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 up-gradation at Kalkini Pourashava

Sub-Project No: IUGIP/KALK/SI/01-04/2023

June 2024

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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 Developpment
Ap	-	Affective Person
DoE	-	Department of environment
DLI	-	Disbursement Link Indicator
ESMF Framework	-	Environmental and Social Management
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 Program	-	Improving Urban Governance and Infrastructure
LGED	-	Local Government Engineering Department
MDSC Consultant	-	Management Design and Supervision
MLGRDC	-	Ministry of Local Government, Rural Development, Cooperatives
O&M	-	Operation and Maintenance
PMU	-	Project Management Unit
PPTA Assistance	-	Project Preparatory Technical
PRSP Paper	-	Poverty Reduction Strategy
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 Kalkini 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) 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.

Table of Contents

List of Tables

List of Figures

List of Appendix

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 urban areas. With the present high increase-trend in urban population, it is justifiably anticipated that by 2020, the 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 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 take place within the urban confines.

2. Now, in line with the aforesaid trend, particularly the visibly sharp rise in rural-urban migration in recent decades, urbanization of the existing Pourashavas of the country will also register a concomitant speedy growth. This will warrant the 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 the 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 LIN improvement remains at the forefront of municipal infrastructure provision through UGIIP-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 the sweeper's colony.

A. Purpose of Environmental Screening Report

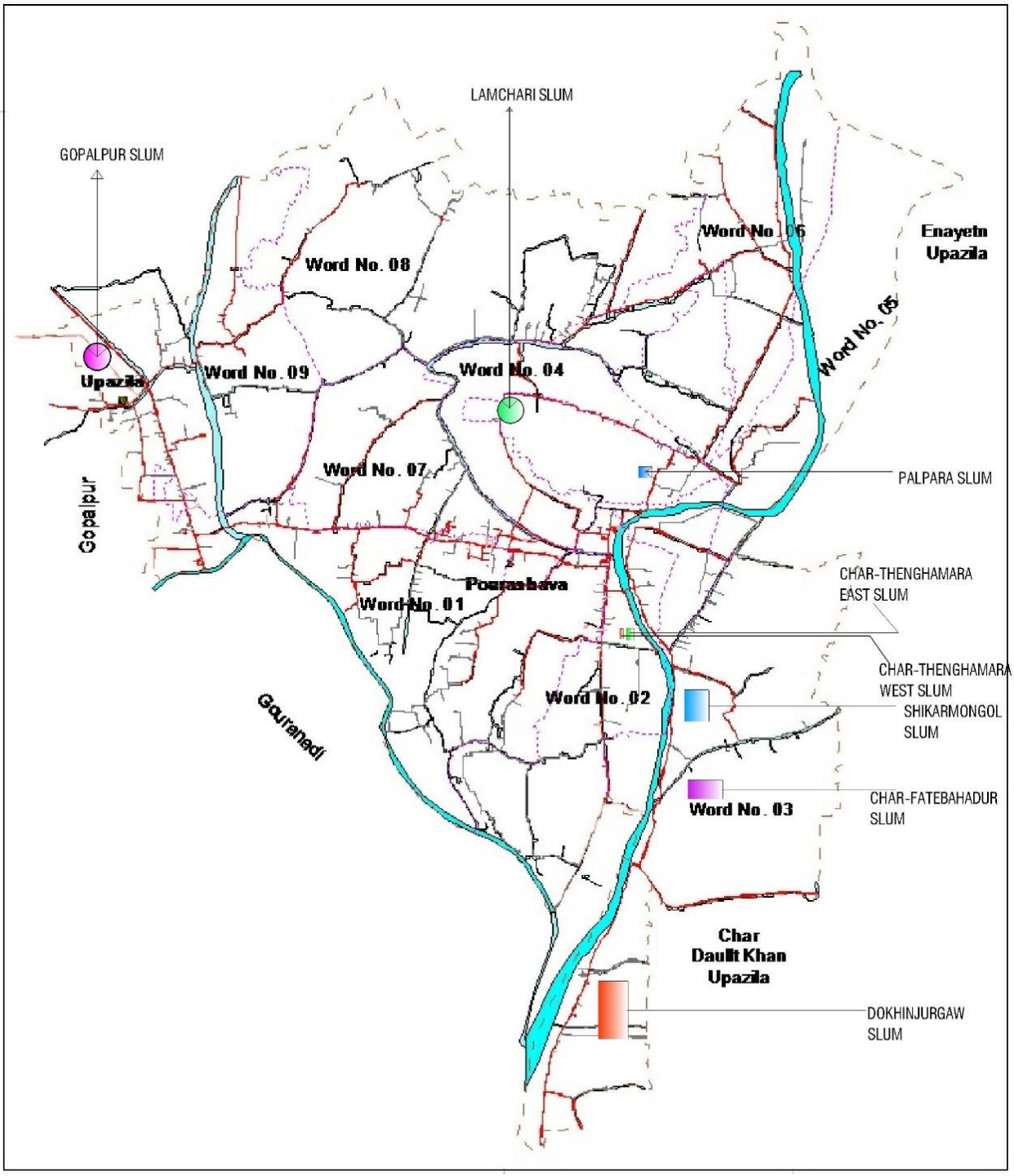
5. The objectives of the LIN Improvement Sub-project are to improve the LIN environment through the installation of drinking water well, dustbins, sanitation, street light facility, and rehabilitation/ improvement of footpaths and drains in various locations in the LIN area, which ultimately improves 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.

B. Proposed LINs

6. Kalkini Pourashava is one of the Local Government Administrative units of Bangladesh and categorizes as Class A. The Pourashava is located in the district of Jashore about 10 km. away from Northeast of District headquarter. Kalkini is an important area, where there is existence of a good number of small, medium businesses of different types and new more industries are growing in that area. However, day by day rapid urbanization in and around Kalkini Pourashava & newly growing tourist site and cultural heritage increases its importance with a significant increase in population in the Pourashava area.

7. There are 13 LINs in Kalkini Pourashava, of which 04 (four) LINs have been included in the Sub-project under discussion for providing infrastructure facilities in the selected LINs and improving the environment. Environmental screening reports on the four proposed LINs in Kalkini Pourashava have been presented in this report (Palpara Area LIN, Cor Thengamara Poschim Area LIN, Chor Fate Bahadur LIN and Shikarmongol (Gochogram)Area LIN). The location of the proposed LINs is shown in **Figure I.1**.

Figure I.1: Locations Map of the Proposed LINs in Kalkini Pourashava Map



IV. ENVIRONMENTAL SCREENING OF PROPOSED LINS

A. Palpara Area LIN (Ward No. 04): Lot-01

8. The LIN is situated in ward no. 04. There are 145 families with 725 members, of which 400 are males, and 325 are females. The land area is 7.0 acres, and People of LIN owns the land. Out of the total families, 60 families earn their livelihood by physical labor, 30 families by hawking, 20 families by the grocer, 20 families by business and the rest by other means. The average income per head per month is less than BDT 3000.00. Most of the families live in katcha houses and semi paka. 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 Palpara Area LIN is situated in ward no. 04 under Kalkini Pourashava of Kalkini Upazila under Madaripur District; refer to **Figure I.1** for the location of the LIN in the Kalkini Pourashava map.

b. Description of Interventions

10. A description of the proposed interventions for Palpara Area LIN is given in **Table II.1**.

Table IV.1: Description of Proposed Interventions of Palpara Area LIN

			Name of works: Constuction of 12 nos. single unit (Type-B) toilets with 02 Nos. soak pit, 05 number dustbin, 60-meter footpath,100-meter RCC drain, Installation of 23 numbers of solar street light, 20 numbers hand tube well & 100 nos. Tree Plantation in Palpara LIN, ward no-04 under Kalkini Pourashava			
	IUGIP/KALK/SI/01-04/2023 (Lot-01)	2023-2024	**Toilets**			
1			a)	Construction 12 nos. single unit (Type-B) toilets with 02 Nos. soak pit	12	Nos.
2			b)	Construction of 05 number dustbin	5	Nos.
3			c)	Construction of 60-meter footpath.	60	m
4			d)	Construction of 100-meter RCC drain	100	m
5			e)	Installation of 23 numbers solar street light	23	Nos.
6			f)	Installation of 20 numbers hand tube well	20	Nos.
7			g)	Plantation of 100 nos. tree	100	Nos.

c. Present Condition (Baseline Environment)

(i) Flooding/Water-clogging

11. Flood does not occur in this LIN. There exist no paved internal drainage systems in the LINs. The existing drains are earthen that are poorly functioning. As the LIN areas are low-lying, heavy rainfall during the rainy season creates waterlogging. 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 LIN people have been suffering from the acute problem of inadequate availability of drinking water. Hence, LIN dwellers have demanded installing 16 nos. of tube wells in their area; refer to **Appendix 1** for the typical design of a tube well. The test of ground water quality of water (in terms of arsenic, chloride, iron contents) was undertaken by DPHE Zonal Laboratory in Gopalganj on 23 August 2023. The test results found that the ground water of Kalkini Pourashava contains excess arsenic, iron, and manganese than the acceptable limits (as per Bangladesh Standard and WHO Standard), refer to **Table II.2** for the test results. This water quality test result can be considered as the water quality of the whole Pourashava area.

Table IV.2: Water Quality Test Results of Kalkini Pourashava

Sl. No.	Water Quality Parameters	Concentration Present	Bangladesh Standard	WHO Standard	Unit
1	Arsenic (As)	0.001	0.05	0.01	Mg/L
2	Chloride	187	150-600	250	Mg/L
3	Iron (Fe)	0.525	0.3-1	0.3	Mg/L

Source: Report on Kalkini Pourashava Water Quality Test undertaken by DPHE Zonal Laboratory in Gopalganj on 23 August 2023

(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 **II.1** for the existing condition of toilet facilities. Hence, they have demanded the construction of 06 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 II.1** for the existing condition of access roads. LIN dwellers want 112m 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**.

(v) Street Lights

15. There exist 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 23 nos. of street lights in and around their LIN. Refer to **Appendix 1** for a typical design of the solar street light.

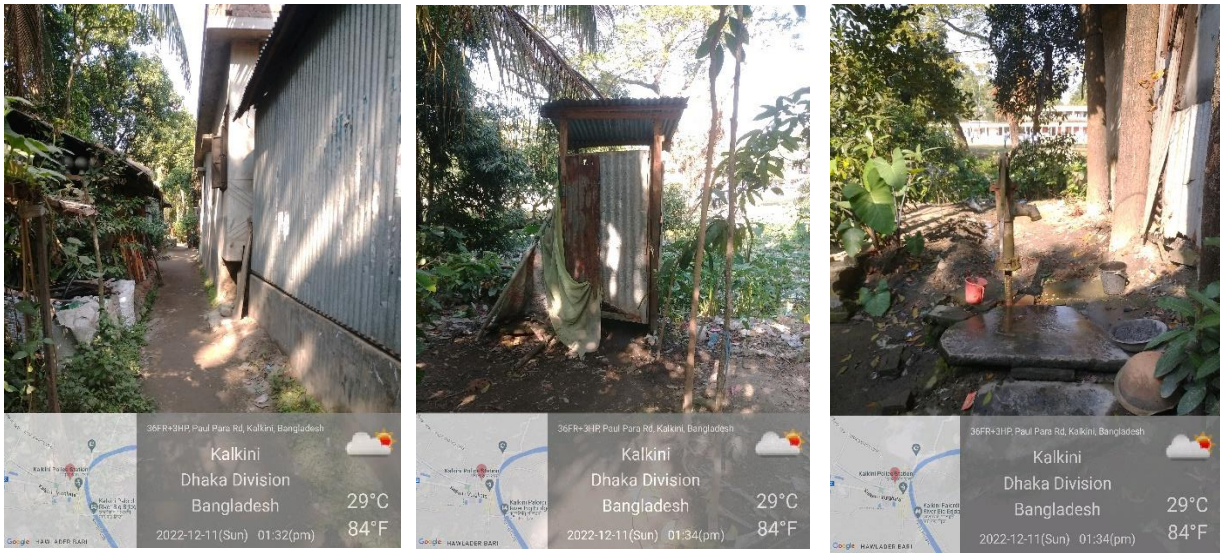
(vi) Drains

16. The existing drains are earthen and inactive. So, LIN dwellers experience water logging, especially during the rainy season. Hence, they have demanded construction of 50m of drains in their area. The proposed drains in the LINs have been considered tertiary drains, and their outfalls are all Paura secondary drains that discharge into primary drains. 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 roadside 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. A typical design of the drain is given in **Appendix 1**.

(vii) Solid Waste Management

17. Presently, solid waste is thrown here and there due to the lack of proper and sufficient dustbins. LIN dwellers demanded the construction of 05 nos. of dustbins in their area. They will use the proposed dustbins properly with their responsibility. It will be discussed and encouraged to LIN dwellers in the courtyard, Primary group, and LINIC meeting. It is expected that the Pourashava existing waste management system will collect the waste from the proposed dustbins in the LIN as they collect it from other dustbins located in the Pourashava area. The proposed dustbin will be placed on the roadsides and away from the households to avoid environmental and sanitation hazards. A typical design of a dustbin is given in **Appendix 1**.

Figure IV.1: Photographs of Existing Conditions of Palpara Area LIN



Access road & Housing | Toilet | Tube Well

d. Site Map of Palpara Area LIN

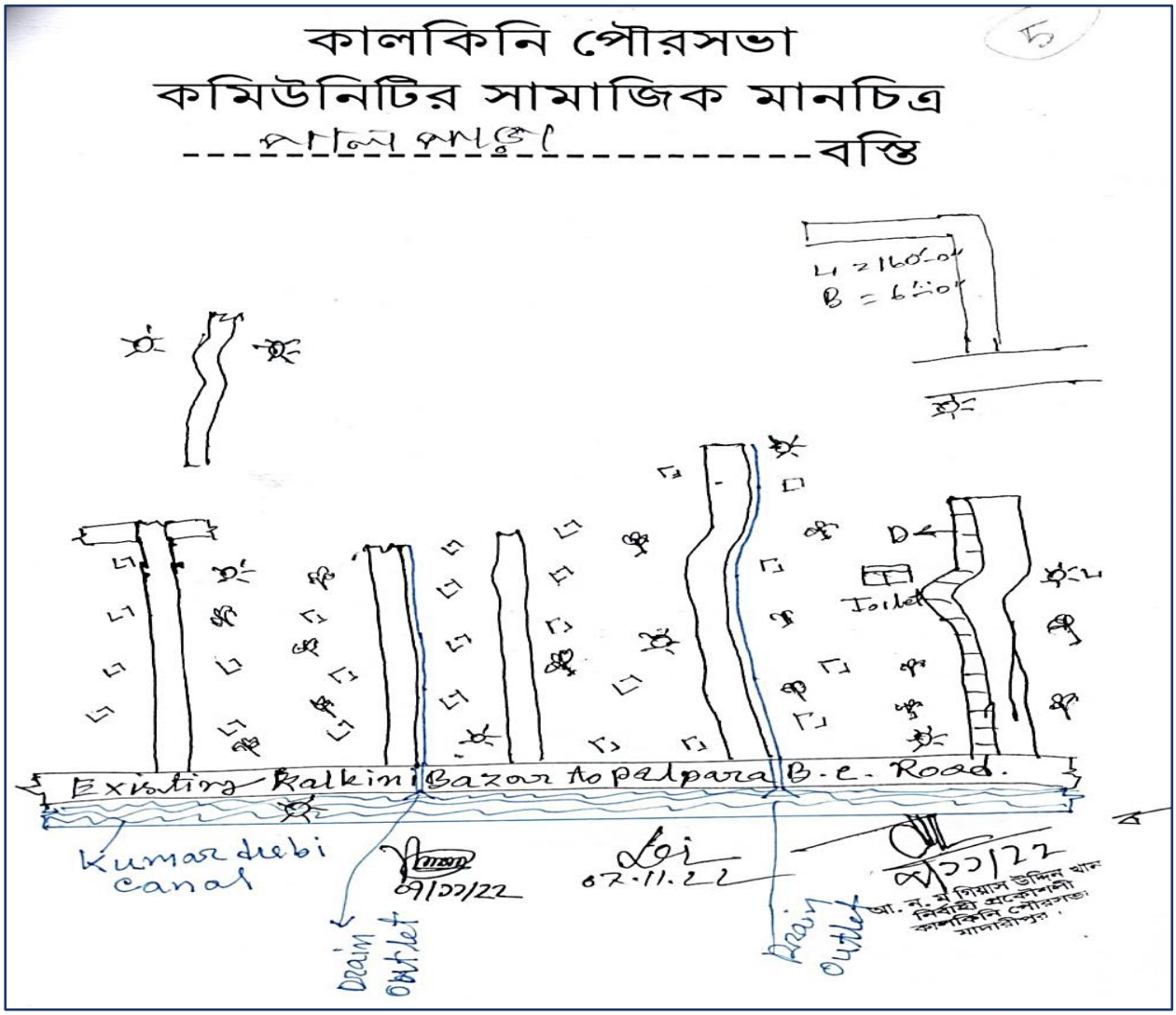


Figure IV.2: Location of existing and proposed infrastructure in Palpara Area LIN

e. Environmental Impact Assessment and Mitigation

18. (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 the 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 (+).”)

19. 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 impairs the air quality - Unhygienic/unsanitary environment due to demolition of old/poor infrastructure and construction of camps in the development site - The 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 disposal in a hygienic way by LINIC, and it is included in the engineering estimate item (LGED rate schedule) - PIU/LINIC will strongly monitor the construction activity, and instant action will take.	PIU, LINIC
Dust Management	(-)	- Moving debris/sediments may create dust during the 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 the work site and trenches will create a hazard to pedestrians and children. - Chances of fire only from open cooking in the area may create a major loss of property to the residence in the LIN.	- Provide safety signage at all sites visible to the public that is monitored by PIU/LINIC, and it will be confirmed in the 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 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. - The bucket filled with sand will be kept at the construction zone.	PIU, LINIC
Air/water/noise quality monitoring	(-)	- Components of works are scattered in the LIN area, which is 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 the construction area by test due to short-term effects. - Water will be sprayed to control the dust, and 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 their 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 workplace.		
Drainage congestion/water logging	(-)	- Clogging/stagnation of flow in the storm drain, source of wastewater is LIN dweller used water (bathing and washing) - Backflow of water through the drain (e.g., due to high water level at the downstream discharge point, such as khal/ river) - Drainage congestion/water logging due to crossroad/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 the toilet - The outfall of the proposed drain is primary to secondary drain, and water quality will be monitored as per necessity (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 the transfer station pollute the air and soil. - The odor from the waste disposal site and composting system. - Contamination of ground water by leachate.	- Follow the waste management plan given in Appendix 4 during the 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 the house - Coordinate with the municipality for the 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 that can arise from 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 Appendix 5 in relation to COVID-19. - Produce and implement a site health and safety (H&S) plan which includes measures such 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 the construction site; (v) documenting procedures to be followed for all site activities; and (vi) maintaining accident reports and records. - Arrange for a 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. - 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;	PIU, LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/ problems	Environmental mitigation/ enhancement measures	Responsibility
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 the loading of sewage from the communal sanitary containers. - Odor	- Design and installation of the sanitary toilet to stop microbial contamination of the groundwater. - Adequate height with proper ventilation. - Water supply and hand wash facility - Regular cleaning and monitoring - 5-10m distance should be maintained between the 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 pollution and water logging - The outlet of the tube well should be connected with the soak pit to the existing drain. - A person has been engaged in cleaning and maintenance of the tube well. - One set of maintenance equipment for the 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 the use of TW, toilets, solar panels, tree plantation, etc., during the preparation of the Community Action Plan (CAP) - Training is a continuous process by the Capacity Development Fund of Pourashava. It is financed by IUGIP-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)

20. Operation Phase / Post-Construction Phase:

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 systems. Install temporary silt traps or sedimentation basins along drainage leading to the water bodies. - Remove all debris/sediments immediately. - Dispose of debris/sediments at a designated site such as a 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, jaundice, etc.	- The necessary test will be performed occasionally by testing water samples from the tube wells (Pourashava PRAP budget)	PIU, LINIC
Solid Waste management	(-)	- Due to open dumping ambient environment will be polluted and will be a breeding place for flies - Threat to human health and/or the environment - Due to bad odor, a nuisance to sensitive receptors	- The waste management system will be connected with the municipal system, obviously. - The waste will soon be carried to the proposed SLF by the Pourashava SWM system	PIU/LINIC

Environmental issues/ concerns/components/ parameters/value	Potential impacts (+/-)	Description of impacts/problems	Environmental mitigation/enhancement measures	Responsibility
			- Develop a rodent and fly control plan - Ensure residual waste is not left in bins and allowed to decompose for a long time	
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 wears out with the passage of time - An inadequate supply of water to the toilet may spread the bad odor - Improper use may spread the germ - Irregular cleaning may create the unhygienic condition - The 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 - A continuous supply of water will be provided - Awareness to the user for proper use of the latrine - LINIC will engage a person to clean and maintenance of Toilet and tube well regularly - Periodic maintenance of the tube well and Toilet will be done by the Pourashava PRAP budget	PIU/LINIC
Dustbin	(-)	- Improper use of dustbins - Irregular cleaning of dustbin may create bad odor and birthplace of flies	- Awareness to the LIN dwellers of the proper use of dustbins - LINIC will engage a person who will monitor the cleaning of 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 the Pourashava PRAP fund. - Provided training on maintenance of TW, toilet and Planted Trees, and solar panels during the preparation of the Community Action Plan (CAP) - Regular maintenance of planted trees by LIN dwellers	Pourashava PRAP budget

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

f. Environmental Management Plan (EMP)

21. 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	- The water quality of the tube well will be tested after installation/construction by LINIC, and it is included in the engineering estimate (Item LGED rate schedule) - The water quality of the tube well will be monitored periodically, and the DoE standard will be maintained properly. - The outlet of household wastewater would be connected with Pourashava's existing drain - PIU/LINIC will strongly monitor the performance of the interventions	Twice a year/Yearly Operation /completion work	Pourashava

Parameters/issues/criteria to be monitored	Problems	Mitigation Measures	Monitoring Frequency	Budget
Dust from drains, footpaths, toilets, street lights, 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 monitor 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, resulting in the 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 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 the 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 of working in confined spaces such as closed drains. Potential impacts are negative and long-term but reversible by mitigation measures.	- Comply with requirements of the Government of Bangladesh Labor Law of 2006, the Labor Law services rule 2015, and all applicable laws and standards on workers H&S. - Ensure adequate safety and provisions as per Annex 8 in relation to COVID-19. - Ensure that all site personnel have a basic level of H&S training. - Produce and implement an O&M and H&S plan which includes measures such 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 the construction site - Arrange for a readily available first aid unit, including an adequate supply of sterilized dressing materials and appliances - Disallow worker exposure to noise levels greater than 85 dBA for a 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

g. Public Consultations

22. **Minutes of Public Consultation:** A public consultation meeting was held at Palpara Area LIN on 19 October 2023. A total of 21participants attended the meeting where 10 were female, and the remaining were male (11 persons). LINIC members, teachers, counselors, farmers, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of PRS-UGIIP visited the LIN of the Pourashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the LINs. The meeting was presided over by the Executive Engineer of Kalkini Pourashava.

Site **:** Palpara Area LIN in ward no. 04

Date **:** 19 October 2023

Time **:** 10:00 AM

23. 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 LIN 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 LIN 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 LIN. There is inadequate/no dustbin in or around the LINs. 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 LIN dwellers urged for street lighting systems in and around the LINs.

24. Experts 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, water pollution, and waste management.

25. As per discussion and feedback from the Pourashava staff 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 a positive socio-economic impact.

26. The LIN dwellers demanded more latrines and tube wells and also demanded separate latrines for women. In his concluding speech, the chairman of the meeting mentioned that as per the allocation of the 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, the maximum number of old sites will be used, and nobody will be affected. The toilet designs have considered a 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. Refer to **Appendix 3** for the attendance and photographs of the meeting.

h. Grievance Redress Mechanism

27. A 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:

Sl. No.	Name	Designation	Position in GRC
1	Md. Nasir Uddin Sikder	01 No Pannel Mayor & Councilor, Ward No. 1, Kalkini Pourashava, Madaripur	President
2	Asaduzzaman Talukder	02 No Pannel Mayor & Councilor, Ward No. 9, Kalkini Pourashava, Madaripur	Member
3	Rashida Begum	03 No Pannel Mayor Reserved Women Councilor, Ward No. 1,2,3, Kalkini Pourashava, Madaripur	Member
4	Alil	Councilor, Ward No. 02 Kalkini Pourashava, Madaripur	Member
5	Md. Israel Sarder	Head Assistant, Kalkini Pourashava, Madaripur	Member-Secretary

28. 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 is included in social and resettlement cost estimates.

i. Grievance Redresses Process

29. **1st Level Grievance:** Names and contact phone numbers of the PIU safeguard focal person will be posted on the construction site at a visible location (construction site signboard) to provide the 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 07 days of receipt of a complaint/ grievance.

30. **2nd Level Grievance:** The grievances that cannot be redressed within 07 days at the 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.

31. **3rd Level Grievance**: The PIU-designated safeguard focal person will refer the unresolved or 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.

32. If the GRM cannot resolve the issues, the affected person also can use the ADB Accountability Mechanism (AM) by 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.

33. **Recordkeeping:** The PIU will keep the records of all grievances, including the date of receive and detailed contract address of the complainant, the nature of the grievance, agreed corrective actions, the dates these were affected, and final outcomes. The grievances will be 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.

34. **Periodic review and documentation of lessons learned:** 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

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

- Environmental and sanitation conditions will be improved.
- LIN dwellers will have comfortable walkways and improved drainage.

- Waterlogging will be removed, which will eliminate mosquito breeding resulting in 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.

B. Cor Thengamara Poschim (Ward No. 02): Lot-02

36. The LIN is situated in ward no. 02. There are 60 families with 450 members, of which 230 are males, and 220 are females. The land area is 0.4 acres, and people owns the land. Out of the total families, 15 families earn their livelihood by physical labor, 10 families by hawking, 15 families by the grocer, 14 families by business and the rest by other means. The average income per head per month is less than BDT 3000.00. Almost all families live in katcha 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

37. The B. Char Thengamara Poschim LIN is situated in ward no. 02 under Kalkini Pourashava of Kalkini Upazila under Madaripur District; refer to **Figure I.1** for the location of the LIN in the Kalkini Pourashava map.

b. Description of Interventions

38. A description of the proposed interventions for Cor Thengamara Poschim Area LIN is given in **Table II.3**.

Table IV.3: Description of Proposed Interventions of Cor Thengamara Poschim Area LIN

			Name of works: Construction 12 nos. single unit (Type-B) toilets with 02 Nos. soak pit. 03 numbers dustbin,355 meter footpath, Installation of 25 numbers of solar street light,18 numbers hand tube well & 100 nos tree plantation in Char Thengamara Poschim Lin, ward no-02 under Kalkini Pourashava		
	IUGIP/KALK/SI/01-04/2023 (Lot-02)	2023-2024	**Toilets**		
1			a)	Construction 12 nos. single unit (Type-B) toilets with 02 Nos. soak pit	12	Nos.
2			b)	Construction of 03 numbers dustbin	3	Nos.
3			c)	Construction of 355-meter footpath	355	m
4			d)	Installation of 23 numbers solar street light	23	Nos.
5			e)	Installation of 14 numbers hand tube well	14	Nos.
6			f)	Plantation of 100 nos. tree	100	Nos.

c. Present Condition (Baseline Environment)

(i) Flooding/Water-clogging

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

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

40. Currently, the LIN people have been suffering from the acute problem of inadequate availability of drinking water. Hence, LIN dwellers have demanded installing 14 nos. of tube wells

in their area; refer to **Appendix 1** for the typical design of a tube well. The test of ground water quality of water (in terms of arsenic, chloride, iron contents) was undertaken by DPHE Zonal Laboratory in Gopalganj on 23 August 2023. The test results found that the ground water of Kalkini Pourashava contains excess arsenic, iron, and manganese than the acceptable limits (as per Bangladesh Standard and WHO Standard), refer to **Table II.2** for the test results. This water quality test result can be considered as the water quality of the whole Pourashava area.

(iii) Sanitations

41. There is no existing sufficient sanitary toilet facility in the LIN area. LIN dwellers are facing a scarcity of hygienic sanitation; refer to Figure **II.3** for the existing condition of toilet facilities. Hence, they have demanded the construction of 06 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

42. There is no existing paved road/walkway in the LIN area. LIN dwellers want 410m 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**.

(v) Street Lights

43. There exist 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 20 nos. of street lights in and around their LIN. Refer to **Appendix 1** for a typical design of the solar street light.

(vi) Drains

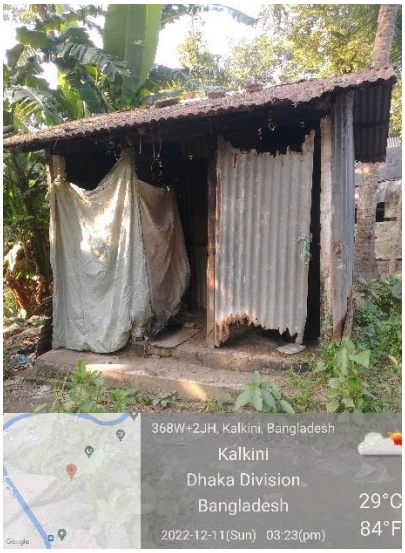
44. The existing drains are earthen and inactive. So, LIN dwellers experience water logging, especially during the rainy season. Hence, they have demanded construction of 50m of drains in their area. The proposed drains in the LINs have been considered tertiary drains, and their outfalls are all Paura secondary drains that discharge into primary drains. 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 roadside 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. A typical design of the drain is given in **Appendix 1**.

(vii) Solid Waste Management

45. Presently, solid waste is thrown here and there due to the lack of proper and sufficient dustbins. LIN dwellers demanded the construction of 05 nos. of dustbins in their area. They will use the proposed dustbins properly with their responsibility. It will be discussed and encouraged to LIN dwellers in the courtyard, Primary group, and LINIC meeting. It is expected that the Pourashava existing waste management system will collect the waste from the proposed dustbins in the LIN as they collect it from other dustbins located in the Pourashava area. The proposed dustbin will be placed on the roadsides and away from the households to avoid environmental and sanitation hazards. A typical design of a dustbin is given in **Appendix 1**.

Figure IV.3: Photographs of Existing Conditions of Char Thengamara Poschim LIN LIN

Access road & Housing



Toilet

Tube Well

d. Site Map of Cor Thengamara Poschim LIN

Figure IV.4: Location of existing and proposed infrastructure in Cor Thengamara Poschim LIN

e. Environmental Impact Assessment and Mitigation

46. "Environmental Impact Assessment and Mitigation" described in Para 18-20 is also applicable for Char Thengamara Poschim LIN.

f. Environmental Management Plan (EMP)

47. "Environmental Management Plan (EMP)" described in Para 21 is also applicable for Cor Thengamara Poschim Area LIN.

g. Public Consultations

48. **Minutes of Public Consultation:** A public consultation meeting was held at Char Thengamara Poschim LIN on 17 October 2023. A total of 18 participants attended the meeting where 10 were female, and the remaining were male (08 persons). LINIC members, teachers, counselors, farmers, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of PRS-UGIIP visited the LIN of the Pourashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the LINs. The meeting was presided over by the Assistant Engineer of Kalkini Pourashava.

Site **:** Char Thengamara Poschim LIN in ward no. 02

Date : 17 October 2023

Time : 11:00 AM

49. 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 LIN 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 LIN 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 LIN. There is inadequate/no dustbin in or around the LINs. 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 LIN dwellers urged for street lighting systems in and around the LINs.

50. Experts 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, water pollution, and waste management.

51. As per discussion and feedback from the Pourashava staff 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 a positive socio-economic impact.

52. The LIN dwellers demanded more latrines and tube wells and also demanded separate latrines for women. In his concluding speech, the chairman of the meeting mentioned that as per the allocation of the 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, the maximum number of old sites will be used, and nobody will be affected. The toilet designs have considered a 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. Refer to **Appendix 3** for the attendance and photographs of the meeting.

h. Grievance Redress Mechanism

53. “Grievance Redress Mechanism” described in Para 27-28 is also applicable for Char Thengamara Poschim LIN.

i. Grievance Redresses Process

54. “Grievance Redress Process” described in Para 29-34 is also applicable for Char Thengamara Poschim LIN.

j. Conclusion

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

- Environmental and sanitation conditions will be improved.
- LIN dwellers will have comfortable walkways and improved drainage.
- Waterlogging will be removed, which will eliminate mosquito breeding resulting in 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.

C. Chor Fate Bahadur LIN (Ward No. 03): Lot-03

56. The LIN is situated in ward no. 03. There are 40 families with 400 members, of which 200 are males, and 200 are females. The land area is 0.25 acres, and people owns the land. Out of the total families, 10 families earn their livelihood by physical labor, 05 by small business, 06 by grocer, and the rest by other means. The average income per head per month is less than BDT 3000.00. Most of the families live in katcha and same paka 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

57. The Char Fate Bahadur LIN is situated in ward no. 03 under Kalkini Pourashava of Kalkini Upazila under Madaripur District; refer to **Figure I.1** for the location of the LIN in the Kalkini Pourashava map.

b. Description of Interventions

58. A description of the proposed interventions for Char Fate Bahadur LIN is given in **Table II.4**.

Table IV.4: Description of Proposed Interventions of Chor Fate Bahadur LIN

			Name of works: Construction 13 nos. single unit (Type-B) toilets with 02 Nos. soak pit, 05 number dustbin, 120-meter footpath, 50-meter RCC drain, Installation of 25 numbers of solar street light, 18 numbers hand tube well & 100 nos tree plantation in Char Fate Bahadur LIN, ward no-03 under Kalkini Pourashava		
	IUGIP/KALK/SI/01-04/2023 (Lot-03)	2023-2024	**Toilets**		
1			a)	Construction 13 nos. single unit (Type-B) toilets with 02 Nos. soak pit	13	Nos.
			Sub-Total Toilets Amount =			
2			b)	Construction of 05 number dustbin	5	No.
3			c)	Construction of 120-meter footpath.	120	m
4			d)	Construction of 50-meter RCC drain	50	m
5			e)	Installation of 25 numbers solar street light	25	Nos.
6			f)	Installation of 18 numbers hand tube well	18	Nos.
7			g)	Plantation of 100 nos. tree	100	Nos.

c. Present Condition (Baseline Environment)

(i) Flooding/Water-clogging

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

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

60. Currently, the LIN people have been suffering from the acute problem of inadequate availability of drinking water. Hence, LIN dwellers have demanded installing 18 nos. of tube wells

in their area; refer to **Appendix 1** for the typical design of a tube well. The test of ground water quality of water (in terms of arsenic, chloride, iron contents) was undertaken by DPHE Zonal Laboratory in Gopalganj on 23 August 2023. The test results found that the ground water of Kalkini Pourashava contains excess arsenic, iron, and manganese than the acceptable limits (as per Bangladesh Standard and WHO Standard), refer to **Table II.2** for the test results. This water quality test result can be considered as the water quality of the whole Pourashava area.

(iii) Sanitations

61. There is no existing sufficient sanitary toilet facility in the LIN area. LIN dwellers are facing a scarcity of hygienic sanitation; refer to Figure **II.5** for the existing condition of toilet facilities. Hence, they have demanded the construction of 08 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

62. There is no existing paved road/walkway in the LIN area. LIN dwellers want 120m 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**.

(v) Street Lights

63. There exist 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 25 nos. of street lights in and around their LIN. Refer to **Appendix 1** for a typical design of the solar street light.

(vi) Drains

64. The existing drains are earthen and inactive; refer to **Figure II.5** for the existing condition of drains. So, LIN dwellers experience water logging, especially during the rainy season. Hence, they have demanded construction of 50m of drains in their area. The proposed drains in the LINs have been considered tertiary drains, and their outfalls are all Paura secondary drains that discharge into primary drains. 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 roadside 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. A typical design of the drain is given in **Appendix 1**.

(vii) Solid Waste Management

65. Presently, solid waste is thrown here and there due to the lack of proper and sufficient dustbins. LIN dwellers demanded the construction of 08 nos. of dustbins in their area. They will use the proposed dustbins properly with their responsibility. It will be discussed and encouraged to LIN dwellers in the courtyard, Primary group, and LINIC meeting. It is expected that the Pourashava existing waste management system will collect the waste from the proposed dustbins in the LIN as they collect it from other dustbins located in the Pourashava area. The proposed dustbin will be placed on the roadsides and away from the households to avoid environmental and sanitation hazards. A typical design of a dustbin is given in **Appendix 1**.

Figure IV.5: Photographs of Existing Conditions of Cor Fate Bahadur Area LIN

Access road & Housing | Toilet | Depression of the area & Tube Well

d. Site Map of Chor Fate Bahadur LIN

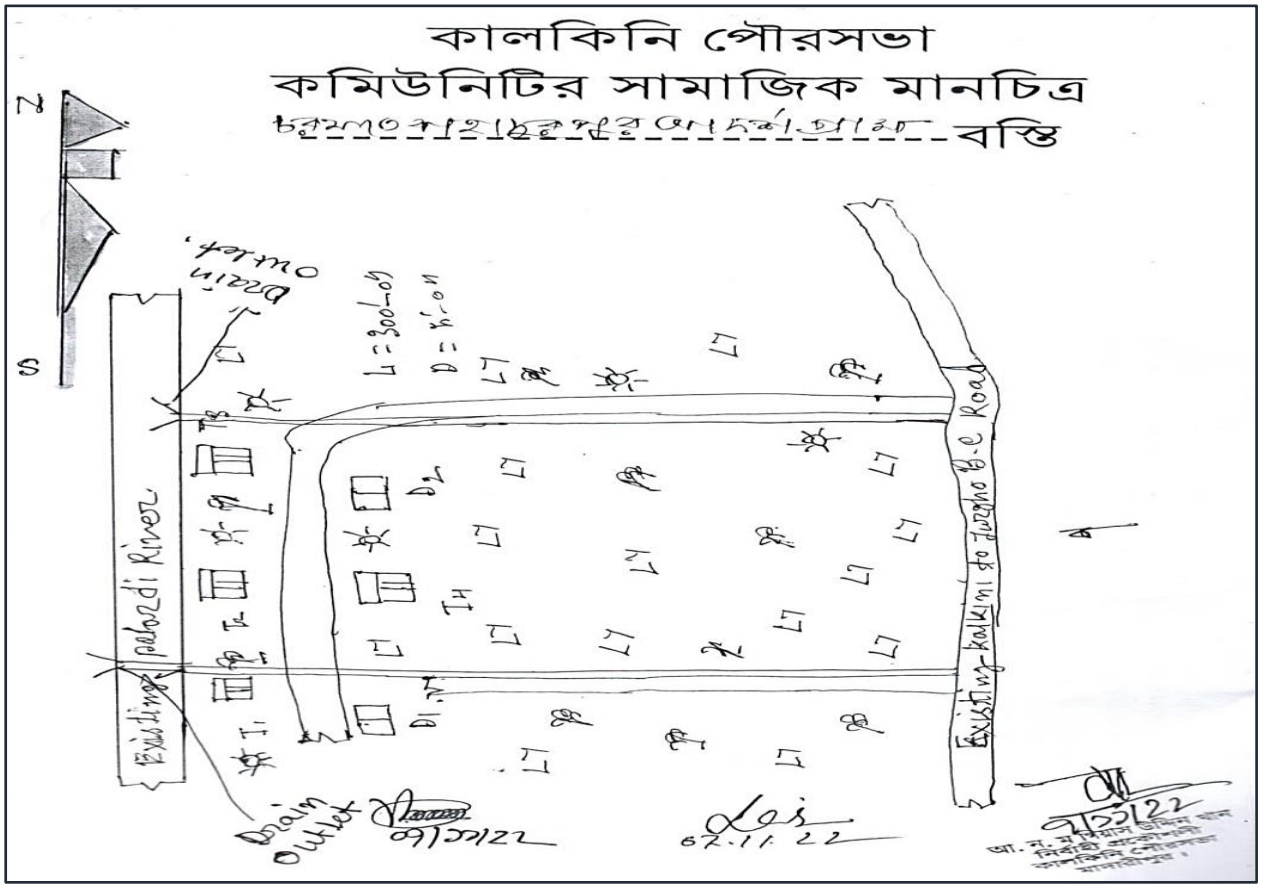


Figure IV.6: Location of existing and proposed infrastructure in Chor Fate Bahadur LIN

e. Environmental Impact Assessment and Mitigation

66. “Environmental Impact Assessment and Mitigation” described in Para 18-20 is also applicable for Cor Fate Bahadur Area LIN.

f. Environmental Management Plan (EMP)

67. “Environmental Management Plan (EMP)” described in Para 21 is also applicable for Char Fate Bahadur LIN.

g. Public Consultations

68. **Minutes of Public Consultation:** A public consultation meeting was held at Char Fate Bahadur LIN on 17 October 2023. A total of 20 participants attended the meeting where 10 were female, and the remaining were male (10 persons). LINIC members, teachers, counselors, farmers, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of PRS-UGIIP visited the LIN of the Pourashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the LINs. The meeting was presided over by the Assistant Engineer of Kalkini Pourashava.

Site **:** Char Fate Bahadur LIN in ward no. 03

Date **:** 17 October 2023

Time **:** 12:00 AM

69. 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 LIN 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 LIN 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 LIN. There is inadequate/no dustbin in or around the LINs. 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 LIN dwellers urged for street lighting systems in and around the LINs.

70. Experts 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, water pollution, and waste management.

71. As per discussion and feedback from the Pourashava staff 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 a positive socio-economic impact.

72. The LIN dwellers demanded more latrines and tube wells and also demanded separate latrines for women. In his concluding speech, the chairman of the meeting mentioned that as per the allocation of the 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, the maximum number of old sites will be used, and nobody will be affected. The toilet designs have considered a 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. Refer to **Appendix 3** for the attendance and photographs of the meeting.

h. Grievance Redress Mechanism

73. “Grievance Redress Mechanism” described in Para 27-28 is also applicable for Cor Fate Bahadur Area LIN.

i. Grievance Redresses Process

74. “Grievance Redress Process” described in Para 29-34 is also applicable for Cor Fate Bahadur Area LIN.

j. Conclusion

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

- Environmental and sanitation conditions will be improved.
- LIN dwellers will have comfortable walkways and improved drainage.
- Waterlogging will be removed, which will eliminate mosquito breeding resulting in 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.

D. Shikarmongol (Guchhogram) LIN (Ward No. 03): Lot-04

76. The LIN is situated in ward no. 03. There are 50 families with 450 members, of which 250 are males, and 200 are females. The land area is 2.50 acres, and the government owns the land. Of the total families, 30 earn their livelihood by physical labor, 05 by fishing, 05 by the grocer, and the rest by other means. The average income per head per month is less than BDT 3000.00. Most of the families live in katcha and paka 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

77. The Shikarmongol (Guchhogram) LIN is situated in ward no. 03 under Kalkini Pourashava of Kalkini Upazila under Madaripur District; refer to **Figure I.1** for the location of the LIN in the Kalkini Pourashava map.

b. Description of Interventions

78. A description of the proposed interventions for Shikarmongol (Guchhogram) LIN is given in **Table II.5**.

Table IV.5: Description of Proposed Interventions of Shikarmongol (Gochogram) LIN

			Name of works: Construction 12 nos. single unit (Type-B) toilets with 02 Nos. soak pit, 04 number dustbin, 312 meter footpath, Installation of 19 numbers of solar street light, 19 numbers hand tube well & 100 nos tree plantation in Shikarmongol (Gochogram) Lin, ward no-03 under Kalkini Pourashava			
	IUGIP/KALK/SI/01-04/2023 (Lot-04)	2023-2024	**Toilets**			
1			a)	Construction 12 nos. single unit (Type-B) toilets with 02 Nos. soak pit	12	Nos.
2			b)	Construction of 04 number dustbin	4	No.
3			c)	Construction of 312-meter footpath	312	m
4			d)	Installation of 19 numbers solar street light	19	Nos.
5			e)	Installation of 19 numbers hand tube well	19	Nos.
5			f)	Plantation of 100 nos. tree	100	Nos.

c. Present Condition (Baseline Environment)

(i) Flooding/Water-clogging

79. Flood does not occur in this LIN. There exist no paved internal drainage systems in the LINs. The existing drains are earthen that are poorly functioning. As the LIN areas are low-lying,

heavy rainfall during the rainy season creates waterlogging. Hence, the construction of drains is necessary to remove water logging conditions in these LINs.

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

80. Currently, the LIN people have been suffering from the acute problem of inadequate availability of drinking water. Hence, LIN dwellers have demanded installing 12 nos. of tube wells in their area; refer to **Appendix 1** for the typical design of a tube well. The test of ground water quality of water (in terms of arsenic, chloride, iron contents) was undertaken by DPHE Zonal Laboratory in Gopalganj on 23 August 2023. The test results found that the ground water of Kalkini Pourashava contains excess arsenic, iron, and manganese than the acceptable limits (as per Bangladesh Standard and WHO Standard), refer to **Table II.2** for the test results. This water quality test result can be considered as the water quality of the whole Pourashava area.

(iii) Sanitations

81. There is no existing sufficient sanitary toilet facility in the LIN area. LIN dwellers are facing a scarcity of hygienic sanitation; refer to Figure **II.7** for the existing condition of toilet facilities. Hence, they have demanded the construction of 08 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

82. There is no existing paved road/walkway in the LIN area. LIN dwellers want 65m 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**.

(v) Street Lights

83. There exist 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 19 nos. of street lights in and around their LIN. Refer to **Appendix 1** for a typical design of the solar street light.

(vi) Drains

84. The existing drains are earthen and inactive; refer to **Figure II.7** for the existing condition of access roads. So, LIN dwellers experience water logging, especially during the rainy season. Hence, they have demanded construction of 128m of drains in their area. The proposed drains in the LINs have been considered tertiary drains, and their outfalls are all Paura secondary drains that discharge into primary drains. 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 roadside 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. A typical design of the drain is given in **Appendix 1**.

(vii) Solid Waste Management

85. Presently, solid waste is thrown here and there due to the lack of proper and sufficient dustbins. LIN dwellers demanded the construction of 06 nos. of dustbins in their area. They will use the proposed dustbins properly with their responsibility. It will be discussed and encouraged to LIN dwellers in the courtyard, Primary group, and LINIC meeting. It is expected that the Pourashava existing waste management system will collect the waste from the proposed dustbins in the LIN as they collect it from other dustbins located in the Pourashava area. The

proposed dustbin will be placed on the roadsides and away from the households to avoid environmental and sanitation hazards. A typical design of a dustbin is given in **Appendix 1**.

Figure IV.7: Photographs of Existing Conditions of Shikarmongol (Gochogram) Area LIN

Access road & Housing | Depression of the area & Toilet | Tube Well

d. Site Map of Shikarmongol (Guchhogram) LIN

Figure IV.8: Location of existing and proposed infrastructure in Poschim Sikarmongol Area LIN

e. Environmental Impact Assessment and Mitigation

86. “Environmental Impact Assessment and Mitigation” described in Para 18-20 is also applicable for Poschim Sikarmongol Area LIN.

f. Environmental Management Plan (EMP)

87. “Environmental Management Plan (EMP)” described in Para 21 is also applicable for Poschim Sikarmongol Area LIN.

g. Public Consultations

88. **Minutes of Public Consultation:** A public consultation meeting was held at Shikarmongol (Guchhogram) on 18 October 2023. A total of 21 participants attended the meeting where 10 were female, and the remaining were male (11 persons). LINIC members, teachers, counselors, farmers, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of PRS-UGIIP visited the LIN of the Pourashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the LINs. The meeting was presided over by the Executive Engineer of Kalkini Pourashava.

Site **:** Shikarmongol (Guchhogram) LIN in ward no. 03

Date **:** 18 October 2023

Time **:** 03:00 PM

89. 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 LIN 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 LIN 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 LIN. There is inadequate/no dustbin in or around the LINs. 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 LIN dwellers urged for street lighting systems in and around the LINs.

90. Experts 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, water pollution, and waste management.

91. As per discussion and feedback from the Pourashava staff 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 a positive socio-economic impact.

92. The LIN dwellers demanded more latrines and tube wells and also demanded separate latrines for women. In his concluding speech, the chairman of the meeting mentioned that as per the allocation of the 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, the maximum number of old sites will be used, and nobody will be affected. The toilet designs have considered a 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. Refer to **Appendix 3** for the attendance and photographs of the meeting.

h. Grievance Redress Mechanism

93. “Grievance Redress Mechanism” described in Para 27-28 is also applicable Shikarmongol (Gochogram) LIN.

i. Grievance Redresses Process

94. “Grievance Redress Process” described in Para 29-34 is also applicable for Shikarmongol (Gochogram) LIN.

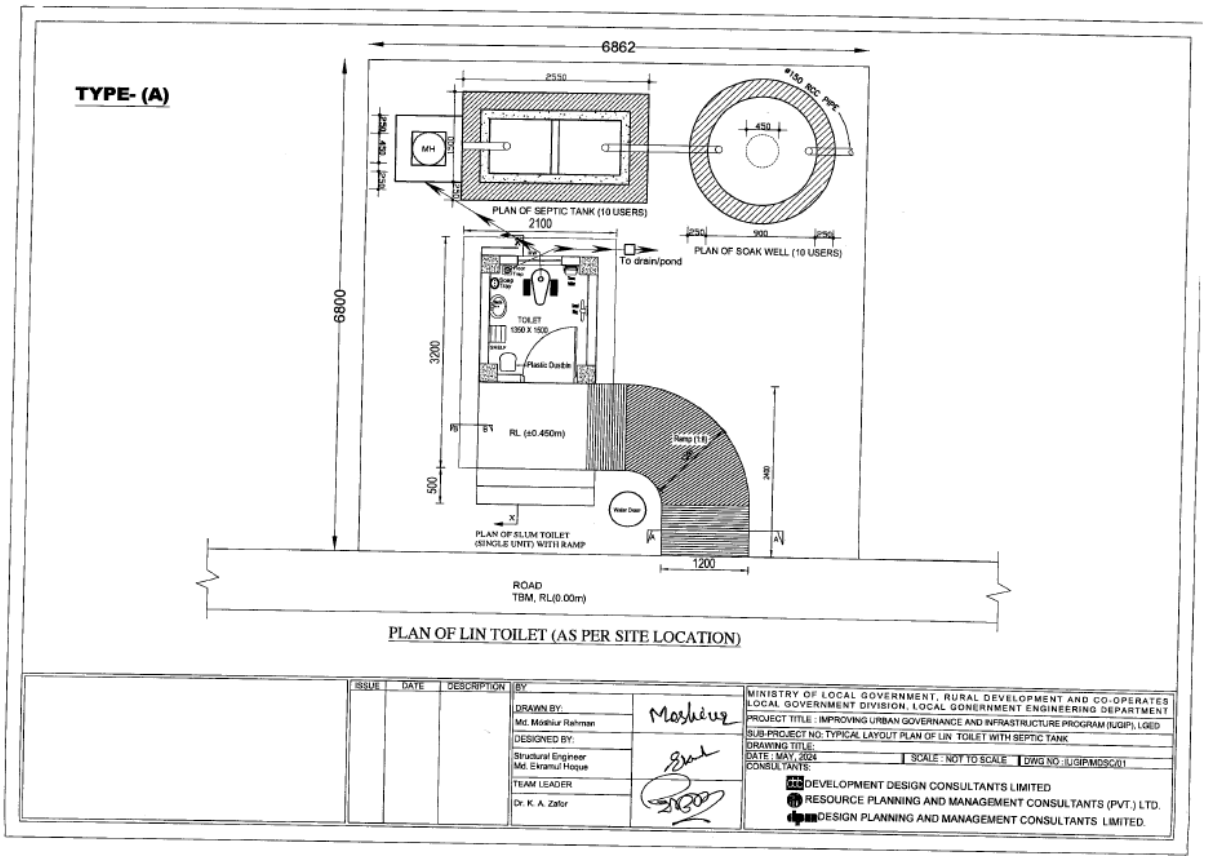
j. Conclusion

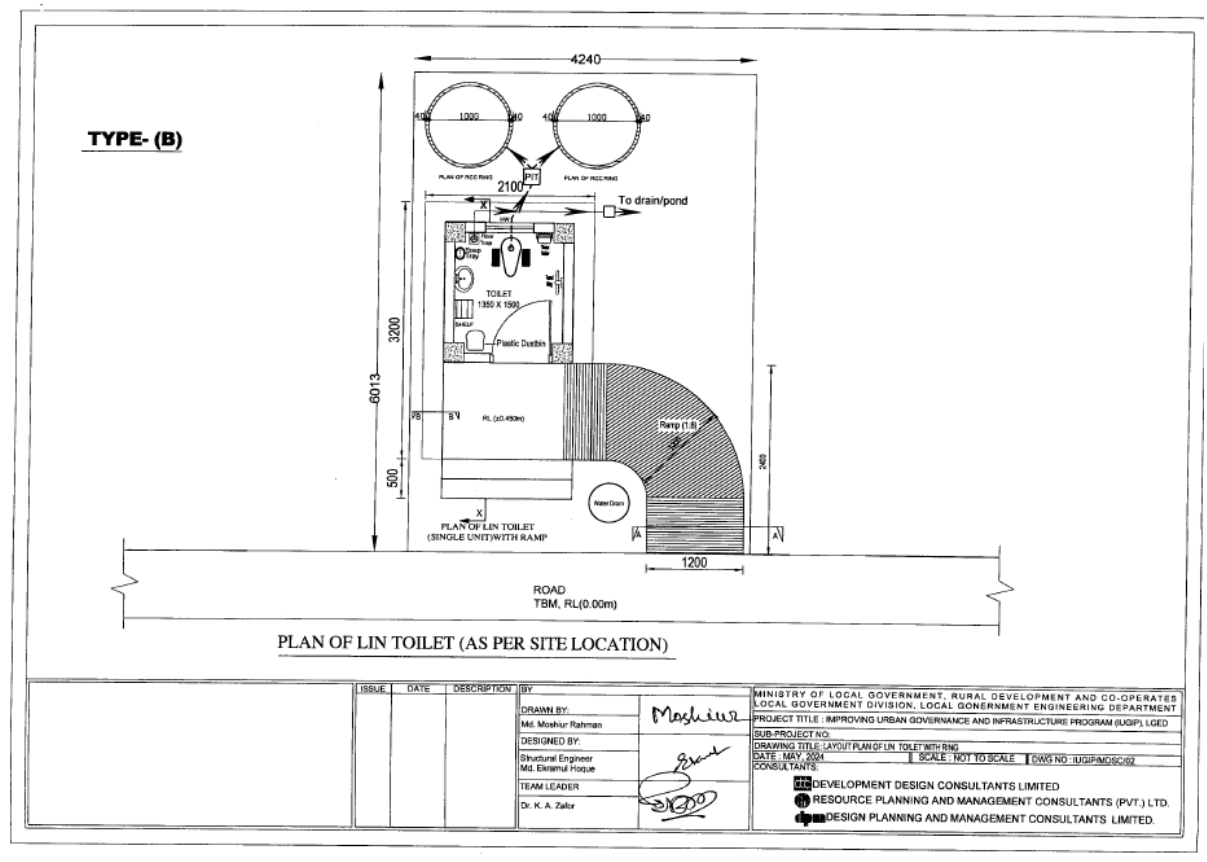
95. So, there will be no negative impact on the implementation of the sub-project, and if there is any, that would be very minimum most of which are construction related, localized, and short-term. Moreover, there will be a lot of positive impacts, such as:

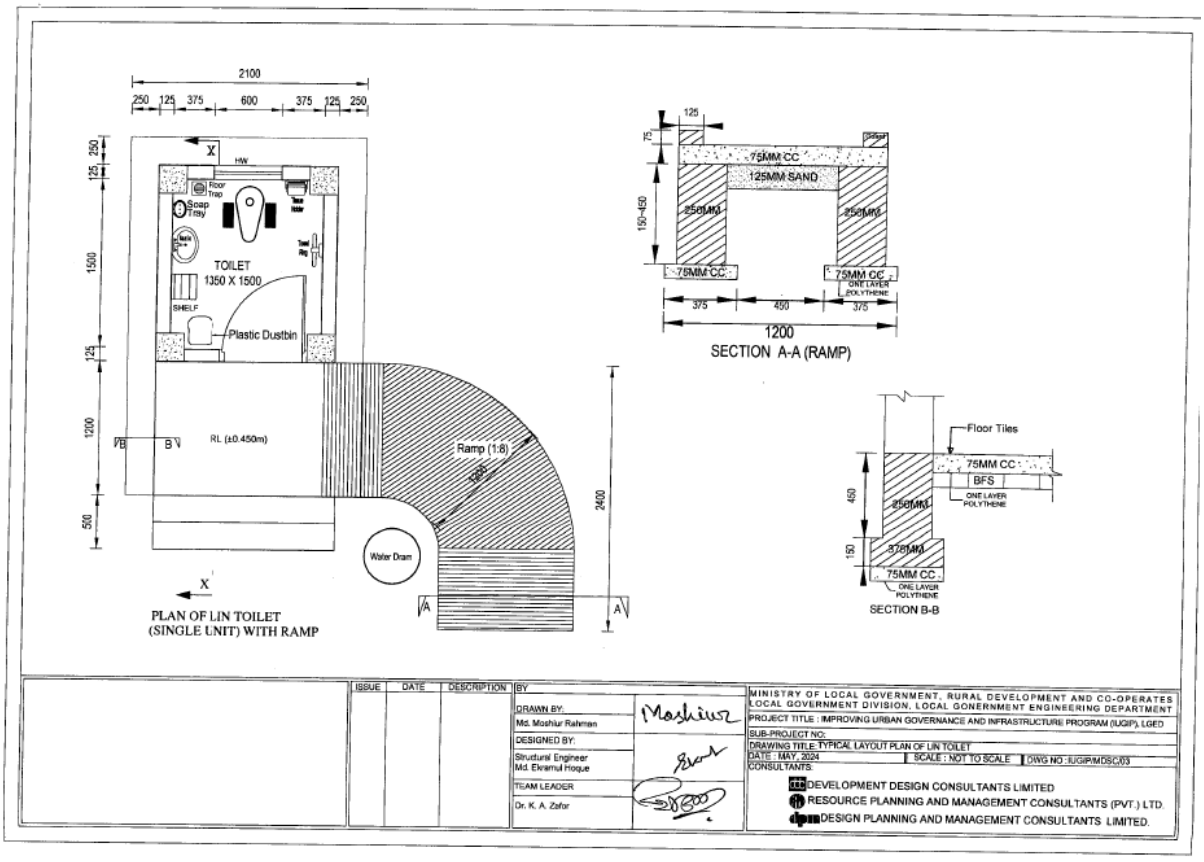
- Environmental and sanitation conditions will be improved.
- LIN dwellers will have comfortable walkways and improved drainage.
- Waterlogging will be removed, which will eliminate mosquito breeding resulting in the reduction of many diseases, including waterborne diseases.
- LIN dwellers will have 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.

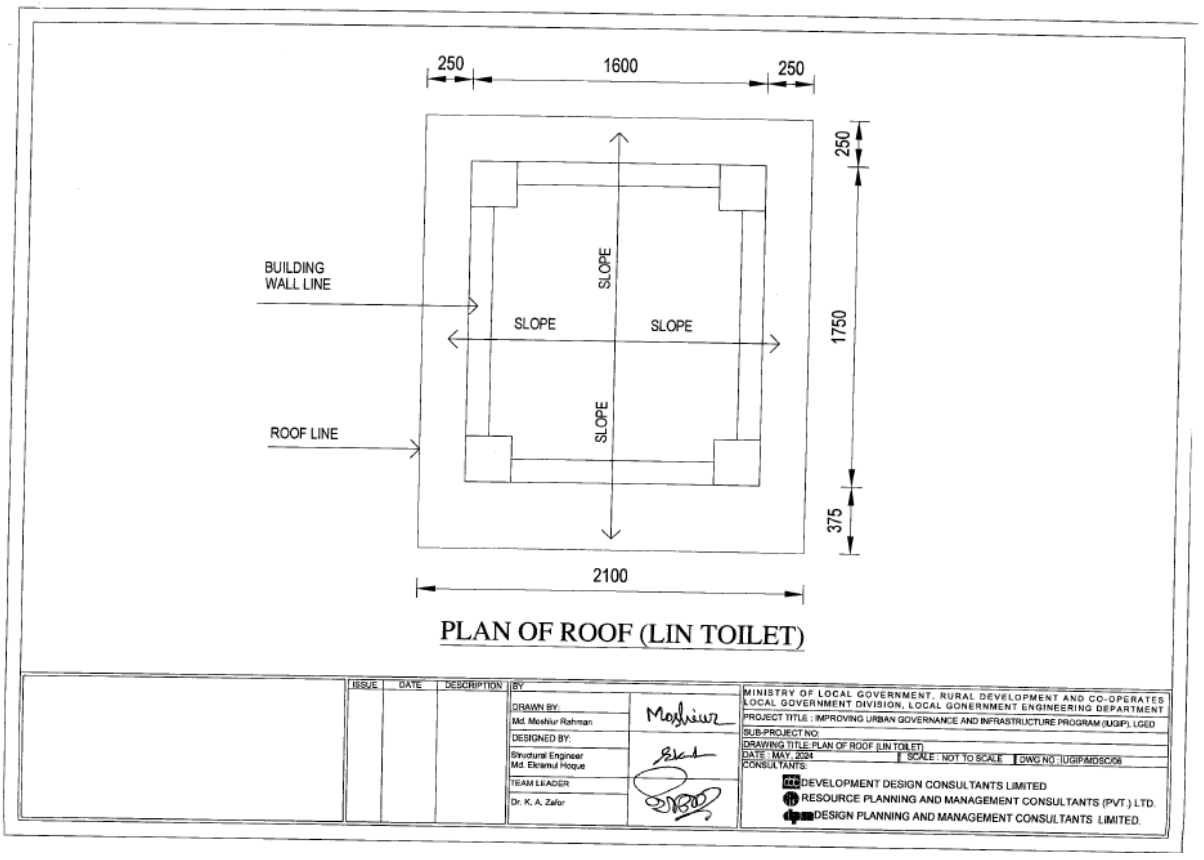
Appendix 1: Typical Plan & Design of the Proposed Infrastructures

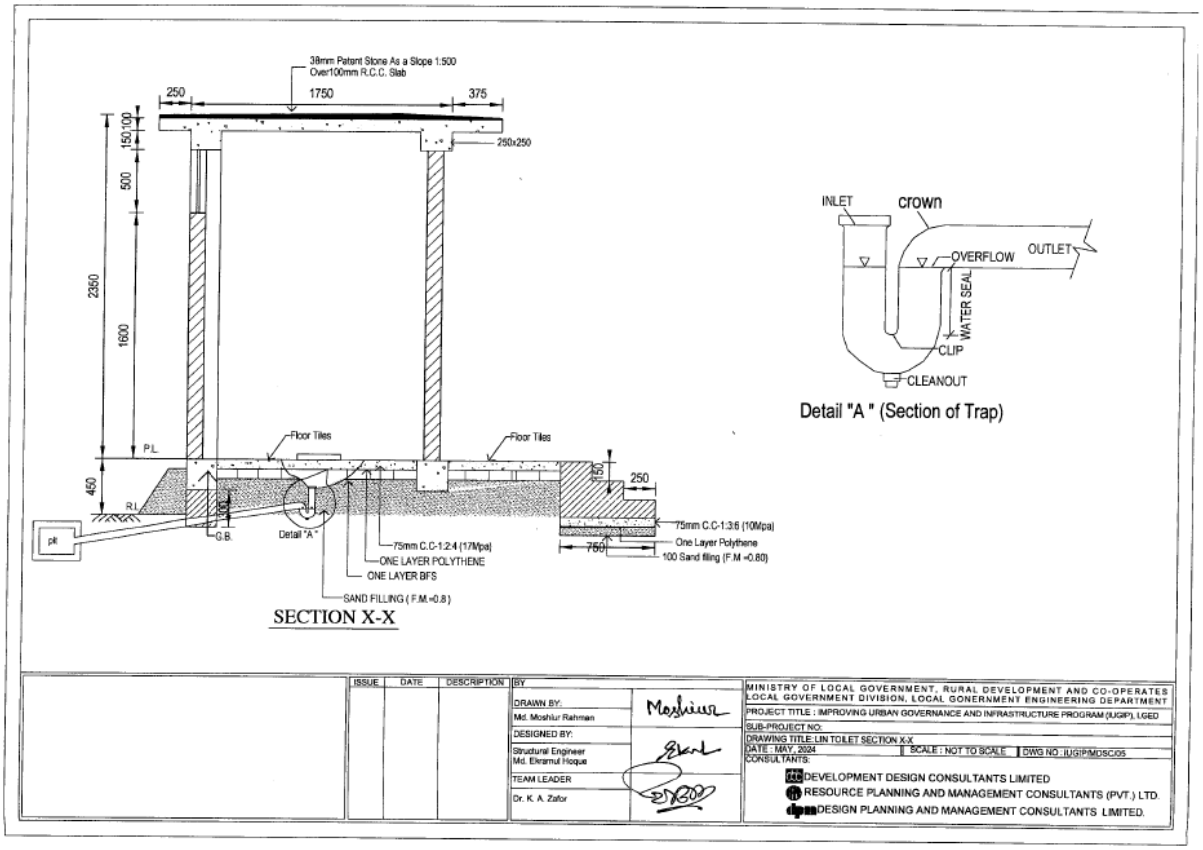
Typical Design of Toilet






2100
250 125 375 600 375 125 250
TOILET
1350 X 1500
SHELF
Plastic Dustbin
Soap Tray
Floor Trap
HW
RL (±0.450m)
Ramp (1:8)
Water Dram
PLAN OF LIN TOILET
(SINGLE UNIT) WITH RAMP
75MM CC
125MM SAND
250MM
75MM CC
ONE LAYER POLYTHENE
SECTION A-A (RAMP)
Floor Tiles
75MM CC
BFS
ONE LAYER POLYTHENE
250MM
375MM
75MM CC
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.

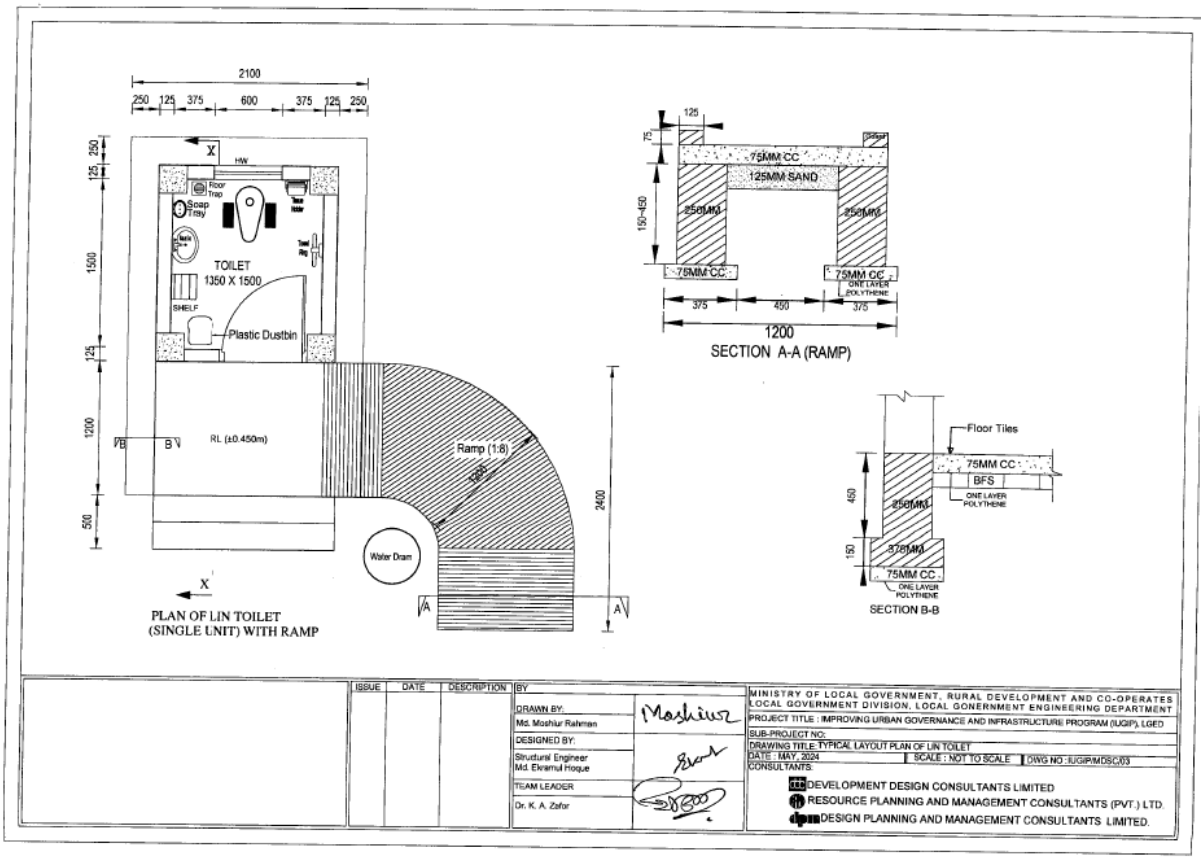

250
1600
250
250
1750
375
2100
BUILDING WALL LINE
ROOF LINE
SLOPE
SLOPE
SLOPE
SLOPE
PLAN OF ROOF (LIN TOILET)
ISSUE
DATE
DESCRIPTION
BY
DRAWN BY:
Md. Moshiur Rahman
DESIGNED BY:
Structural Engineer
Md. Ekramul Hoque
TEAM LEADER
Dr. K. A. Zafor
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
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.



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 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.



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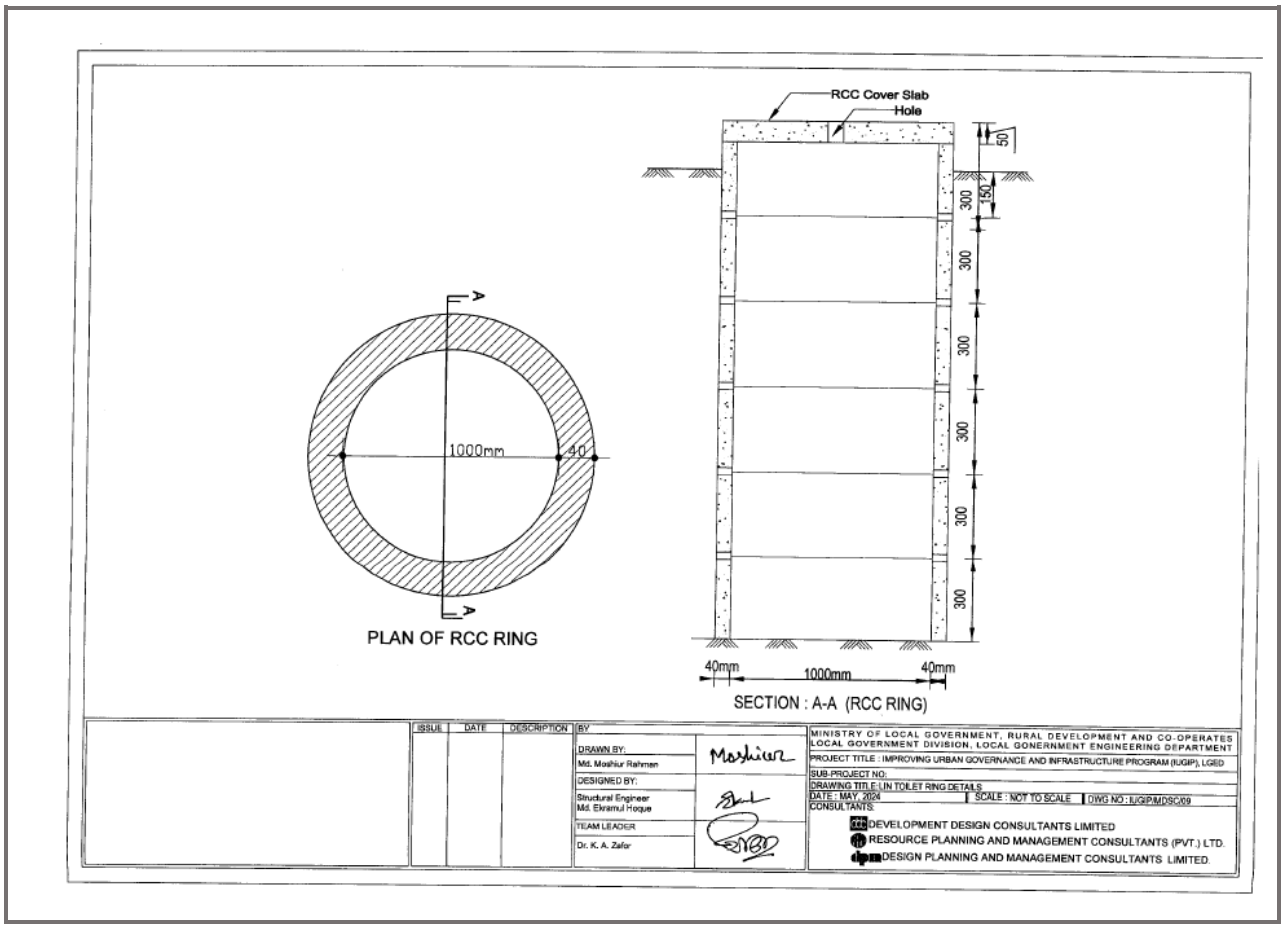
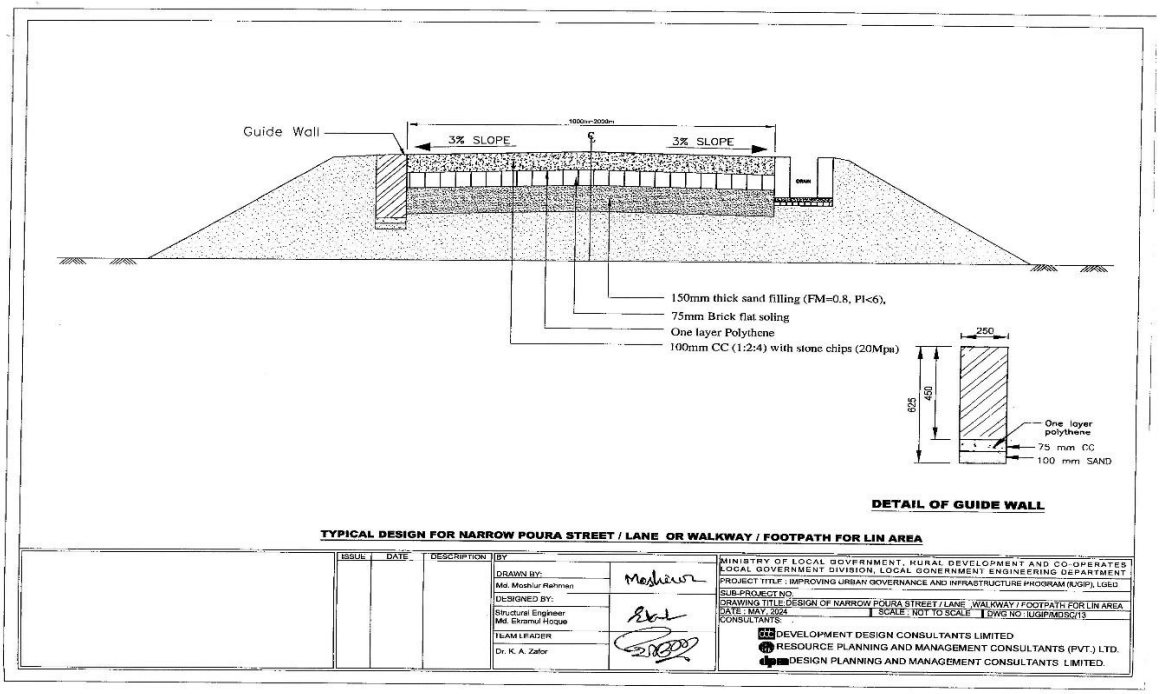
DRAWN BY: Md. Moshiur Rahman
DESIGNED BY: Structural Engineer Md. Ekramul Hoque
TEAM LEADER: Dr. K. A. Zafor

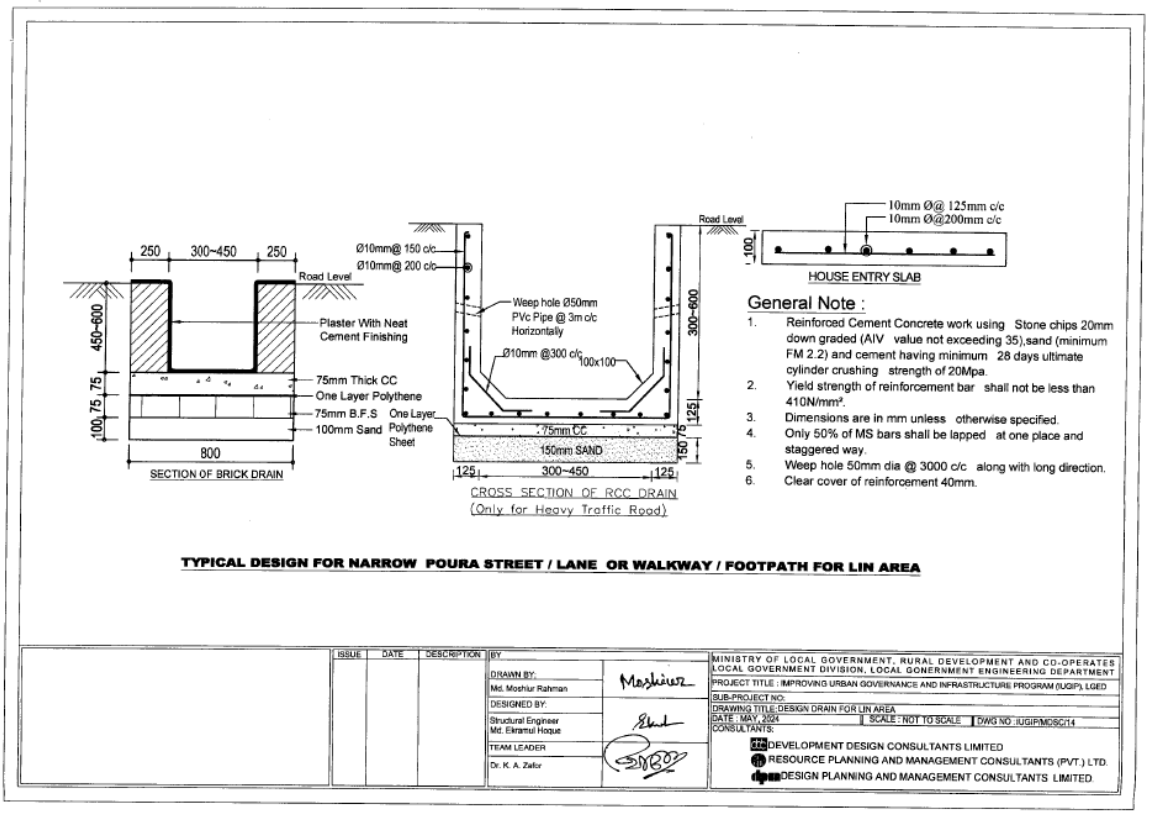
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATES
LOCAL GOVERNMENT DIVISION, LOCAL GONERNMENT ENGINEERING DEPARTMENT
PROJECT TITLE : IMPROVING URBAN GOVERNANCE AND INFRASTRUCTURE PROGRAM (IUGIP), LGED
SUB-PROJECT NO:
DRAWING TITLE: TYPICAL LAYOUT PLAN OF LIN TOILET
DATE : MAY, 2024 | SCALE : 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.



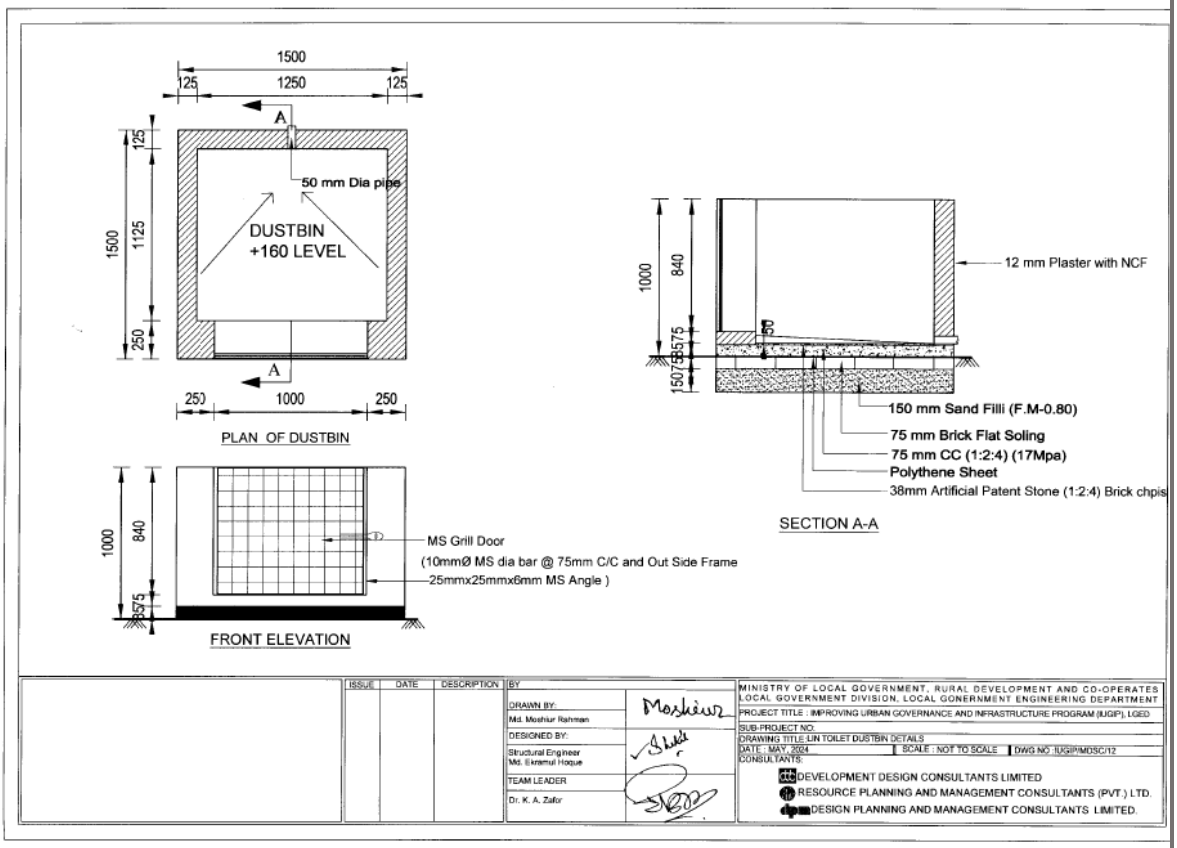
Typical Design of Footpath



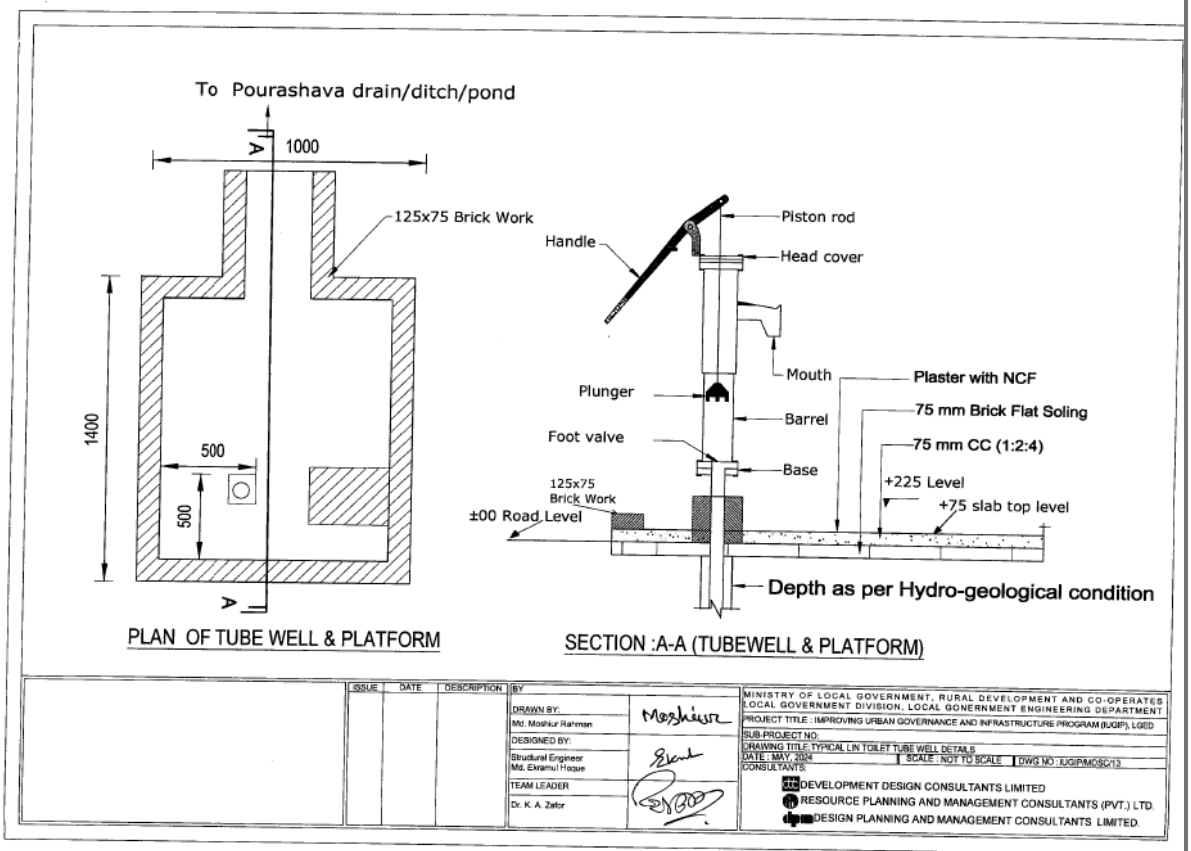
Typical Design of Footpath



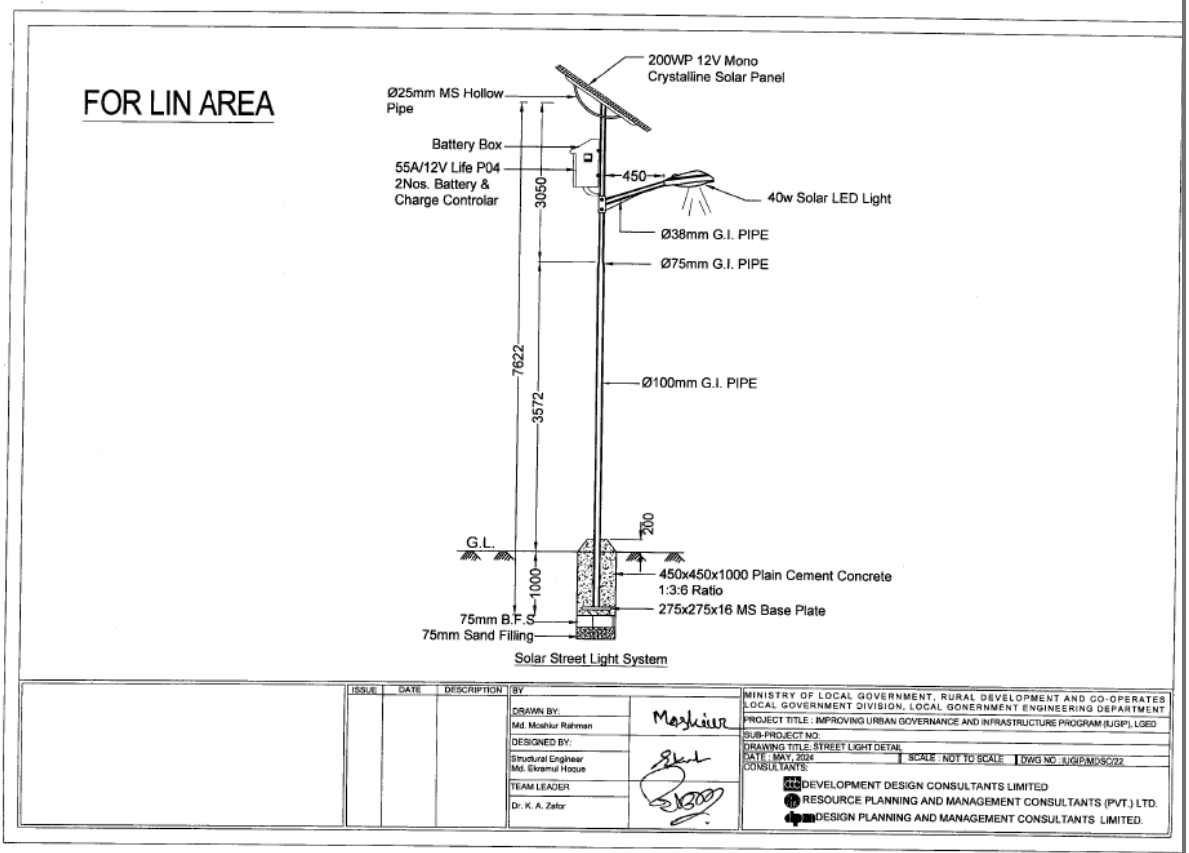
Typical Design of Dustbin



Typical Design of Tube Well



Typical Design of Street Light



Appendix 2: Budget for Implementation of EMP

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.

Table-1: 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, One set of maintenance equipment of Tube well	10,000.00
5	Tree Plantation on the slope of road/footpath, 100 nos. of trees @ 495 TK/per tree (except Sweeper LIN).	49,500.00
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
	Total	**2,14,500.00**
Note:		
-Water sample will be analyzed after installation of proposed Tube well by LINICS and it is included in engineering estimate/cost estimate. -Water sample will be analyzed during Operation period by Pourashava PRAP budget (Arsenic, Iron, Manganese and Chloride)		
During operation period- training for maintenance of Tube well, Toilet and Street light N.B. After plantation of trees and it is maintained by LIN dwellers		Pourashava PRAP budget

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

Appendix 3: Photographs & Attendance Sheets of Public Consultation

Summary of the Outcomes of the Public Consultation Meetings: Four public consultation meetings were held at all the LINs of Kalkini Pourashava from October 17 to 19, 2023. A total of 80 participants attended the meetings, where 40 (50%) were female, and the remaining 40 (50%) were male. LINIC members, teachers, counselors, farmers, female workers, housewives, and small business holders were present in the meetings. The safeguarding team of PRS-UGIIP visited all four LINs under the respective Pourashava. Consultants described environmental and social issues in the context of development aspects and potential impacts of the infrastructure development work of the LINs. The meetings were held through presiding by the Pourashava representatives (Executive Engineer or Assistant Engineer or Sub-Assistant Engineer).

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. So, they urged the installation of more tube wells in the LINs.

Water logging was an additional problem in the LINs. 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 LIN. Required footpaths would ease their safe movement. They asked for the construction of necessary footpaths in their LIN. There is inadequate dustbin in or around the LINs; LIN dwellers cannot properly dump their waste, especially kitchen waste. It creates bad odor and un-hygienic conditions in and around the LINs. 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 LIN dwellers urged for street lighting systems in and around the LINs. The people demanded regular cleanliness of drains and the spreading of medicine for killing mosquitoes. Presently, a few LIN dwellers use hanging and pit latrines, threatening public health and un-hygienic. They insisted on a community sanitary latrine to overcome it.

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.

As per discussion and feedback from the Pourashava staff and 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 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 LIN.
- The project will provide workers with necessary safety measures and facilities during construction.
- The LIN 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.

Attendance of Participants in the Meetings and photographs are given below:

কালকিনি পৌরসভা

দ্বিতীয় নগর পরিচালন ও অবকাঠামো উন্নতিকরণ (সেক্টর) প্রকল্প (UGIIP-II) এর আওতায়
দারিদ্র হ্রাসকরণ ও বস্তি উন্নয়ন কার্যক্রম

বস্তি উন্নয়ন কমিটি (SIC) সভার উপস্থিতির স্বাক্ষর

স্থান:- পালপাড়া

অদ্য ১৯.১০.২০২২ খ্রি: তারিখে পালপাড়া বস্তিতে এক সভা অনুষ্ঠিত হয়। উক্ত সভায় উপস্থিতির স্বাক্ষর নিম্নরূপ :

সময় : সকাল ১০:০০ টা

ক্রমিক নং	অংশগ্রহনকারীদের নাম	পদবী	স্বাক্ষর
০১	জনাব আ.ন.ম গিয়াস উদ্দিন খান	নির্বাহী প্রকৌশলী	
০২	জনাব রাকিব হোসেন	সহকারী প্রকৌশলী	
০৩	জনাব লিটন হোসেন	উপ-সহকারী প্রকৌশলী	
০৪	জনাব হোসাইন শেখ	উপ-সহকারী প্রকৌশলী	১৯.১০.২২
০৫	মো: মেসবাহুল হক	কাউন্সিলর	
০৬	বিলকিছ বেগম	সংরক্ষিত মহিলা কাউন্সিলর	
০৭	মলিনা পাল	সভাপতি	
০৮	রিক্তা পাল	সাধারন সদস্য	
০৯	বিবেক পাল	সদস্য সচিব	
১০	মীরা পাল	সদস্য	
১১	পুষ্প পাল	সদস্য	
১২	অষ্টমী পাল	সদস্য	
১৩	মনিকা রানী পাল	সদস্য	
১৪	শীলা রানী পাল	সদস্য	
১৫	জতিন পাল	সদস্য	
১৬	আলপনা রানী পাল	সদস্য	
১৭	পঞ্চ পাল	সদস্য	
১৮	সুকান্ত পাল	সদস্য	
১৯	নিখিল চন্দ্র পাল	সদস্য	
২০	মনি পাল	সদস্য	
২১	গৌতম পাল	সদস্য	

Photograph & Attendance Sheet of Consultation Meeting at Palpara Area LIN

কালকিনি পৌরসভা

দ্বিতীয় নগর পরিচালন ও অবকাঠামো উন্নতিকরণ (সেক্টর) প্রকল্প (UGIIP-II) এর আওতায়
দারিদ্র হ্রাসকরণ ও বস্তি উন্নয়ন কার্যক্রম

বস্তি উন্নয়ন কমিটি (SIC) সভার উপস্থিতির স্বাক্ষর

স্থান: চর-ঠেংগামারা (পশ্চিম)

অদ্য ১৭.১০.২০২২ খ্রি: তারিখে চর ঠেঙ্গামারা পশ্চিম বস্তিতে এক সভা অনুষ্ঠিত হয়। উক্ত সভায় উপস্থিতির স্বাক্ষর নিম্নরূপ :

সময়: সকাল ১০:০০ ঘটিকা

ক্রমিক নং	অংশগ্রহনকারীদের নাম	পদবী	স্বাক্ষর
০১	জনাব আ.ন.ম গিয়াস উদ্দিন খান	নির্বাহী প্রকৌশলী	
০২	জনাব রাকিব হোসেন	সহকারী প্রকৌশলী	
০৩	জনাব লিটন হোসেন	উপ-সহকারী প্রকৌশলী	
০৪	জনাব হোসাইন শেখ	উপ-সহকারী প্রকৌশলী	17.10.22
০৫	জনাব অলিল	কাউন্সিলর	
০৬	জনাব রাশিদা বেগম	সংরক্ষিত মহিলা কাউন্সিলর	
০৭	জনাব সেলিনা	সভাপতি	সেলিনা
০৮	জনাব আকলিমা	সাধারন সদস্য	আকলিমা
০৯	জনাব মো: শাহজাহান	সদস্য সচিব	শাহজাহান
১০	জনাব রীনা বেগম	সদস্য	রীনা
১১	জনাব আলো বেগম	সদস্য	আলো
১২	জনাব হাওয়া বেগম	সদস্য	হাওয়া
১৩	জনাব পাখি	সদস্য	পাখি
১৪	জনাব মো: সেলিম সরদার	সদস্য	সেলিম
১৫	জনাব মো: শামীম	সদস্য	শামীম
১৬	আম্বেলা বেগম	সদস্য	আম্বেলা
১৭	মাহিনুর	সদস্য	মাহিনুর
১৮	রোকেয়া	সদস্য	রোকেয়া

Photograph & Attendance Sheet of Consultation Meeting at Cor Thengamara Poschim Area LIN

কালকিনি পৌরসভা

দ্বিতীয় নগর পরিচালন ও অবকাঠামো উন্নতিকরণ (সেক্টর) প্রকল্প (UGIIP-II) এর আওতায়
দারিদ্র হ্রাসকরণ ও বস্তি উন্নয়ন কার্যক্রম

বস্তি উন্নয়ন কমিটি (SIC) সভার উপস্থিতির স্বাক্ষর

স্থান:- চরফতে বাহাদুর (গুচ্ছগ্রাম)

অদ্য ১৭.১০.২০২২ খ্রি: তারিখে চরফতে বাহাদুর (গুচ্ছগ্রাম) বস্তিতে এক সভা অনুষ্ঠিত হয়। উক্ত সভায়

উপস্থিতির স্বাক্ষর নিম্নরূপ :

সময়: দুপুর ১২:০০ ঘটিকা

ক্রমিক নং	অংশগ্রহনকারীদের নাম	পদবী	স্বাক্ষর
০১	জনাব আ.ন.ম গিয়াস উদ্দিন খান	নির্বাহী প্রকৌশলী	
০২	জনাব রাকিব হোসেন	সহকারী প্রকৌশলী	
০৩	জনাব লিটন হোসেন	উপ-সহকারী প্রকৌশলী	
০৪	জনাব হোসাইন শেখ	উপ-সহকারী প্রকৌশলী	১৭.১০.২২
০৫	আনোয়ার হোসেন	কাউন্সিলর	
০৬	রাশিদা বেগম	সংরক্ষিত মহিলা কাউন্সিলর	
০৭	নূপুর	সভাপতি	নূপুর
০৮	মাহমুদা	সাধারন সদস্য	মাহমুদা
০৯	নারায়ন	সদস্য সচিব	নারায়ন
১০	রেহেনা	সদস্য	রেহেনা
১১	রহিমন আক্তার	সদস্য	রহিমন
১২	রিক্তা	সদস্য	রিক্তা
১৩	সবিতা	সদস্য	সবিতা
১৪	আ: জলিল	সদস্য	
১৫	সাগর মিয়া	সদস্য	সাগর
১৬	লিটন হাওলাদার	সদস্য	লিটন
১৭	বিপ্লব	সদস্য	বিপ্লব
১৮	হাওয়া বেগম	সদস্য	হাওয়া
১৯	তানিয়া	সদস্য	তানিয়া
২০	রাজিয়া বেগম	সদস্য	রাজিয়া

Photograph & Attendance Sheet of Consultation Meeting at Cor Fate Bahadur Area LIN

কালকিনি পৌরসভা

দ্বিতীয় নগর পরিচালন ও অবকাঠামো উন্নতিকরণ (সেক্টর) প্রকল্প (UGIIP-II) এর আওতায়
দারিদ্র হ্রাসকরণ ও বস্তি উন্নয়ন কার্যক্রম

বস্তি উন্নয়ন কমিটি (SIC) সভার উপস্থিতির স্বাক্ষর

স্থান: শিকারমঙ্গল (গুচ্ছগ্রাম)

অদ্য ১৮.১০.২০২২ খ্রি: তারিখে শিকারমঙ্গল (গুচ্ছগ্রাম) বস্তিতে এক সভা অনুষ্ঠিত হয়। উক্ত সভায় উপস্থিতির স্বাক্ষর নিম্নরূপ : সময়: বিকাল ৩:০০ ঘটিকা

ক্রমিক নং	অংশগ্রহনকারীদের নাম	পদবী	স্বাক্ষর
০১	জনাব আ.ন.ম গিয়াস উদ্দিন খান	নির্বাহী প্রকৌশলী	
০২	জনাব রাকিব হোসেন	সহকারী প্রকৌশলী	
০৩	জনাব লিটন হোসেন	উপ-সহকারী প্রকৌশলী	
০৪	জনাব হোসাইন শেখ	উপ-সহকারী প্রকৌশলী	18.10.22
০৫	আনোয়ার হোসেন	কাউন্সিলর, ওয়ার্ড নং-০৩	
০৬	রাশিদা বেগম	সংরক্ষিত মহিলা কাউন্সিলর ১,২,৩ নং ওয়ার্ড	
০৭	মোসা: নূরজাহান	সভাপতি	
০৮	রেশমা	সাধারন সদস্য	
০৯	হেলাল বেপারী	সদস্য সচিব	
১০	রূপা আক্তার	সদস্য	
১১	হেলেনা বেগম	সদস্য	
১২	ইয়াসমিন	সদস্য	
১৩	লিলি বেগম	সদস্য	
১৪	মাজেদা	সদস্য	
১৫	শাহীনা বেগম	সদস্য	
১৬	চুন্নু সরদার	সদস্য	
১৭	কামাল সরদার	সদস্য	
১৮	আ: খালেক	সদস্য	
১৯	রতন	সদস্য	
২০	ফরহাদ	সদস্য	
২১	আমিরোন নেছা	সদস্য	

Photograph & Attendance Sheet of Consultation Meeting at Poschim Sikarmongol Area LIN

Appendix 4: Waste Management Plan for LIN Development (for short time)

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 5: Site and Design Conditions to Meet ESMF environmental Criteria

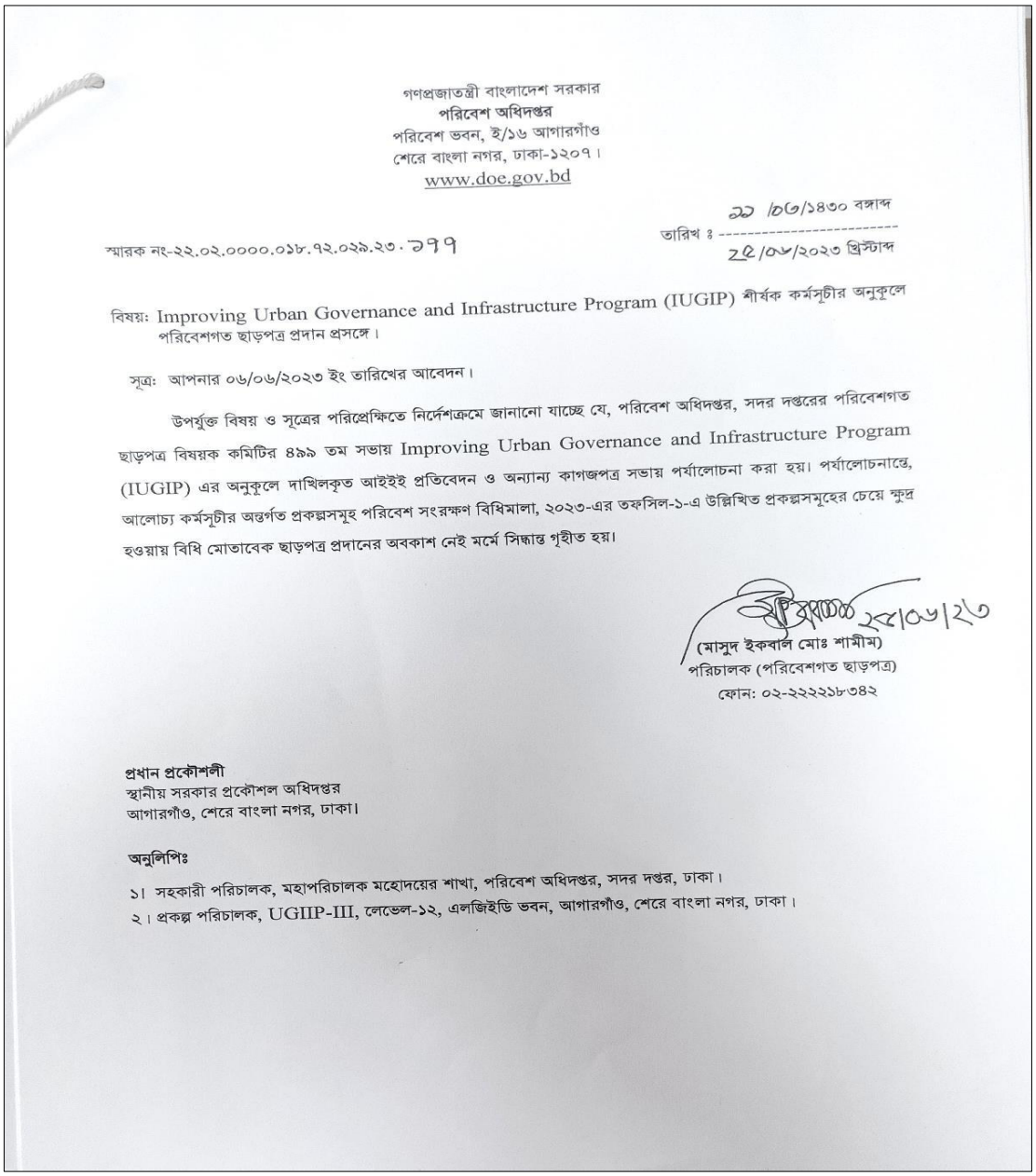
Environmental Guidelines for Subproject site selection, planning and design		Remarks
1. Overall selection guidelines - applicable to all subprojects		
i. Comply with all requirements of relevant national and local laws, rules, and guidelines, including obtaining environmental clearance certificate (ECC) 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 6: Health & Safety Manual for 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 earmuffs.)
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 7: DoE Approval Letter for IUGIP



গণপ্রজাতন্ত্রী বাংলাদেশ সরকার
পরিবেশ অধিদপ্তর
পরিবেশ ভবন, ই/১৬ আগারগাঁও
শেরে বাংলা নগর, ঢাকা-১২০৭।
www.doe.gov.bd

স্মারক নং-২২.০২.০০০০.০১৮.৭২.০২৯.২৩.৩৭৭

তারিখ ঃ ২২/০৬/১৪৩০ 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

(মাসুদ 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।