Governance and Infrastructure Program (IUGIP)
Subproject title		Low Income Neighborhood Improvement Community upgradation RBL sub-project
Project Executing Agency		LGED, Dhaka
Project Implementing Agency		Bhabaniganj Pourashava
Modality		RBL progress
Is Project eligible for funding under the RBL Program? [√] Yes [ ] No *(Ref DOE of ECR 2023)*		
Environment Impact categorization [√] New [ ] Re categorization – Previous Category [ ]		
[ ] **Category A** (Cat A - Not eligible for funding under the RBL)		
[√] **Category B** [ ] **Category C**		
(Ref Checklist- Rapid Environmental Assessment (REA) checklists)		
Prepared by: Musarrat Nower Enam Jr. Environmental Specialist		
Environmental Specialist (Name, title, signature): Date;		
For Project Executing Agency / PMU (Name, title, signature):		

Checklist 1 - Project Exclusion Screening Checklist for Environmental Safeguards

The following checklist shall be completed before inclusion of any activity/subproject in the RBL program. If Answer to any of the mentioned criteria is 'Yes' then such activity/subproject will not be eligible and shall be excluded from the RBL program.

Questions		Response		Remarks /Clarifications
		Yes	No	
1.	**Type and Nature of Subproject**			
1.1	Proposed activity / subproject classified under the Red Category per ECR 2023?		√	Complied the ECR 2023 for classification
1.2	Proposed activity / subproject includes components involving prohibited investment activities per ADB SPS?		√	Complied REA for prohibited list
2.	**Location of Proposed Subproject**		√	
2.1	Proposed activity/subproject located in ecologically sensitive areas such as protected areas (national parks, wildlife sanctuaries), notified wetlands or wetlands of significant value, critical habitats?		√	
2.2	Proposed activity/subproject located in world heritage sites, and/or within 250 m from the core zone of outer boundary of the world heritage area		√	
2.3	Proposed activity located within monuments/sites protected by Department of Archeology, Government of Bangladesh?		√	
3.	**Potential impacts**			
3.1	Proposed activity/subproject may significantly impact mangroves, wetlands, estuaries, buffer zones of protected Areas etc.?		√	
3.2	Proposed activity/subproject may potentially lead to encroachment/damage of physical cultural resources with significant value and/or places recognized by government agencies (e.g., Department of Archeology), which may include places of worship, cultural heritage sites, graves/cemeteries, historical monuments, etc.		√	
3.3	Proposed activity/subproject likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented, and may affect an area larger than the sites or facilities subject to physical works (i.e., category A projects as per ADB SPS 2009)		√	

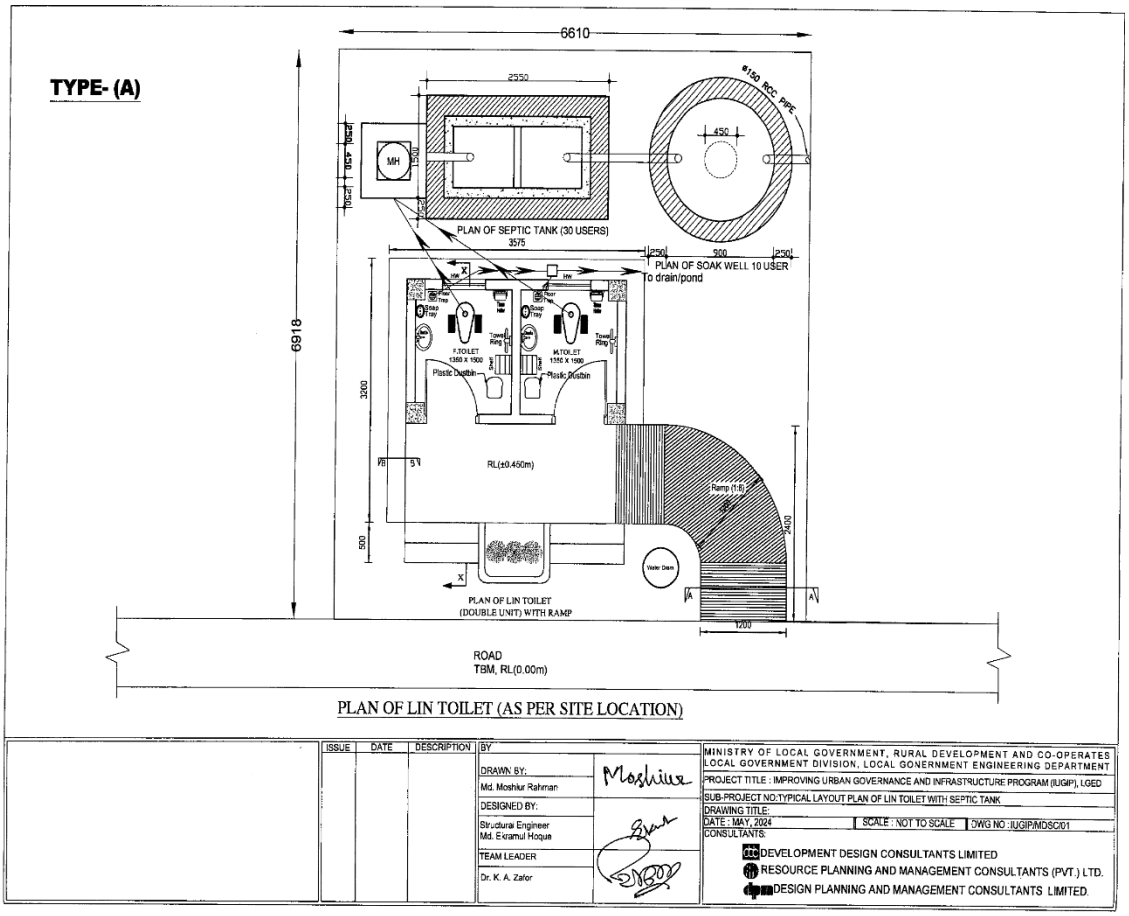
REA check list

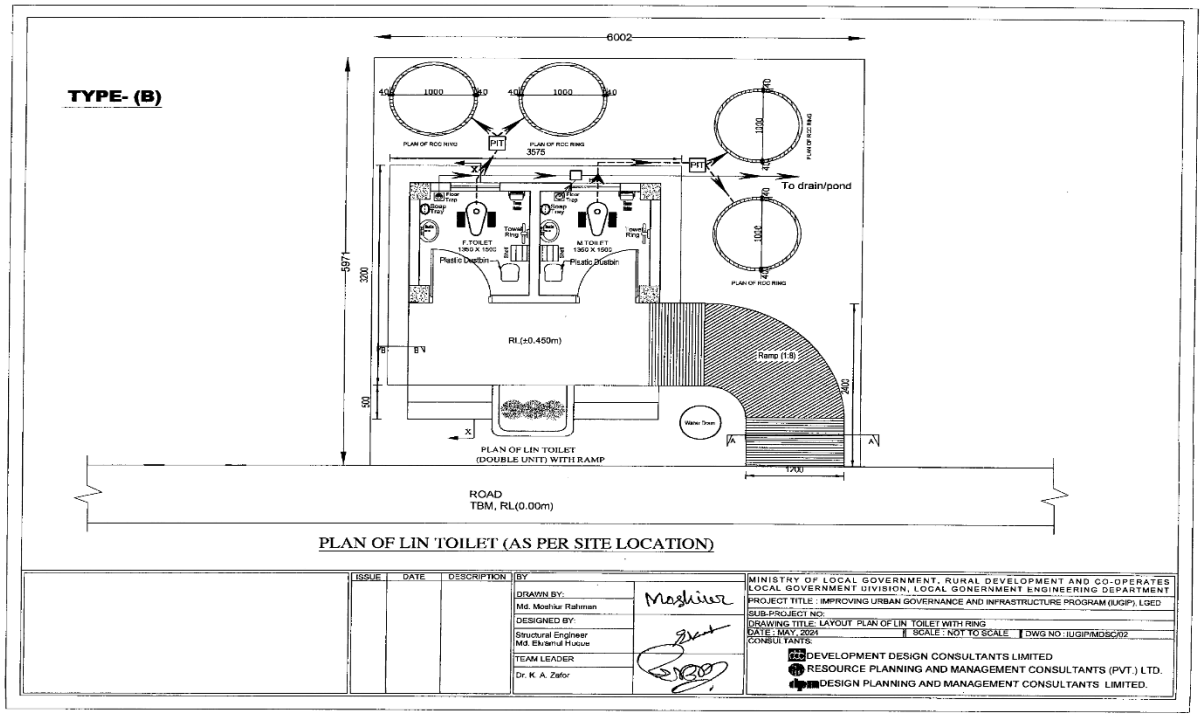
Instructions:

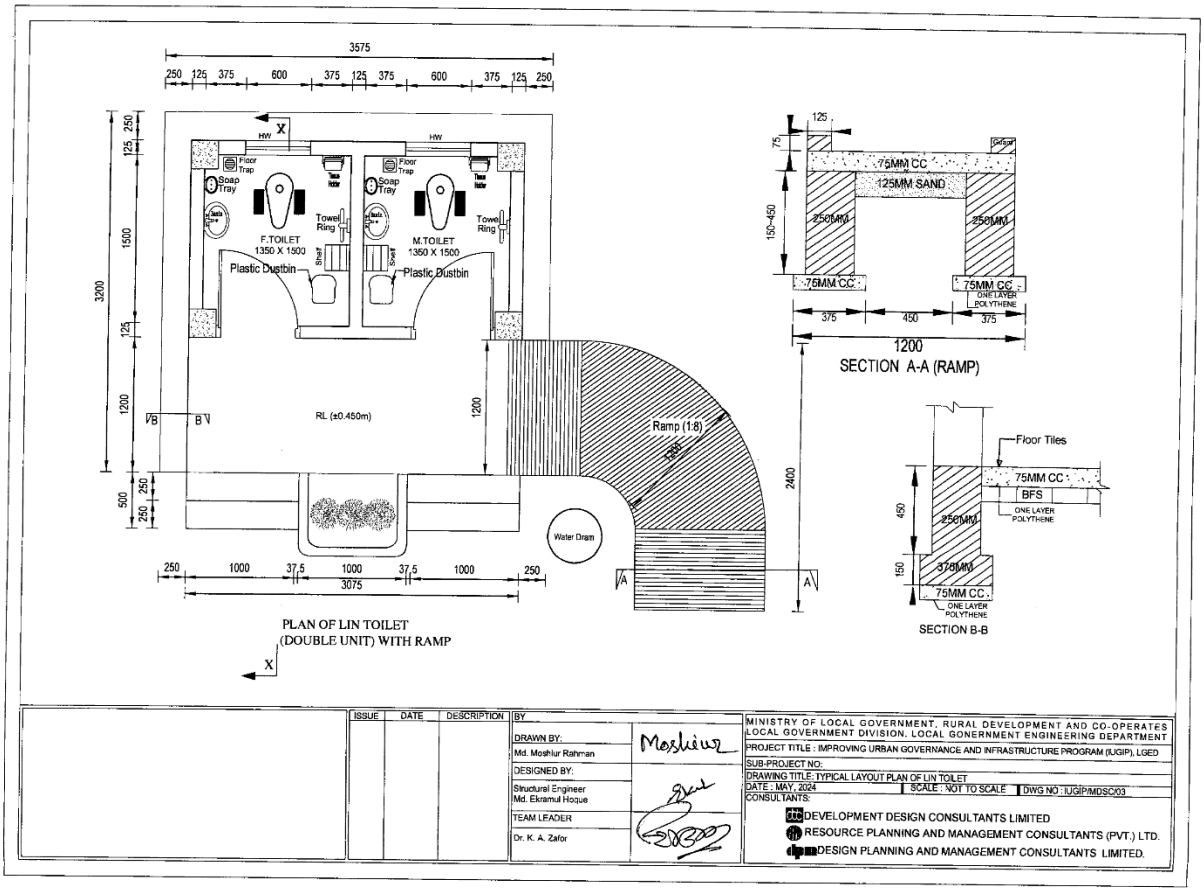
i. The project team completes this checklist to support the environmental classification of a project. It is to be attached to the environmental categorization form and submitted to the Project Management Unit, for endorsement by the Environmental Officer of PMU and for approval by the Project Director
ii. This checklist focuses on environmental issues and concerns
iii. Answer the questions assuming the "without mitigation" case. The purpose is to identify potential impacts. Use the "remarks" section to discuss any anticipated mitigation measures

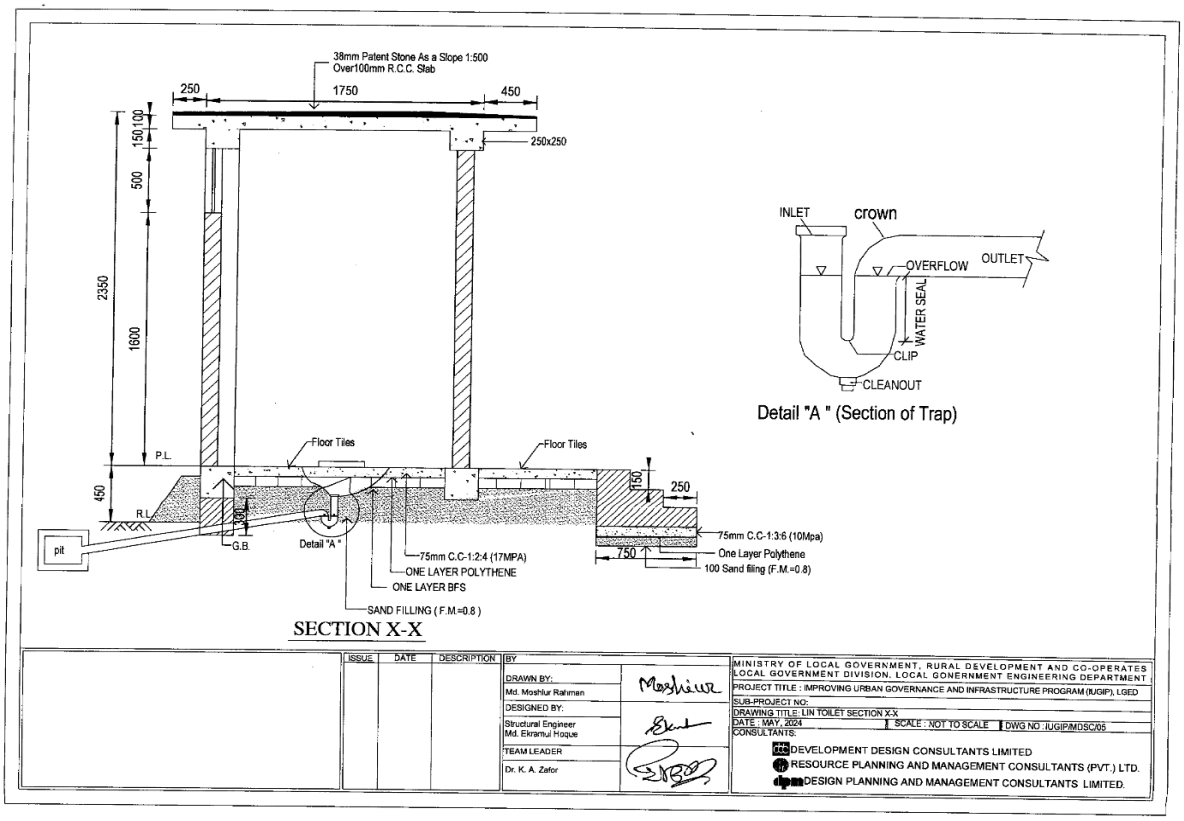
Sl no	Screening Questions	Yes	No	Remarks
A. Project Siting Is the project area adjacent to or within any of the following environmentally sensitive areas?				
1	Cultural heritage site		√	There is no protected area at the proposed site
2	Protected Area		√	There is no wetland area at the proposed site
3	Wetland		√	Not Applicable
4	Mangrove		√	Not Applicable
5	Estuarine		√	Not Applicable
6	Buffer zone of protected area		√	There is no special protected area for biodiversity within 5km aerial distance from the proposed site
7	Special area for protecting biodiversity		√	There are no buildings of archaeological and cultural heritage importance close to the sub-project.
8	100m distance from flowing water way?		√	
9	20m distance from static water supply?		√	
10	Training on before construction/ SOP and PPE, health and	√		
11	Proper way of fecal dumping generated wastes?	√		
12	Separate toilet for male and female?	√		
13	Toilet has good access for community people?	√		
14	Community toilets ram and hand railing facility for disabled and old aged person?	√		
15	Any Biogas Generation Plan nearby?		√	
16	H & S measures maintained by workers during construction /Management of disinfection?	√		
17	Proper water supply & electricity availability camp site Ensured?	√		
18	Toilet swear outlet connected to a Pourashava sewerage?	√		
19	community safety risks due to both accidental and natural causes, especially where the structural elements or components of the project are accessible to members of the affected community or where their failure could result in injury to the community throughout project construction, operation and		√	
20	Proper Ventilation access availability?	√		

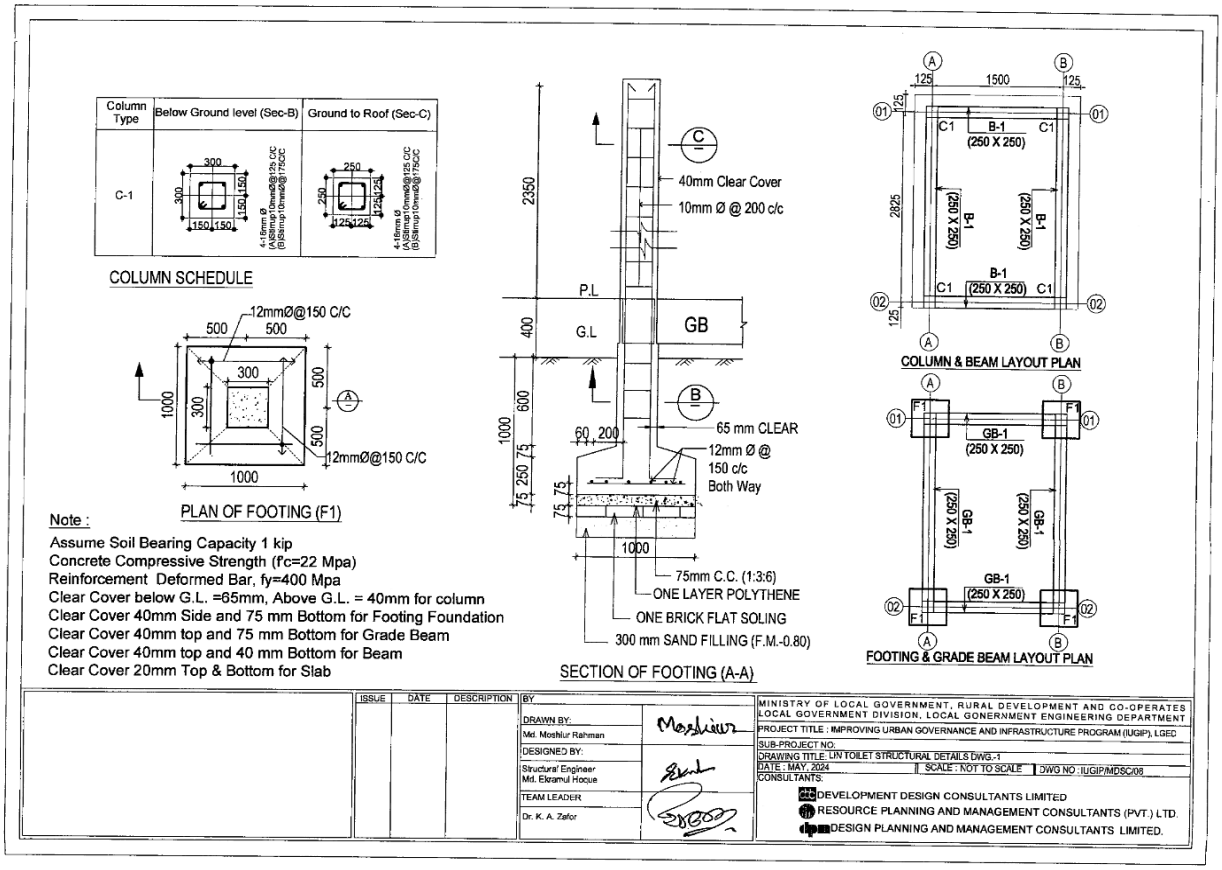
Appendix 2: Typical Detailed Design of Proposed LIN

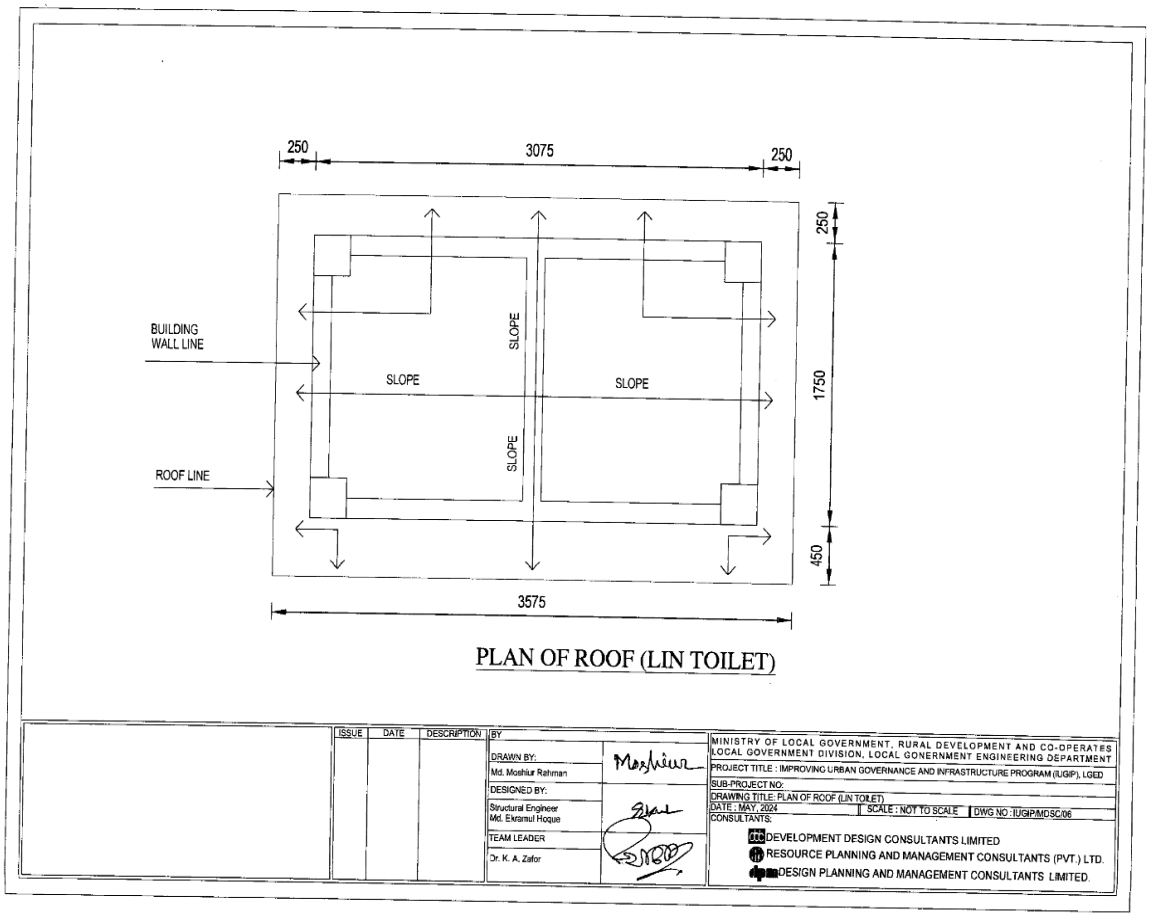


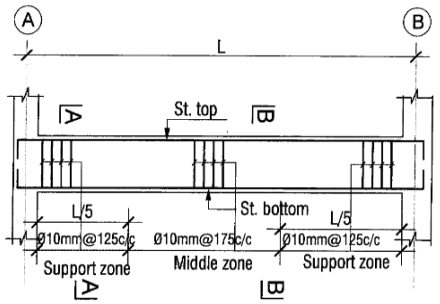



3575
250 125 375 600 375 125 375 600 375 125 250
HW
Floor Trap
Soap Tray
Tissue Holder
Towel Ring
Sheet
F.TOILET
1350 X 1500
M.TOILET
1350 X 1500
Plastic Dustbin
RL (±0.450m)
Ramp (1:8)
Water Drain
3075
PLAN OF LIN TOILET
(DOUBLE UNIT) WITH RAMP
75MM CC
125MM SAND
250MM
ONE LAYER POLYTHENE
1200
SECTION A-A (RAMP)
Floor Tiles
BFS
375MM
SECTION B-B
ISSUE
DATE
DESCRIPTION
BY
DRAWN BY:
Md. Moshiur Rahman
DESIGNED BY:
Structural Engineer
Md. Ekramul Hoque
TEAM LEADER
Dr. K. A. Zafor
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION. LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE: TYPICAL LAYOUT PLAN OF LIN TOILET
DATE : MAY, 2024
SCALE : NOT TO SCALE
DWG NO : IUGIP/MDSC/03
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.

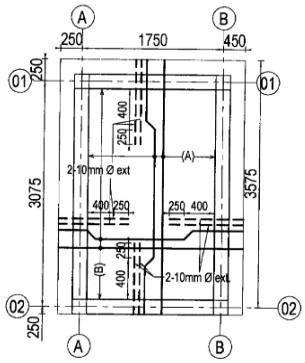

38mm Patent Stone As a Slope 1:500
Over100mm R.C.C. Slab
250x250
Floor Tiles
P.L.
R.L.
G.B.
Detail "A"
pit
75mm C.C-1:2:4 (17MPA)
ONE LAYER POLYTHENE
ONE LAYER BFS
SAND FILLING (F.M.=0.8)
75mm C.C-1:3:6 (10Mpa)
One Layer Polythene
100 Sand filing (F.M.=0.8)
SECTION X-X
INLET
crown
OVERFLOW
OUTLET
WATER SEAL
CLIP
CLEANOUT
Detail "A " (Section of Trap)
ISSUE
DATE
DESCRIPTION
BY
DRAWN BY:
Md. Moshiur Rahman
DESIGNED BY:
Structural Engineer
Md. Ekramul Hoque
TEAM LEADER
Dr. K. A. Zafor
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION. LOCAL GOVERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE: LIN TOILET SECTION X-X
DATE : MAY, 2024
SCALE : NOT TO SCALE
DWG NO : IUGIP/MDSC/05
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.


Column Type
Below Ground level (Sec-B)
Ground to Roof (Sec-C)
C-1
COLUMN SCHEDULE
12mmØ@150 C/C
PLAN OF FOOTING (F1)
Note :
Assume Soil Bearing Capacity 1 kip
Concrete Compressive Strength (f'c=22 Mpa)
Reinforcement Deformed Bar, fy=400 Mpa
Clear Cover below G.L. =65mm, Above G.L. = 40mm for column
Clear Cover 40mm Side and 75 mm Bottom for Footing Foundation
Clear Cover 40mm top and 75 mm Bottom for Grade Beam
Clear Cover 40mm top and 40 mm Bottom for Beam
Clear Cover 20mm Top & Bottom for Slab
40mm Clear Cover
10mm Ø @ 200 c/c
P.L
G.L
GB
65 mm CLEAR
12mm Ø @ 150 c/c Both Way
75mm C.C. (1:3:6)
ONE LAYER POLYTHENE
ONE BRICK FLAT SOLING
300 mm SAND FILLING (F.M.-0.80)
SECTION OF FOOTING (A-A)
COLUMN & BEAM LAYOUT PLAN
FOOTING & GRADE BEAM LAYOUT PLAN
ISSUE
DATE
DESCRIPTION
BY
DRAWN BY:
Md. Moshiur Rahman
DESIGNED BY:
Structural Engineer
Md. Ekramul Hoque
TEAM LEADER
Dr. K. A. Zafor
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION, LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE: LIN TOILET STRUCTURAL DETAILS DWG.-1
DATE : MAY, 2024
SCALE : NOT TO SCALE
DWG NO : IUGIP/MDSC/06
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.

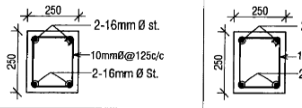
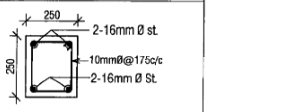
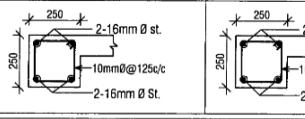
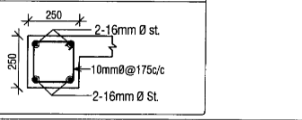

BUILDING WALL LINE
ROOF LINE
SLOPE
PLAN OF ROOF (LIN TOILET)
ISSUE
DATE
DESCRIPTION
BY
DRAWN BY:
Md. Moshiur Rahman
DESIGNED BY:
Structural Engineer
Md. Ekramul Hoque
TEAM LEADER
Dr. K. A. Zafor
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION, LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE: PLAN OF ROOF (LIN TOILET)
DATE : MAY, 2024
SCALE : NOT TO SCALE
DWG NO : IUGIP/MDSC/06
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.



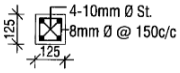
TYPICAL LONG SECTION OF GRADE BEAM & BEAM



SLAB REINFORCEMENT DETAILS

SHOWING DETAILS OF GRADE BEAM CROSS SECTION REINFORCEMENT AS PER TYPICAL LONG SECTION		
TYPE OF BEAM	SUPPORT ZONE SECTION (A-A)	MIDDLE ZONE SECTION (B-B)
GB 1		
B 1		

Note:
Slab Thickness 100 mm
A=10mm Ø @ 125 c/c alt. ckd.
Provide 10mm Ø @ 200 c/c Binder where not shown in drawings

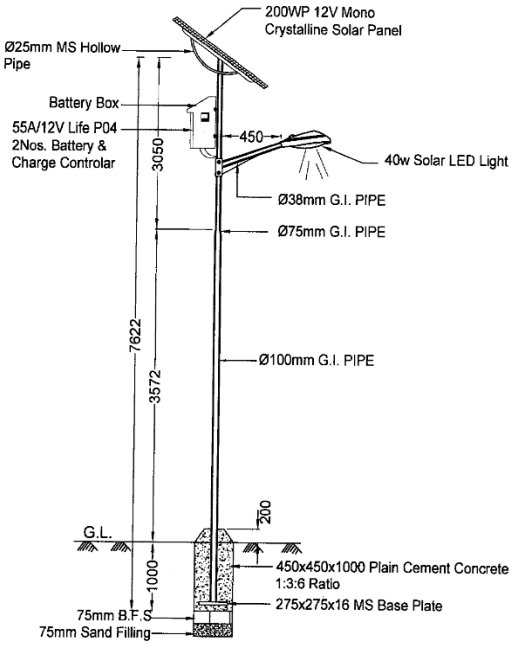


SECTION OF LINTEL
OVER 125mm WALL

ISSUE	DATE	DESCRIPTION	BY
			DRAWN BY: Md. Moshiur Rahman
			DESIGNED BY: Structural Engineer Md. Ekramul Hoque
			TEAM LEADER Dr. K. A. Zafor

MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION, LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE: LIN TOILET STRUCTURAL DETAILS DWG.-2
DATE : MAY, 2024 | SCALE : NOT TO SCALE | DWG NO : IUGIP/MDSC/09
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.

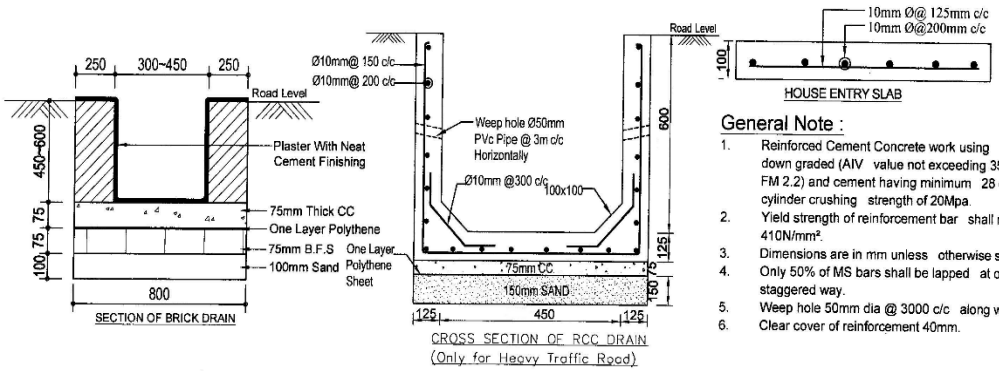
FOR LIN AREA



Solar Street Light System

ISSUE	DATE	DESCRIPTION	BY
			DRAWN BY: Md. Moshiur Rahman
			DESIGNED BY: Structural Engineer Md. Ekramul Hoque
			TEAM LEADER Dr. K. A. Zafor

MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION, LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE: STREET LIGHT DETAIL
DATE : MAY, 2024 | SCALE : NOT TO SCALE | DWG NO : IUGIP/MDSC/22
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.



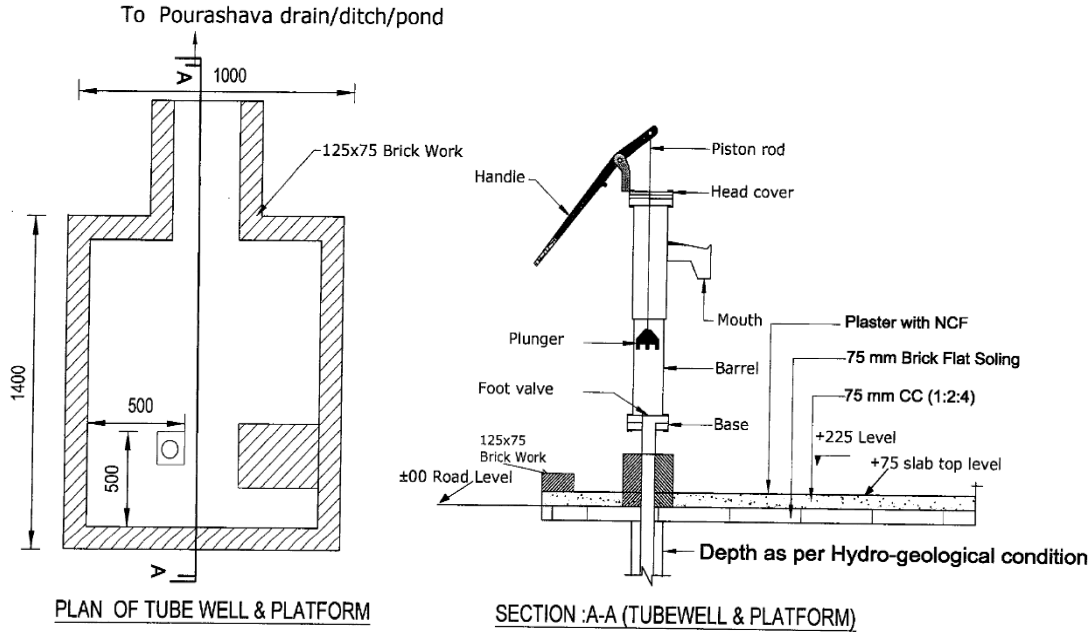
General Note :

1. Reinforced Cement Concrete work using Stone chips 20mm down graded (AIV value not exceeding 35),sand (minimum FM 2.2) and cement having minimum 28 days ultimate cylinder crushing strength of 20Mpa.
2. Yield strength of reinforcement bar shall not be less than 410N/mm².
3. Dimensions are in mm unless otherwise specified.
4. Only 50% of MS bars shall be lapped at one place and staggered way.
5. Weep hole 50mm dia @ 3000 c/c along with long direction.
6. Clear cover of reinforcement 40mm.

TYPICAL DESIGN FOR NARROW POURA STREET / LANE OR WALKWAY / FOOTPATH FOR LIN AREA

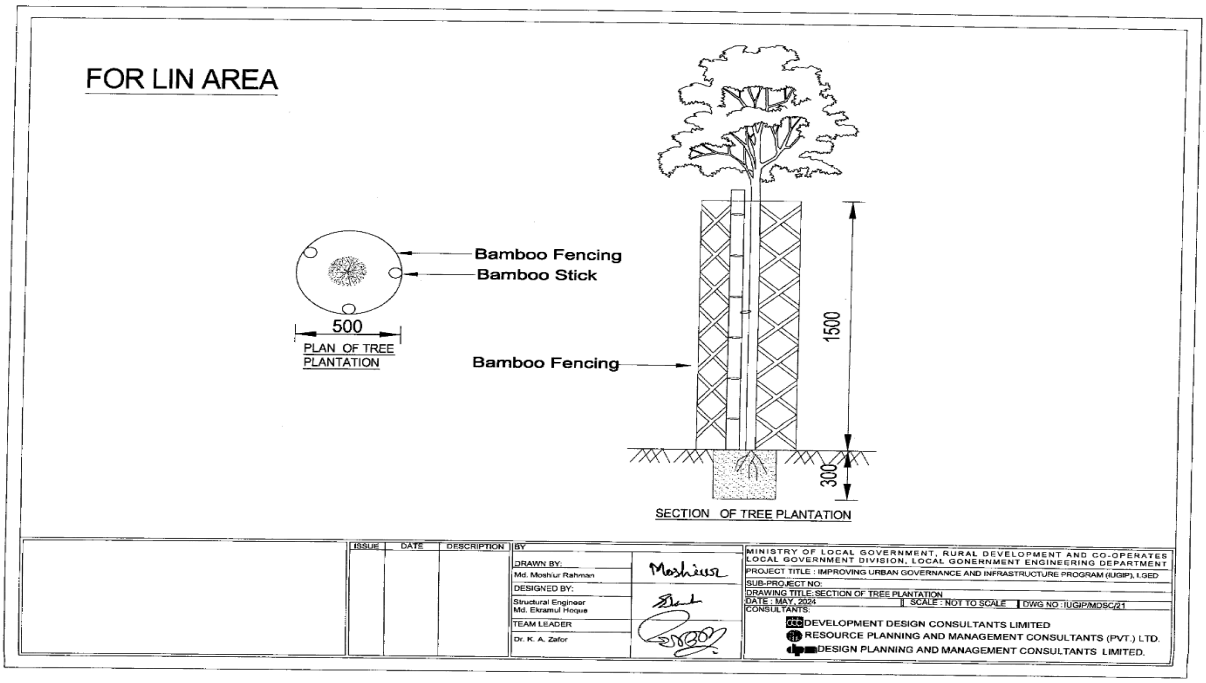
ISSUE	DATE	DESCRIPTION	BY
			DRAWN BY: Md. Moshiur Rahman
			DESIGNED BY: Structural Engineer Md. Ekramul Hoque
			TEAM LEADER Dr. K. A. Zafor

MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION, LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE:DESIGN DRAIN FOR LIN AREA
DATE : MAY, 2024 | SCALE : NOT TO SCALE | DWG NO : IUGIP/MDSC/14
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.



ISSUE	DATE	DESCRIPTION	BY
			DRAWN BY: Md. Moshiur Rahman
			DESIGNED BY: Structural Engineer Md. Ekramul Hoque
			TEAM LEADER Dr. K. A. Zafor

MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION, LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE:TYPICAL LIN TOILET TUBE WELL DETAILS
DATE : MAY, 2024 | SCALE : NOT TO SCALE | DWG NO : IUGIP/MDSC/10
CONSULTANTS:
DEVELOPMENT DESIGN CONSULTANTS LIMITED
RESOURCE PLANNING AND MANAGEMENT CONSULTANTS (PVT.) LTD.
DESIGN PLANNING AND MANAGEMENT CONSULTANTS LIMITED.



Appendix 3: Budget for Implementation of EMP

104. The cost of mitigation measures and surveys during construction stage will be incorporated into the LINIC's costs. The surveys will be conducted by the LINICs.

The operation phase mitigation measures will be the responsibility of Pourashava/LINIC. All monitoring during the operation and maintenance phase will be conducted by Pourashava therefore, there are no additional costs. The indicative costs of EMP implementation during construction period are shown in Table 1.

Table1: EMP in CPP– LIN improvement sub-project (each LIN)

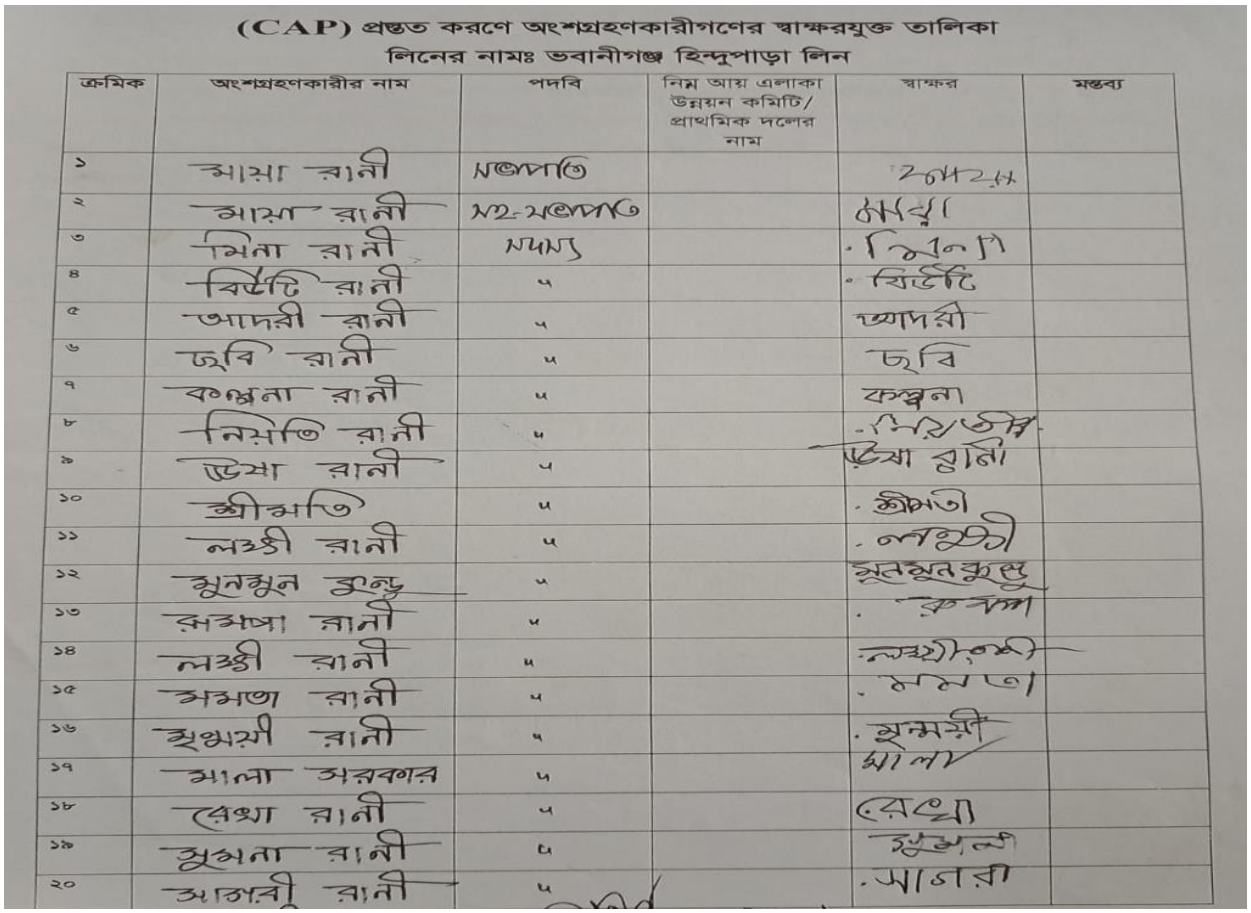
Item No.	Description of Item	Amount (Tk.)
Construction Period		
1	Providing and maintaining adequate potable water supply and sanitation facilities (Separate for Male and Female) at labor camp site including first aid box with necessary drugs to the entire satisfaction of E-in-C.	
	a) Sanitation: 2 nos. of temporary Toilet facility (1 no for male and 1 no for female) @ Tk. 10000.00	20,000.00
	b) Supply of potable water for drinking and household purposes for workers and staffs.	30,000.00
2	Water spraying for dust suppression	10,000.00
3	Supply of Personal Protection Equipment (PPE) helmet, gloves, safety shoes & glass, safety signs, first aid box with necessary drugs, Fire extinguisher and sand fill bucket etc. for workers.	35,000.00
4	EMP implementation training for workers/LINIC members	10,000.00
5	Tree Plantation on the slope of road/footpath, 100 nos. of trees @ 495 TK/per tree (except Sweeper LIN-Perlot*)	As Required Per Lot
6	Proper storage of construction materials/equipment in a safe place and covering the sand with tarpaulins and fencing the site with barbed wire and cement should be stored on a dun age to avoid cake formation to the entire satisfaction of the E-in-C.	50,000.00
7	Proper maintenance of drainage system during construction period to drain out the surface water.	10,000.00

Item No.	Description of Item	Amount (Tk.)
Construction Period		
	Total	1,65,000.00(+Tress/lot)
Note:		

**** Cost of the EMP items should be as fixed budget**

Appendix 4: Photographs & Attendance List of Public Consultation

131. Attendance of Participants in the Meetings and photographs at Hindupara LIN Lot-01 given below:

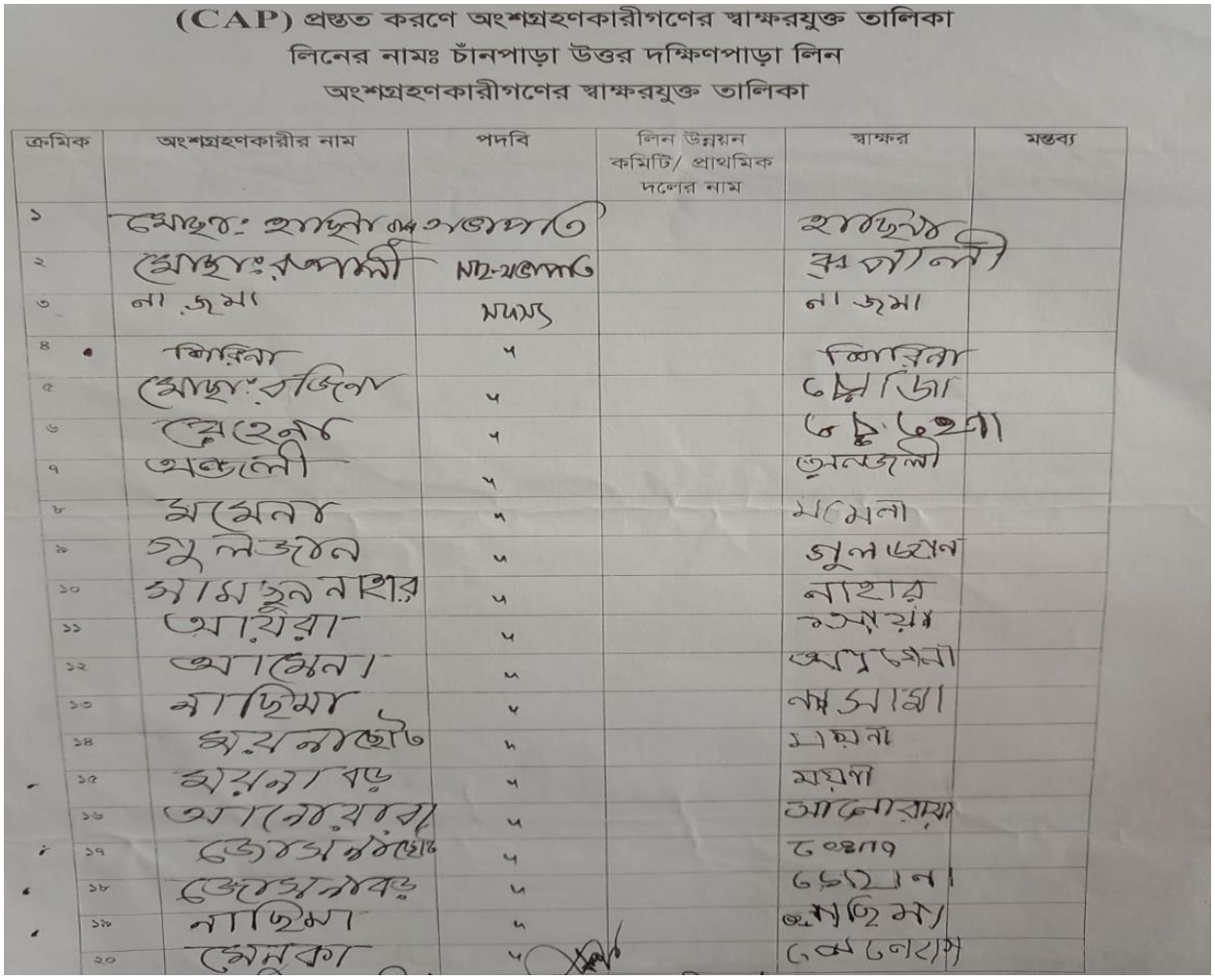


(CAP) প্রস্তুত করণে অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

লিনের নামঃ ভবানীগঞ্জ হিন্দুপাড়া লিন

ক্রমিক	অংশগ্রহণকারীর নাম	পদবি	নিম্ন আয় এলাকা উন্নয়ন কমিটি/ প্রাথমিক দলের নাম	স্বাক্ষর	মন্তব্য
১	মায়া রানী	সভাপতি		মায়া	
২	মায়া রানী	সহ-সভাপতি		মায়া	
৩	মিনা রানী	সদস্য		মিনা	
৪	বিউটি রানী	"		বিউটি	
৫	আদরী রানী	"		আদরী	
৬	ছবি রানী	"		ছবি	
৭	কল্পনা রানী	"		কল্পনা	
৮	নিয়তি রানী	"		নিয়তি	
৯	উষা রানী	"		উষা রানী	
১০	শ্রীমতি	"		শ্রীমতি	
১১	লক্ষ্মী রানী	"		লক্ষ্মী	
১২	মুনমুন কুন্ডু	"		মুনমুন কুন্ডু	
১৩	রমপা রানী	"		রমপা	
১৪	লক্ষ্মী রানী	"		লক্ষ্মী	
১৫	মমতা রানী	"		মমতা	
১৬	মৃন্ময়ী রানী	"		মৃন্ময়ী	
১৭	মালা সরকার	"		মালা	
১৮	রেখা রানী	"		রেখা	
১৯	সুমনা রানী	"		সুমনা	
২০	সাগরী রানী	"		সাগরী	

132. Attendance of Participants in the Meetings and photographs at Chand Para North South Para LIN (Lot-02) given below



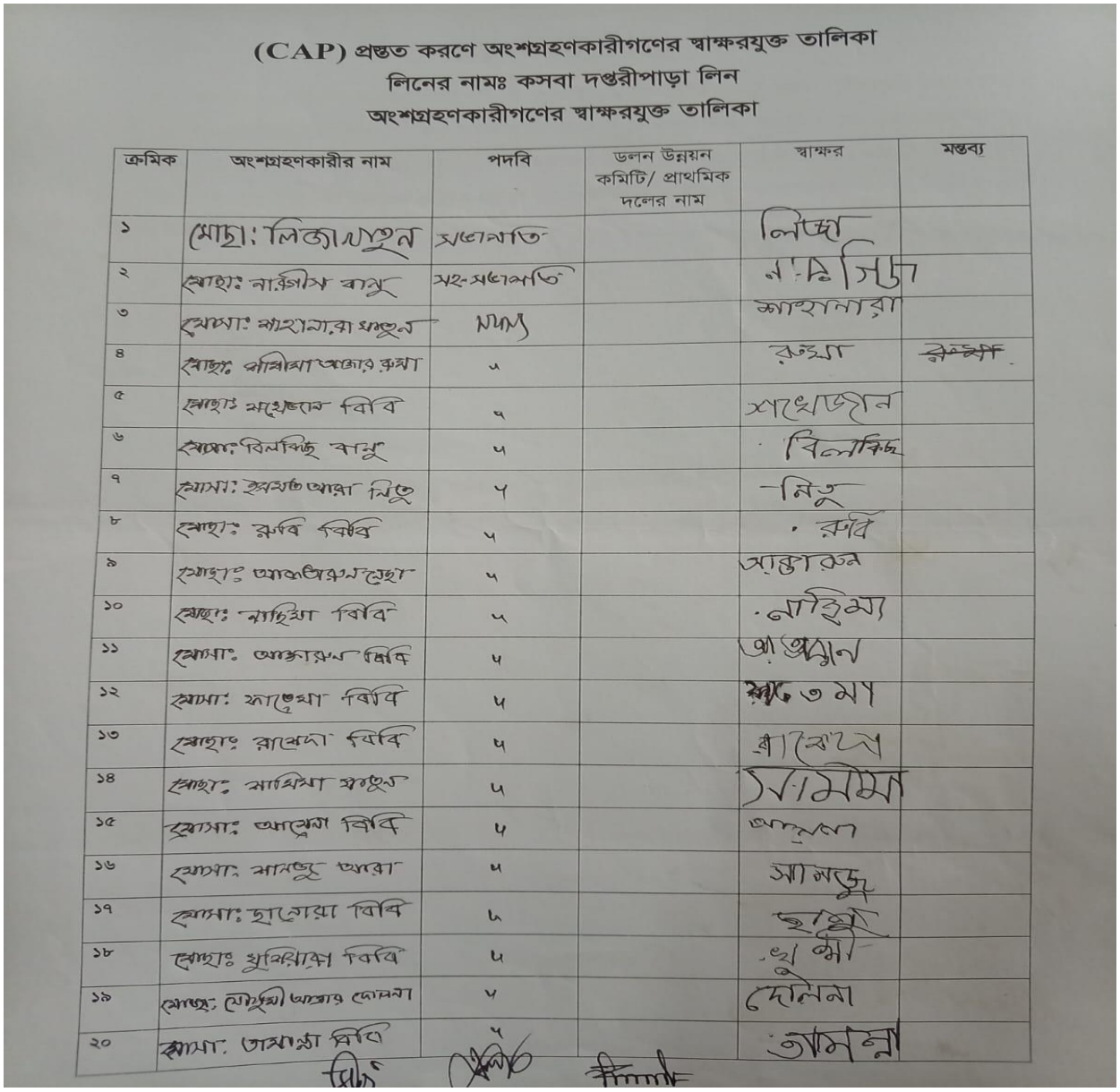
(CAP) প্রস্তুত করণে অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

লিনের নামঃ চাঁনপাড়া উত্তর দক্ষিণপাড়া লিন

অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

ক্রমিক	অংশগ্রহণকারীর নাম	পদবি	লিন উন্নয়ন কমিটি/ প্রাথমিক দলের নাম	স্বাক্ষর	মন্তব্য
১	মোছাঃ হাছনা বেগম	সভাপতি		হাছনা	
২	মোছাঃ রুপালী	সহ-সভাপতি		রুপালী	
৩	নাজমা	সদস্য		নাজমা	
৪	শিরিনা	"		শিরিনা	
৫	মোছাঃ রজিনা	"		রজিনা	
৬	রেহেনা	"		রেহেনা	
৭	অঞ্জলী	"		অঞ্জলী	
৮	মমেনা	"		মমেনা	
৯	গুলজান	"		গুলজান	
১০	সামছুন নাহার	"		নাহার	
১১	আয়েরা	"		আয়েরা	
১২	আমেনা	"		আমেনা	
১৩	নাছিমা	"		নাছিমা	
১৪	ময়নাছোট	"		ময়না	
১৫	ময়নাবড়	"		ময়না	
১৬	আনোয়ারা	"		আনোয়ারা	
১৭	জেসমিনছোট	"		জেসমিন	
১৮	জেসমিনবড়	"		জেসমিন	
১৯	নাছিমা	"		নাছিমা	
২০	মেনুকা	"		মেনুকা	

133. Photograph & Attendance Sheet of Consultation Meeting at Kosba Doptori Para LIN (Lot-03)



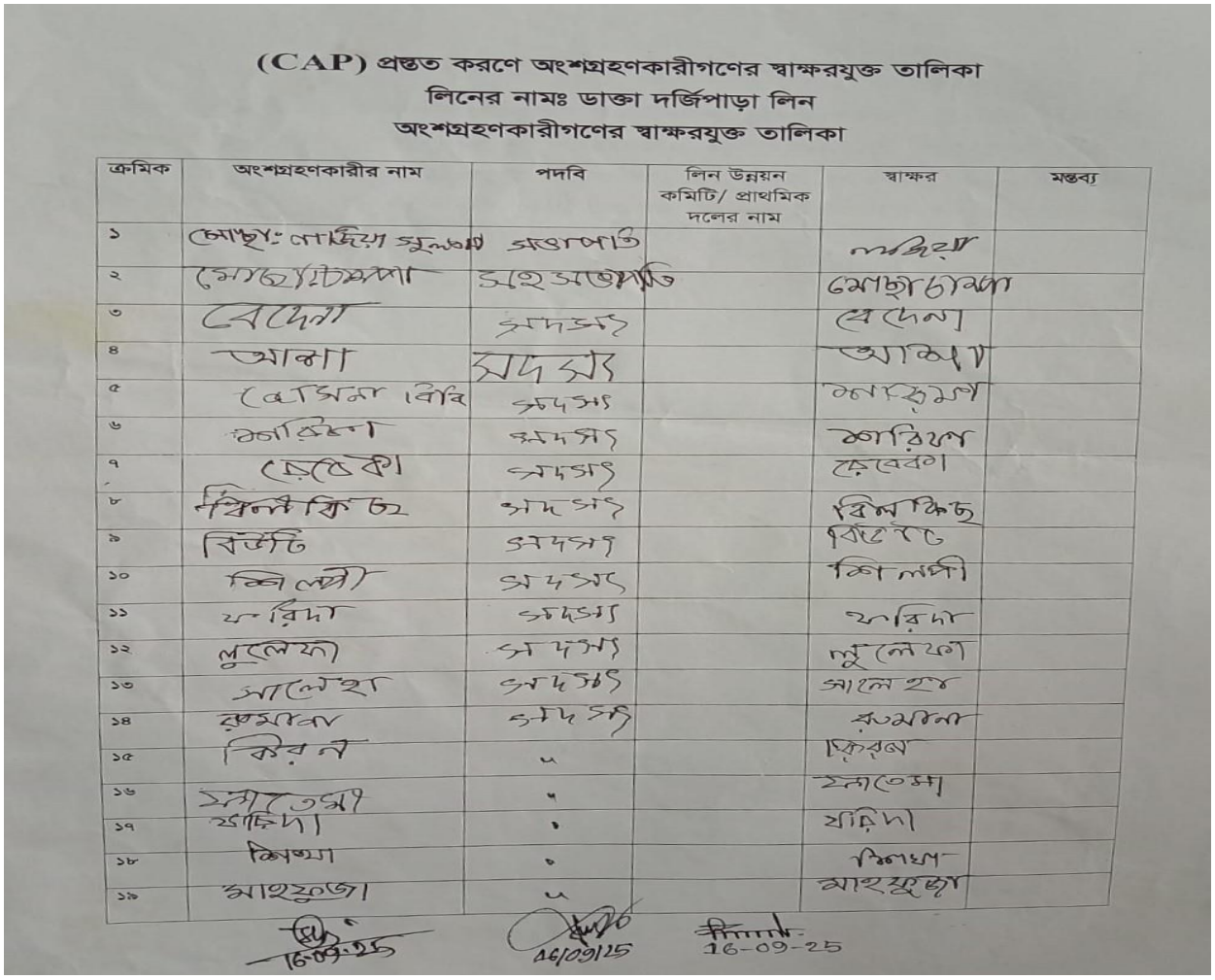
(CAP) প্রস্তুত করণে অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

লিনের নামঃ কসবা দপ্তরীপাড়া লিন

অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

ক্রমিক	অংশগ্রহণকারীর নাম	পদবি	ডলন উন্নয়ন কমিটি/ প্রাথমিক দলের নাম	স্বাক্ষর	মন্তব্য
১	মোছা: লিজা খাতুন	সভানেত্রী		লিজা	
২	মোছা: নার্গিস বানু	সহ-সভানেত্রী		নার্গিস	
৩	মোসা: শাহানারা খাতুন	সদস্য		শাহানারা	
৪	মোছা: রহিমা আক্তার রুমা	৫		রুমা	
৫	মোছা: সখেজান বিবি	৫		সখেজান	
৬	মোসা: বিলকিছ বানু	৫		বিলকিছ	
৭	মোসা: ইয়াসমিন আরা নিতু	৫		নিতু	
৮	মোছা: রুবি বিবি	৫		রুবি	
৯	মোছা: আকতারুন নেছা	৫		আক্তারুন	
১০	মোছা: নাছিমা বিবি	৫		নাছিমা	
১১	মোসা: আক্তারুন বিবি	৫		আক্তারুন	
১২	মোসা: ফাতেমা বিবি	৫		ফাতেমা	
১৩	মোছা: রাবেদা বিবি	৫		রাবেদা	
১৪	মোছা: নাসিমা খাতুন	৫		নাসিমা	
১৫	মোসা: আয়েশা বিবি	৫		আয়েশা	
১৬	মোসা: সামছু আরা	৫		সামছু	
১৭	মোসা: ছালেহা বিবি	৫		ছালেহা	
১৮	মোছা: খুরিয়াকা বিবি	৫		খুরিয়া	
১৯	মোছা: মোহিনী আক্তার দোলনা	৫		দোলনা	
২০	মোসা: তামান্না বিবি	৫		তামান্না	

134. Photograph & Attendance Sheet of Consultation Meeting at Dacta Dorji Para LIN (Lot-04)



(CAP) প্রস্তুত করণে অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা
লিনের নামঃ ডাক্তা দর্জিপাড়া লিন
অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

ক্রমিক	অংশগ্রহণকারীর নাম	পদবি	লিন উন্নয়ন কমিটি/ প্রাথমিক দলের নাম	স্বাক্ষর	মন্তব্য
১	মোছাঃ নাজিয়া সুলতানা	সভাপতি		নাজিয়া	
২	মোছাঃ চাঁদনী	সহ সভাপতি		মোছাঃ চাঁদনী	
৩	বেদেনা	সদস্য		বেদেনা	
৪	আক্কা	সদস্য		আক্কা	
৫	রোজিনা বিবি	সদস্য		রোজিনা	
৬	মারিয়া	সদস্য		মারিয়া	
৭	রেবেকা	সদস্য		রেবেকা	
৮	বিলাকিচ	সদস্য		বিলাকিচ	
৯	বিউটি	সদস্য		বিউটি	
১০	শিল্পী	সদস্য		শিল্পী	
১১	ফরিদা	সদস্য		ফরিদা	
১২	লুলেফা	সদস্য		লুলেফা	
১৩	সালেহা	সদস্য		সালেহা	
১৪	রুমানা	সদস্য		রুমানা	
১৫	কিরণ	"		কিরণ	
১৬	সুলতানা	"		সুলতানা	
১৭	ফাহিদা	"		ফাহিদা	
১৮	শিখা	"		শিখা	
১৯	মাহফুজা	"		মাহফুজা	

16-09-25 16/09/25 16-09-25

135. Photograph & Attendance Sheet of Consultation Meeting at Surjo Para LIN (Lot-05)

(CAP) প্রস্তুত করণে অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

লিনের নামঃ সুর্য্যপাড়া লিন

ক্রমিক	অংশগ্রহণকারীর নাম	পদবি	নিম্ন আয় এলাকা উন্নয়ন কমিটি / প্রাথমিক দলের নাম	স্বাক্ষর	মন্তব্য
১	মোছাঃ তারা বানু	সভাপতি		তারা	
২	মোছাঃ দোলন খাতুন	সদস্য		দোলন	
৩	মোছাঃ নিলুফা বিবি	"		নিলুফা	
৪	মোছাঃ শিরিনা আক্তার	"		শিরিনা	
৫	মোছাঃ রবিত বিবি	"		রবিত	
৬	মোছাঃ রেহেনা বিবি	"		রেহেনা	
৭	মোছাঃ রিনা খাতুন	"		রিনা	
৮	মোছাঃ চামনা বিবি	"		চামনা	
৯	মোছাঃ জান্নাতুন বিবি	"		জান্নাতুন	
১০	মোছাঃ মুসলিম খাতুন	"		মুসলিমা	
১১	মোছাঃ ফিরোজা বিবি	"		ফিরোজা	
১২	মোসাঃ রুনভান বেগম	"		রুনভান	
১৩	মোছাঃ মুক্তা বিবি	"		মুক্তা	
১৪	মোছাঃ ফুরেজা বিবি			ফুরেজা	
১৫	মোসাঃ আরেদা বেগম	"		আরেদা	
১৬	মোছাঃ দুলালী বিবি	"		দুলালী	
১৭	মোছাঃ রুমা বেগম	"		রুমা	
১৮	মোছাঃ রিনা বিবি	"		রিনা	
১৯	মোছাঃ বানু বেগম	"		বানু	
২০	মোছাঃ সনজা	"		সনজা	

16-09-25 16/09/25 16-09-25

136. Photograph & Attendance Sheet of Consultation Meeting at Uttarekdala Rishipara LIN (Lot-06)

(CAP) প্রস্তুত করণে অংশগ্রহণকারীগণের স্বাক্ষরযুক্ত তালিকা

লিনিকের নামঃ উত্তর একডাল ঋষিপাড়া লিন

ক্রমিক	অংশগ্রহণকারীর নাম	পদবি	লিন উন্নয়ন কমিটি/ প্রাথমিক দলের নাম	স্বাক্ষর	মন্তব্য
১	সাবিত্রী রানী	সভাপতি		সাবিত্রী	
২	দুরবতী রানী	সদস্য		দুরবতী	
৩	মিনা রানী	"		মিনা	
৪	গৌরী রানী	"		গৌরী	
৫	ললিতা রানী	"		ললিতা	
৬	কাজেলী রানী	"		কাজেলী	
৭	সত্যবতী রানী	"		সত্যবতী	
৮	ফুল কুমারী রানী	"		ফুলকুমারী	
৯	রিতা রানী	"		রিতা	
১০	দুরবতী রানী	"		দুরবতী	
১১	কল্পতি রানী	"		কল্পতি	
১২	রিমা রানী	"		রিমা	
১৩	তিলসি রানী	"		তিলসি	
১৪	ববিতা রানী	"		ববিতা	
১৫	অর্চনা রানী	"		অর্চনা	
১৬	আলো রানী	"		আলো	
১৭	ছবি রানী	"		ছবি	
১৮	শংকরী রানী	"		শংকরী	
১৯	শ্রীমতি রানী	"		শ্রীমতি	
২০	পুতুল রানী	"		পুতুল	

137. Summary of outcomes at public consultation meeting: Six public consultation meetings were held at all the Slums of Bhabaniganj Paurashava. A total of 119 participants attended the meetings, where 98% were female, and the remaining 2% were male. SIC members, counselors,female workers, housewives, and small business holders were present in the meetings. The safeguarding team of IUGIP visited all six slums under the respective Paurashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the slums. The meetings were held through presiding by the Paurashava representatives (Assistant Engineer).

138. Participants of the meeting exchanged views with the safeguarding team about their sufferings and the remedial measures to be taken to overcome them. Safe water supply is essential in the proposed sub-project area as people frequently suffer from waterborne diseases.

139. Water logging was an additional problem in the slums. Their yards inundate by rainwater due to not having proper drainage provisions. It creates an un-hygienic living condition, i.e., a breeding place for mosquitoes and flies, which will cause diseases. They wanted immediate relief from it through the construction of the drain. Inadequate internal road communication slowed their livelihood and created physical stress for the resident of the slum. Required footpaths would ease their safe movement. They asked for the construction of necessary footpaths in their slum. There is inadequate dustbin in or around the slums; slum dwellers cannot properly dump their waste, especially kitchen waste. It creates bad odor and un-hygienic conditions in and around the slums. They wanted the installation of more dustbins. Inadequate light during nighttime is an additional problem. Social nuisance creates due to the lack of adequate street lights. Pilferage and unsocial activities are promoted in the dark. The slum dwellers urged for street lighting systems in and around the slums. The people demanded regular cleanliness of drains and the spreading of medicine for killing mosquitoes. Presently, a few slum dwellers use hanging and pit latrines, threatening public health and un-hygienic. They insisted on a community sanitary latrine to overcome it.

140. The consultants discussed safeguard issues, focusing on the sub-project components with their importance, including socioeconomic and health hazards. Also discussed were environmental and social impacts and mitigation measures for air, dust, and water pollution and waste management and dust management.

141. As per discussion and feedback from the Paurashava staff and SIC members, the slums were selected through consultation with the local leader/councilors living in the Paurashava area. According to the discussion, the participants appreciated the proposed slum improvement components, as it will improve the health and sanitation conditions of the slum, which will provide a positive socio-economic impact.

The significant issues and suggestions that came out during the meeting are given below:

- Construction wastes should be dumped properly in the dumping yard.
- During construction work, adequate measures should be taken to minimize the probable impact that arises.
- The people will accept the temporary disturbances that may arise during construction for their future interests.
- In order to stage and stockpile construction equipment and materials, there is sufficient space along the space of footpaths, tube-well platforms, latrines, dustbins, and so on.
- Besides, there is no possibility of affecting any structure needing relocation by the sub-project activities. Moreover, due to construction work and proposed development, there is no possibility of a loss of livelihood, neither permanent nor temporary.
- Locations of all the proposed works components are fixed with the opinion of all the residents in the slum.
- The project will provide workers with necessary safety measures and facilities during construction.
- The slums dwellers are well awaked of the location to set up tube well dustbin toilets and the intervention as members of the social mapping group. Again, the issue was discussed in the consultation meeting.

Appendix 5: Waste Management Plan for LIN Development (for short-time period)

Aspect	Waste type	Classification	Proposed reuse/Recycling/Disposal	Responsible
Demolition/site clearing	Vegetation (logs, mulched timber, weeds)	General solid waste (organic)	- Recycling/Disposal whereas applicable	LINIC
	Concrete, asphalt and gravel	General solid waste (in-organic)	- Recycling/Disposal whereas applicable or where suitable and approved by PIU	LINIC
	Metal waste	General solid waste in-organic)	Recycling	LINIC
Earthworks	Excavated soil	General solid waste	- Beneficial reuse onsite. Balance cut and fill earthworks, where possible, to optimize reuse.	LINIC
Construction of -Footpath -Drain -Dustbin -Street light -Toilets and -Tube Wells	Steel Reinforcing	General solid waste (in-organic)	Recycling	LINIC
	Pipes/PVC pipes	General solid waste (in-organic)	Disposal/ Recycling	LINIC
	Concrete (solids and washouts) and asphalt	General solid waste (in-organic)	Disposal/Re-use	LINIC
	Timber/Steel formwork	General solid waste (in-organic)	Re-use	LINIC
	Packaging Materials,	General solid waste (in-organic/organic)	Disposal/ Re-use	LINIC
	Empty oil and other drums	General solid waste (in-organic)	Disposal/ Re-use	LINIC
	Metals and electrical cabling	General solid waste (in-organic)	Recycling	LINIC
Compounds /Construction camps	Waste generated by the maintenance of equipment, vehicles	General solid waste (in-organic)	Disposal/ Recycling/Disposal whereas applicable	LINIC
	Construction /labor camp waste generated by workers	General solid waste (organic)	Disposal	LINIC
Site Office Operation	Paper, cardboard and plastic	General solid waste (in-organic)	Recycling/ Disposal	LINIC
	Glass bottles and aluminum cans	General solid waste (in-organic)	Recycling	LINIC
	Ink Cartridges	General solid waste (in-organic)	Recycling/ Disposal	LINIC
	Food Waste	General solid waste (in-organic)	Disposal	LINIC

Appendix 6: Site and Design Conditions to Meet the ESMF Criteria

Environmental Guidelines for Subproject site selection, planning and design	Remarks
1. Overall selection guidelines - applicable to all subprojects	
i.Comply with all requirements of relevant national and local laws, rules, and guidelines, including obtaining environmental clearance certificate (ECC) from DOE for all subprojects classified as green/ yellow/orange/ red per Bangladesh Environmental Conservation rules 2023	-
ii.Comply with all requirements of ADB SPS 2009 and follow procedures set in this environmental assessment and review framework (ESMF)	-
iii.Ensure that subproject design should reflect inputs from public consultation	
iv.Avoid locations in forests, mangrove areas, estuaries, buffer zones of protected areas	i.Check and confirm the eligibility through exclusion criteria before proceeding further on such sensitive sites ii.if eligible, and unavoidable: - Approval from concerned authority -Alternative site analysis to justify site selection -confirm via detailed baseline and impact assessment that the project will not lead to significant impacts on respective areas -EMP to include measures to avoid, minimize, mitigate impacts, and monitoring actions to confirm mitigation
v. Avoid locations within 100 m of protected monuments/sites protected by department of archeology, government of Bangladesh vi. Avoid locations within 1 km of UNESCO notified protected monuments / world heritage sites 10.	If unavoidable - conduct site screening by heritage expert, and conduct heritage assessment study if warranted; integrate recommendations into design, construction, and operation -ensure that no damage / disruption to such places/monuments -obtain necessary clearance and permissions -EMP to include measures to avoid destruction / disturbance of such places -Provide "chance find" procedures in the EMP that include a pre-approved management and conservation approach for materials that may be discovered during project implementation.
vii. Avoid tree-cutting where possible. Retain mature roadside trees which are important/valuable or historically significant. If any trees will have to be removed, plant two new trees for every one that is lost. viii. Preference shall be given to planting indigenous or local tree species.	For any tree to be cut, consider replacement of 2:1.
ix.Ensure all planning and design interventions and decisions are made in consultation with local communities and include women. Reflect inputs from public consultation and disclosure for site selection.	All consultations should be documented, and concerns expressed by public addressed in IEEs.
x.Synchronize all road improvement and pipe laying works (to extent possible) to minimize disturbance and optimize use of resources (e.g., water pipes laid prior to road improvements).	Coordinate planning of works with *Pourashavas*.
xi.If subproject includes existing facilities to be rehabilitated or expanded and/or associated	For non-compliances, provide corrective action for each area of concern including cost and schedule to be included in the subproject EMP.
xii.Locate all new facilities/buildings at sites where there is low risk of flooding or other hazards that might impair functioning of or present a risk of damage to water treatment plants, tanks/reservoirs, or their environs.	Flood statistics data of the project area needs to be reviewed. Location restriction may be reviewed depending on site availability, and flood or other hazards

2. Infrastructure in low-income neighborhoods	
Environmental Guidelines for Subproject site selection, planning and design	**Remarks**
i. Include measures to address additional sewage/domestic wastewater due to improved/new water supply system	
ii. Project design to address health and safety hazards to workers from handling and management of disinfection chemicals (such as chlorine), and other contaminants, and biological and physical hazards	
iii. Sanitation. Ensure toilets are a provided with water supply and power supply for hygienic, safe, and uninterrupted	
iv. Sanitation. Design toilet as leak proof, and connect outlet to a community sewer (if available) or to a septic tank (water sealed)	
v. Sanitation. Design septic tanks as water sealed compartments to avoided contamination of groundwater/land	
vi. Sanitation. Locate septic tanks where there is proper access to a mobile suction hose equipment to allow removal of contents periodically for further treatment and disposal	
vii. Sanitation. Locate sanitation facilities (public toilets and septic tanks) preferably (a) 20 m from any source of water supply; (b) 30 m from drainage lines and (c) 100 m to a designated waterway.	Distance restriction may be reviewed depending on the technology adopted for the sanitation facilities and treatment of septage, site plant availability, and buffer
iii. Sanitation. Ensure septage collection system is fully mechanized; prohibit manual collection	
ix. Sanitation. Do not locate septic tanks where there is risk of hazards such as floods, landslides etc.,	
x. Sanitation. Ensure no immediate drinking water intakes downstream of discharge point of effluent from sanitation facilities	Include design measures and consider relocating existing deep tube wells.
xi. Sanitation. Hazardous working conditions in some places of the facility due to lack of oxygen and flammable nature of methane emissions will be detrimental to the health and safety of workers and facility. Put in place standard operating procedures with appropriate equipment, and workers are provided with necessary training and personnel protection equipment to safeguard health and safety	

Appendix 7: Health Safety Manual of Construction workers

Parameters/issues	Workplace Hazards	Suggested PPE
Eye and Face protection	Flying particles, molten metal, liquid fuel, gases or vapors, light radiation.	Safety glasses with side-shields, protective shades, etc.
Head Protection	Falling objects, inadequate height clearance, and overhead power cords.	Helmets with top and side impact protection.
Hearing protection	Noise, ultra-sound.	Hearing protectors (ear plugs of ear muffs.)
Foot Protection	Falling or rolling objects, pointed objects. Corrosive or hot liquids.	Safety shoes and boots for protection against moving & falling objects, liquids and fuels.

Hand Protection	Hazardous materials, cuts or lacerations, vibrations, extreme temperatures.	Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc.
Respiratory Protection	Dust, vapors.	Facemasks with appropriate filters for dust removal and air purification spray, mists, vapors and gases). Single or multi-gas personal monitors, if available.
	Oxygen deficiency	Portable or supplied air (fixed lines.) on site rescue equipment.
Body/leg Protection	Extreme temperatures, hazardous materials, biological agents, cutting and laceration.	Insulating clothing, body suits, aprons etc. of appropriate materials.

Appendix 8: Standard Operation Procedure (SOP) of toilet

The stability and integrity of the sanitation system will be monitored periodically to detect any problem and allow remedial actions if required. Any repairs will be small scale involving manual, temporary and short-term works involving regular checking and recording of performance for sign of deterioration, service and replace of parts. Operation and maintenance of the toilets and tube wells will be the responsibility of the LINICs

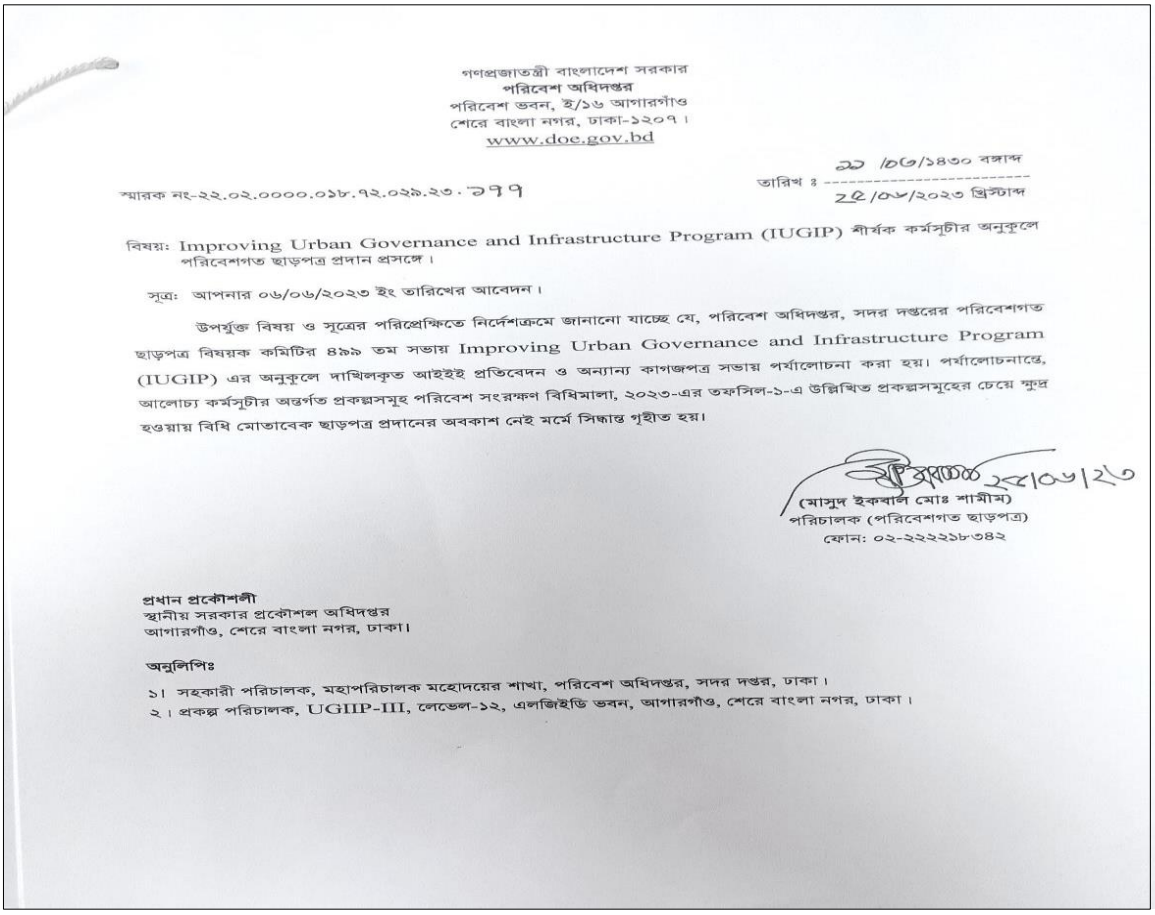
- Clean and functioning the latrine/tube well regularly by LINICs selected person as per guidelines of LIN improvement activity.
- Whether pan is dry then makes it watery before use.
- After defecation more or less two liters of water has to flow into the pan. Human excreta should not attach with the pan.
- Maintain sanitary bins (waste bin) to keep used toilet tissue or other waste
- Maintain electricity supply, light, switch and tap
- Maintain bleaching powder to reduce bad odor regularly and financed by LIN dwellers (users).
- Maintain sludge cleaning of toilet as per necessary by LINICs
- Except water any hard/soft materials should not be thrown into the pan.
- Smoking is strictly prohibited into the latrine.
- After using the latrine, it has to clean properly. Jar and Mug has to keep in proper place.
- An adolescent or a woman has to go with the child when child will go for using the toilet.
- After the child defecation woman has to wash it properly.
- Train the LIN dwellers to use the toilet/tube well properly by LINICs
- To build up awareness among the LIN dweller about maintenance of toilet/tube well.

Appendix 9: Standard Operation Procedure (SOP) of street light

Solar lighting systems are generally installed in LIN area. It is important that all essential tools (crews, ladder, brush, cable, tapes etc.), spares and consumables have to keep ready by LINICs for proper operation and maintenance of solar street light. LINICs or LINICs suggested person will be responsible for O&M of solar systems-

- Clean solar panel from dust, birds dropping etc. Use clean water and avoid hard water, per week
- Maintain ladder or suitable equipment for cleaning the panel per week.
- Observe battery state of charge using hydrometer per week
- Check electrolyte level of battery and top up if required.
- Change/replace of battery as per necessary by authorized venders
- Inspect all terminals for corrosion and loosened cable connections, clean and tighten as per necessary.
- Inspect panel for broken modules. If any, replace it with appropriate module as per necessary
- Check panel wiring for physical damage and wind chafing
- Inspect inverter - remove dust or dirt, inspect system wiring for poor connections. Look for signs of excessive heating, inspect controller for proper operation
- Visually check all conduit and wire insulation for damage
- Visually check for loose, broken, corroded, or burnt wiring connections.
- Visually check for broken of lamp post.

Appendix 10: DoE Approval letter for IUGIP



গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
পরিবেশ ভবন, ই/১৬ আগারগাঁও
শেরে বাংলা নগর, ঢাকা-১২০৭।
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স্মারক নং-২২.০২.০০০০.০১৮.৭২.০২৯.২৩. ৯৭৭

তারিখ : ২৯ /০৬/১৪৩০ বঙ্গাব্দ
২৫/০৬/২০২৩ খ্রিস্টাব্দ

বিষয়: Improving Urban Governance and Infrastructure Program (IUGIP) শীর্ষক কর্মসূচীর অনুকূলে পরিবেশগত ছাড়পত্র প্রদান প্রসঙ্গে।

সূত্র: আপনার ০৬/০৬/২০২৩ ইং তারিখের আবেদন।

উপর্যুক্ত বিষয় ও সূত্রের পরিপ্রেক্ষিতে নির্দেশক্রমে জানানো যাচ্ছে যে, পরিবেশ অধিদপ্তর, সদর দপ্তরের পরিবেশগত ছাড়পত্র বিষয়ক কমিটির ৪৯৯ তম সভায় Improving Urban Governance and Infrastructure Program (IUGIP) এর অনুকূলে দাখিলকৃত আইইই প্রতিবেদন ও অন্যান্য কাগজপত্র সভায় পর্যালোচনা করা হয়। পর্যালোচনান্তে, আলোচ্য কর্মসূচীর অন্তর্গত প্রকল্পসমূহ পরিবেশ সংরক্ষণ বিধিমালা, ২০২৩-এর তফসিল-১-এ উল্লিখিত প্রকল্পসমূহের চেয়ে ক্ষুদ্র হওয়ায় বিধি মোতাবেক ছাড়পত্র প্রদানের অবকাশ নেই মর্মে সিদ্ধান্ত গৃহীত হয়।

২৫/০৬/২৩
(মোসুদ ইকবাল মোঃ শামীম)
পরিচালক (পরিবেশগত ছাড়পত্র)
ফোন: ০২-২২২২১৮৩৪২

প্রধান প্রকৌশলী
স্থানীয় সরকার প্রকৌশল অধিদপ্তর
আগারগাঁও, শেরে বাংলা নগর, ঢাকা।

অনুলিপিঃ
১। সহকারী পরিচালক, মহাপরিচালক মহোদয়ের শাখা, পরিবেশ অধিদপ্তর, সদর দপ্তর, ঢাকা।
২। প্রকল্প পরিচালক, UGIIP-III, লেভেল-১২, এলজিইডি ভবন, আগারগাঁও, শেরে বাংলা নগর, ঢাকা।