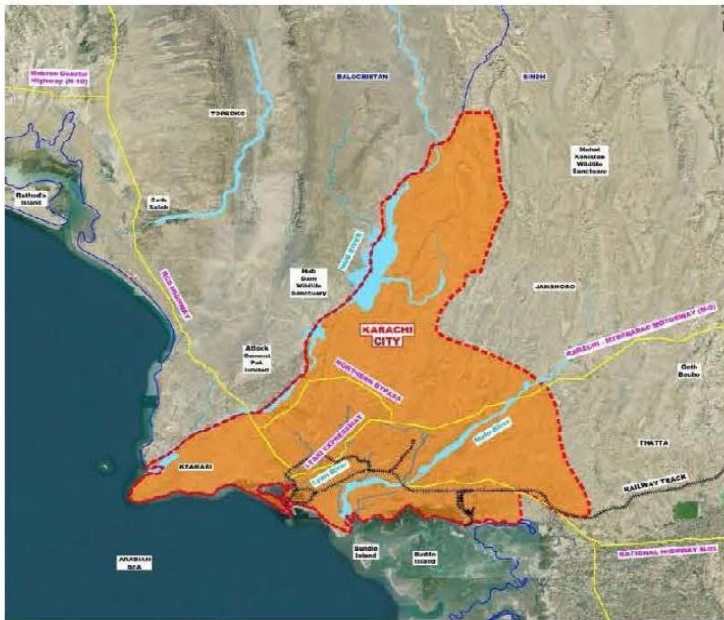




PROJECT IMPLEMENTATION UNIT (PIU), KWSSIP
KARACHI WATER & SEWERAGE BOARD (KWSB)



Environmental and Social Management Plan (ESMP)



KARACHI WATER & SEWERAGE SERVICES IMPROVEMENT PROJECT (KWSSIP)

**PACKAGE-3: REPAIR/REPLACEMENT OF DAMAGED SECTIONS
OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF**

KARACHI:

Lot-1 (District West)

Lot-2 (District South)

Lot-3 (District Kemari)

Lot-4 (Manhole Cover with ring slab)

November 2022



**REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS
IN DIFFERENT DISTRICT OF KARACHI (PACKAGE-3)**

LOT-1 (District West)

LOT-2 (District South)

LOT-3 (District Keamari)

LOT-4 (Manhole Cover with Ring Slab)

Karachi Water and Sewerage Services Improvement Project (KWSSIP)

ENVIRONMENTAL AND SOCIAL SCREENING REPORT

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LIST OF ABBREVIATIONS / ACRONYMS

AED	Anti-Encroachment Drive
AIDS	Acquired Immunodeficiency Syndrome
AIIB	Asian Infrastructure Investment Bank
ARAP	Abbreviated Resettlement Action Plan
BOQs	Bills of Quantities
CC	Construction Contractor
CHS	Community Health & Safety
CLICK	Competitive and Livable City of Karachi
DC	Design Consultants
DCP	Dichlorine Phosphate
E&S	Environmental and Social
E&SS	Environmental & Social Safeguards
ECOPs	Environmental Code of Practices
EHS	Environmental Health & Safety
EMF	Environmental Management Framework
ESC	Environmental and Social Cell
ESMMP	Environmental and Social Management and Monitoring Plan
ESMP	Environmental and Social Management Plans
GAP	Gender Action Plan
GBV	Gender Based Violence
GoS	Government of Sindh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HIV	Human Immunodeficiency Virus
HSE	Health Safety and Environment
KMC	Karachi Metropolitan Corporation
KWSB	Karachi Water and Sewerage Board
KWSSIP	Karachi Water and Sewerage Services Improvement Project
M&E	Monitoring and Evaluation
MS	Mild Steel
NOC	No-Objection Certificate
O&M	Operation and Maintenance
OCHS	Occupational and Community Health and Safety
OPs	Operational Policies
PCR	Physical Cultural Resource
PE	Polyethylene
PIU	Project Implementation Unit
PM	Project Manager
PPE	Personal Protective Equipment
PRCC	Pre-Stressed Reinforced Cement Concrete
RCC	Reinforced Cement Concrete

RPF	Resettlement Policy Framework
SC	Supervision Consultant
SDS	Social Development Specialist
SEPA	Sindh Environmental Protection Agency
SMF	Social Management Framework
STI	Sexually Transmitted Infections
WB	World Bank
XEN	Executive Engineer

1. INTRODUCTION

1.1 Overview

The First Karachi Water and Sewerage Services Improvement Project (KWSSIP-1), funded by World Bank (WB) and Asian Infrastructure Investment Bank (AIIB), is an initiative of Government of Sindh (GoS) through Karachi Water and Sewerage Board (KWSB) to improve water and sewerage services in Karachi.

In compliance with the local regulations and WB safeguard policies, this Screening Report has been prepared to assess potentially adverse environmental and social impacts of a KWSSIP-1 subproject comprising repair/replacement of damaged sections of water lines and sewers in different district (South, West and Keamari) of Karachi.

Karachi with an estimated population of 16.02 million, is Pakistan's largest city, economic financial hub and main seaport. Recent rain events have severely damaged the water and sewerage infrastructure of the city. It has been assessed that the present water supply network including both water trunk mains and the distribution mains have developed leakages while the sewerage system has also developed crown failure of its joints in the sewerage pipes at different locations in almost all districts of Karachi.

Competitive and Livable City of Karachi (CLICK) project. Many roads in the city have been affected as a result of the recent flooding during the monsoon season and require urgent patch-work repairs. Considering this situation, surveys have been initiated under the CLICK project for undertaking the repair and rehabilitation of the damaged road patches in Karachi city and so far 268 such road segments have been identified. Once the surveys have been completed, the CLICK project will carry out patch-work repairs of these road segments.

KWSSIP. In parallel to the above, the KWSSIP has been entrusted the task to identify and carry out the repair of water supply and sewerage lines that have been damaged by the above-mentioned flooding in the city during the monsoon season. For this purpose, KWSSIP has carried out comprehensive surveys to identify the locations of the damaged sections of water supply and sewerage networks and the extent of the damages to carry out their repairs/replacement. Most of these water supply and sewerage pipelines have been laid under the roads. After completion of the repair and/or replacement of water and sewerage network under KWSSIP, the road segments above these repaired water supply and sewerage pipelines will be repaired under the CLICK project.

1.2 Subproject Selection Criteria

The main criteria of the subproject selection as agreed between PIU-CLICK and PIU-KWSSIP are as follows:

- Only those water supply and sewer lines will be catered which are at present leaking or sunken down to be identified after joint survey by the Consultant, PIU and relevant operation and maintenance (O&M) staff of KWSB.

- Selection for repairing existing water supply and sewer portions will be based upon the identified location of the above survey as well as the information received from the CLICK where repair the roads will be carried out through necessary patchwork to make them motorable. The study team in coordination with KWSB will figure out the condition of the system and suggest necessary repair if required.

1.2.1 Purpose of the Document

The current report presents findings of environmental and social (E&S) screening for repair/replacement of damaged sections of water lines and sewers in different districts (West, South and Keamari) of Karachi, in accordance with the WB safeguard requirements specified in the Environmental Management Framework and Social Management Framework prepared for KWSSIP.

1.2.2 Institutional Responsibility

To implement KWSSIP, the Project Implementation Unit (PIU) has been established under KWSB. KWSSIP is headed by the Project Director (PD). The PIU has an Environmental and Social Cell that is responsible for the environmental and social management of the project and compliance with the regulatory and WB policy requirements. Organization chart of PIU is given in **Figure 1.1**.

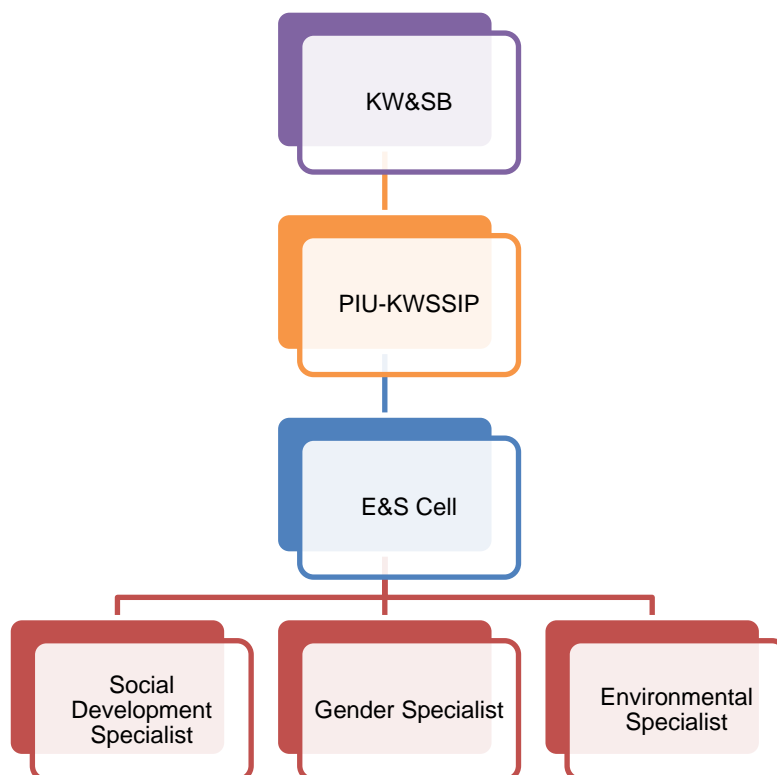


Figure 1. 1: PIU Organization

1.2.3 Subproject Location

The proposed subproject sites are located in various districts (South, West and Keamari) of Karachi. The location plan is described later in the document (see **Section 3**).

1.2.4 Objectives of Environmental & Social Screening

Following are the objectives of E&S Screening:

- Conduct a detailed environmental and social screening including Anti Encroachment Drive (AED) screening of all sites of the subproject, and prepare respective instruments.
- Prepare Environmental and Social Management Plans (ESMP) for the subproject and their budgets in accordance with the Bank's Operational Policy 4.01 (OP-4.01), OP-4.12 and other applicable safeguard policies and the Environmental Management Framework (EMF) and Social Management Framework (SMF) prepared for KWSSIP-1.
- Prepare the Abbreviated Resettlement Action Plans (ARAPs)/Resettlement Action Plans (RAPs), if required, in the light of the RPF (Resettlement Policy Framework) embedded in the Bank's approved Social Management Framework for KWSSIP-1.

1.2.5 Environmental Management Framework and Social Management Framework

An Environmental Management Framework (EMF) was prepared for KWSSIP-1 in 2019 with the purpose to establish principles, rules, guidelines and procedures to ensure compliance of the Project with the environmental safeguard requirements of the national laws and World Bank's safeguard policies. The EMF sets out the policies, strategies, procedures and institutional requirements to screen the project activities, and also identifies the environmental documents required for these activities and the approval and clearance procedures to be followed.

Similarly, a Social Management Framework (SMF) including a Resettlement Policy Framework (RPF) was prepared for the KWSSIP-1 in 2019 with the aim to assess potential adverse social impacts of the envisaged subprojects to be financed under the project and ways to avoid, minimize or mitigate them through the establishment of clear procedures and methodologies for planning, screening, review, approval and implementation of subprojects. SMF policy principles include transparency, inclusion, participation, social accountability and social safeguards that will be mainstreamed by adopting appropriate processes for social impact assessment and mitigation.

2. REGULATORY REVIEW

2.1 Overview

Three sets of laws, policies and strategies i.e., national, provincial, and World Bank Operational Policies (OPs) are applicable for the project. **Table 2.1** presents a list of these laws, policies and strategies that are applicable to the sub-project titled “Repair/Replacement of Damaged Sections of Water Lines and Sewers in Different District of Karachi (Package-3)

Table 2.1: Applicable Laws, Policies, Standards and Strategies

Key National Laws, Regulations and Policies	1.	Pakistan Climate Change Act, 2016
	2.	Pakistan Penal Code 1860
	3.	Protection of Trees and Brushwood Act, 1949
	4.	Antiquities Act 1975
	5.	Pakistan Labor laws
	6.	Fatal Accidents Act 1855
Key Provincial Laws, Regulations and Policies	1.	Sindh Environmental Protection Agency (Environmental Assessment) Regulations, 2021
	2.	Factories Act, 1934 and The Sindh Factories (Second Amendment) Act, 2021
	3.	Karachi Strategic Development Plan, 2020
	4.	The Sindh Occupational Safety and Health Act, 2017
	5.	Sindh Sanitation Policy, 2017
	6.	Sindh Drinking Water Policy, 2017
	7.	The Sindh Prohibition of Employment of Children Act, 2017
	8.	Sindh Environmental Quality Standards, 2016
	9.	Sindh Minimum Wages Act, 2015 (Sindh Act No. VIII of 2016)
	10.	The Sindh Bonded Labor System (Abolition) Act, 2015
	11.	Sindh Workers Compensation Act, 2015
	12.	Sindh Environmental Protection Act (SEPA), 2014
	13.	The Sindh Industrial Relations Act, 2013
	14.	Sindh Local Governments Act (SLGA), 2013

	15.	The Protection Against Harassment of Women at the Workplace Act, 2010
	16.	Sindh Cultural Heritage (Preservation) Act 1994
	17.	Sindh Solid Waste Management Board Act 2014
	18.	The Sindh Transparency and Right to Information Act, 2016
	19.	Sindh Payment of Wages Act 2015
	20.	Sindh Minimum Wages Act, 2015
	21.	The Sindh Commission on the status of Women Act, 2015
	22.	The Sindh Differently Able Persons Act, 2017
	23.	Sindh Public Property Act, 2010
	24.	Sindh Plantation, Maintenance of Trees and Public Parks Ordinance, 2002
Applicable World Bank Policies/ Framework	1.	World Bank Operational Policies <i>Environmental Assessment (OP 4.01)</i> <i>Natural Habitat (OP 4.04)</i> <i>Physical Cultural Resources (OP 4.11)</i> <i>Involuntary Resettlement (OP 4.12)</i> <i>Gender Policy (OP 4.20)</i> <i>Access to Information (BP 17.50)</i>
	2.	Managing the Risks of Adverse Impacts on Communities from Temporary Project Induced Labor Influx
	3.	Environmental, Health & Safety Guidelines

3. DESCRIPTION OF SUBPROJECT

3.1 Components of Subproject

The proposed subproject comprises the repair/ rehabilitation of following components:



In the above-mentioned components following works will be executed;

- Repair of joints.
- Repair/replacement of pipes (sewer and water).
- Replacement of precast manhole covers with ring slabs (No major construction activity will be involved during replacement)

Major activities involve in the proposed subproject are described as under:

Demolition Works/ Dismantling

- The existing structures i.e. roads and pavements will be demolished/ dismantled. The demolished/ rejected debris will be broken to pieces not larger than 25mm (1 inch) to 75mm (3 Inches). All materials resulting from demolition i.e. old pipes and asphalt will be disposed of at designated sites. The soil will be backfilled and the excess spoil material will be temporarily stored in the nearby sites to be identified in consultation with relevant DMC and CLICK for the use by CLICK during the road patch-work.

Earthwork

- Earthwork will include site preparation, excavation of soil, disposal of excess excavated material, shoring and protection work, backfill, surface reinstatement etc.

Repair of Joints/Valves

- Damaged/leaked joints and valves of bulk water lines and distribution network will be repaired or replaced as needed.

Replacement of Pipes (Water & Sewerage)

- Damaged pipes (both water and sewerage) will be replaced with new pipes.

Comprehensive environment and social screening was carried out for all the priority sites. In view of urgency of works, those sites where some technical, environmental and social issues

were identified have been excluded from the priority sites. Based on the environmental and social screenings, 18 sites were selected for the subproject. The details of selected subproject sites (lot wise) are described in **Table 3.1**, **Table 3.2** and **Table 3.3**.

Table 3. 1: Description of Subproject Activities LOT-1 District West

Sr. No.	Road	Water Supply Bulk	Water Supply Distribution	Sewerage
1.	Manghopir Road from Banaras to New Nazimabad	Diameter =33" Material= MS, PRCC Depth =8' Repair = 30 ft	Diameter =16" Material =PRCC Depth =10' Repair = 200 ft Diameter =18" Material =MS Depth =8' Repair = 100 ft	Not applicable (N/A)
2.	Choudhry School to Post Office	Diameter =48" Material= PRCC Depth =8' Repair = Joint Leakages	Diameter =18", 10" Material =PRCC, DADEX Depth =8' Repair = 150 ft	N/A
3.	Qasba Colony Muhammad Pur School Amenity Plot (Qasba Police Station to Kati Pahari Road)	N/A	Diameter =8", 6" Material =MS, PE Depth =5' Repair = 180 ft	N/A
4.	Naya Nazimabad to Madinatul Hikmat Road	Diameter =66" Material= MS Depth =6' Repair = 500 ft Diameter =48" Material= PRCC Depth =6' Repair = 2750 ft	N/A	N/A
5.	Ittehad Town Road Zero Point to Khyber Chowk	N/A	Diameter =12" Material =PE Depth =8' Repair = 6000 ft, 10 Leakages	N/A

Table 3. 2: Description of Subproject Activities LOT-2 District South

Sr. No.	Road	Water Supply Bulk	Water Supply Distribution	Sewerage
1.	Brounten Road	N/A	Diameter =6" Material =AC Depth =5'-6" Repair = 200 ft	Diameter =24" Material= RCC Depth =10' Repair = 200 ft
2.	Mclever Road	N/A	Diameter =6" Material =AC Depth =4'-6" Repair = 800 ft	Diameter =12" Material= RCC Depth =10' Repair = 600 ft
3.	Claremount Road	N/A	Diameter =4" Material =PE Depth =5'-6" Repair = 1000 ft	Diameter =24" Material= RCC Depth =15' Repair = 1000 ft
4.	Merry Weather Road	N/A	N/A	Diameter =12" Material= RCC Depth =8' Repair = 200 ft
5.	Feroz Nana Road	N/A	Diameter = 6" Material =AC Depth =5' Repair = 450 ft	N/A
6.	Mc-Neil Road	N/A	Diameter = 6" Material =AC Depth =5'-6" Repair = 610 ft	N/A
7.	Muhammad Bin Qasim Road	N/A	Diameter =4" Material =PE Depth =6'-6" Repair = 200 ft	N/A
8.	Outram Road	N/A	Diameter =8" Material =PE Depth =7' Repair = 300 ft	Diameter =24" Material= RCC Depth =8'-6" Repair = 250 ft

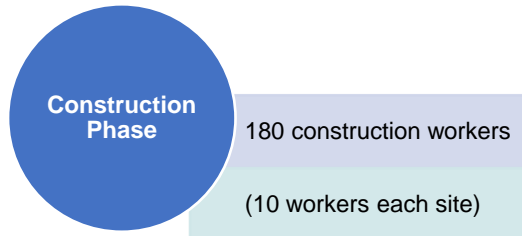
Sr. No.	Road	Water Supply Bulk	Water Supply Distribution	Sewerage
9.	Old Queen Road	N/A	N/A	Diameter =15" Material= RCC Depth =6'-6" Repair = 450 ft
10.	Teacher Road	N/A	Diameter =8" Material =PE Depth =4' Repair = 1 Joint Leakages	N/A
11.	Lee Market Road	N/A	Diameter =8", 6" Material =PE Depth =6' Repair = Joint Leakages	N/A
12.	Siddique Wahab Road	N/A	Diameter =18" Material =CI Depth =6'-6" Repair = 1 Chamber+ Valve	Diameter =24" Material= RCC Depth =8' Repair = 650 ft

Table 3. 3: Description of Subproject Activities LOT-3 District Keamari

Sr. No.	Road	Water Supply Bulk	Water Supply Distribution	Sewerage
1.	9-C Road Baldia (Football Ground)	Diameter =33" Material= PRCC Depth =8' Repair = Joint Leakages	Diameter =10" Material =MS Depth =8' Repair = 150 ft	N/A

3.1.1 Workforce Requirement

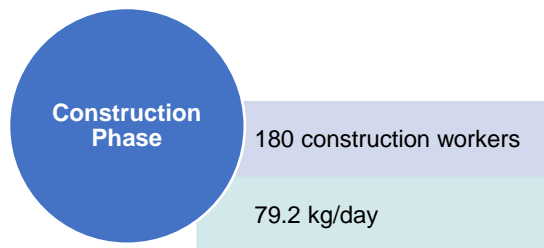
Manpower requirement during rehabilitation and construction is given as under:



No manpower will be required during operation phase. Operation of these sites will be carried out by KWSB as routine works.

3.1.2 Solid Waste Generation

Solid waste generation during construction by contractor’s labor is given as under;

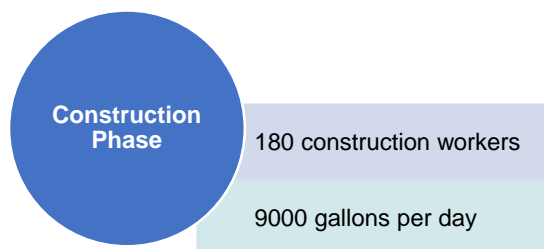


Waste Generation Rate = 0.44kg/capita/day
Ref: Pakistan – Waste Management Report, 2020

The construction waste mostly includes road debris and waste pipes. The quantity of construction debris will be different for each site, depending on the existing conditions of the road as well as the pipelines. Further, most of excavated material will be backfilled. Around 3,350 ft of sewers (various diameters) will be replaced and around 10,340 ft of water supply pipes (various diameters) will be repaired.

3.1.1 Water Requirement

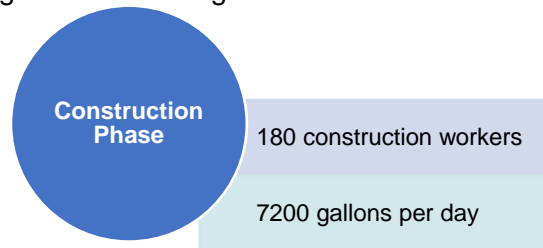
The domestic water requirement by contractors’ labor for the proposed project activities is summarized hereunder:



The given quantity refers to domestic water requirements. The water required for construction activities will be arranged by the contractor. During construction, water will be used for making mortar for jointing of sewer lines and will be of negligible quantity.

3.1.2 Wastewater Generation

The domestic wastewater generation during construction activities is summarized hereunder:



For construction activities, water will be used for preparation of mortar and negligible quantity of wastewater will be generated.

3.1.3 Construction Camps

As stated earlier that the project activities are spread over in three districts of Karachi (South, West and Keamari), therefore a centralized construction camp will not be required. The proposed project activities will be carried out at multiple locations simultaneously. The contractor will set up temporary tent facilities for provision of clean drinking water and sanitation facilities for the minimum of 10 workers at each site.

4. STAKEHOLDER ENGAGEMENT

4.1 Stakeholders Consultation

The stakeholder engagement and consultations have been carried out for the proposed project by following the methodological steps, guidelines and procedures for environmental and social screening defined in the Environmental Management Framework (EMF) and Social Management Framework (SMF).

In order to meet the criteria of meaningful stakeholder consultation process, the consultation was started in November 2022. The consultations were conducted with various potential stakeholders to assess their views and recommendations.

The overall objective of the consultation was that stakeholders are kept informed about the project related activities and to identify any contextual issues by obtaining their views and inputs about any Project related issue. Henceforth, the feedback obtained and PIU responses to the issues raised, are directly included as part of the Project planning and decision-making process.

4.1.1 Identification of Stakeholders

All stakeholders have different types of stakes according to their occupations and involvements in various aspects of the Project. The study team contacted with all the stakeholders at different stages of the Project and shared their views and concerns with respect to implementation of the Project. Following categories of stakeholders were identified:

- Institutional Stakeholders;
- Local community;
- Commuters/ road users;
- Local business owners etc.

4.1.2 Objectives of the Public Consultation

The objectives of the public consultation are as follows;

- To share full information with the stakeholders about the Project;
- To obtain feedback/responses about the proposed project;
- To identify the urgency and severity of issues and problems in project; and
- To acquire responses about the needs, preferences/priorities of the stakeholders.

4.1.3 Information Disseminated

Following issues were discussed with the affected during the consultation meetings:

- Introduction of the project;

- Description of various project components;
- Information on perceived benefits from the proposed project;
- Information regarding Grievance Redress Mechanism (GRM) and lodging of complaints during construction activities; and
- Needs, priorities and reactions of the affected people regarding the proposed project.

4.1.4 Schedule of Consultations

Public consultation is an on-going process and the consultation meetings will continue in the construction phase as well. Public consultations were conducted in all the project districts in clusters as the project activities are spread over in various parts of the city. As of now, nine (09) public consultation meetings and five (05) departmental meetings and multiple individual consultations were conducted with the identified stakeholders. Schedule of consultation meetings is given below in **Table 4.1**.

Table 4. 1: Schedules of Consultation Meetings

Sr. No.	Location	Date / Time	Venue	No of Participants
1	Sarai Road Market, District South	10-11-2022 01:15 pm	Main Market	07
2	Sarai Road Market, District South	10-11-2022 02:30 pm	Main Market	05 (Females)
3	Gari khatta Market, District South	11-11-2022 12:10 pm	Main Market	06
4	Gari khatta Market, District South	11-11-2022 12:40 pm	Main Market	09 (Females)
5	Sector -4, District West	11-11-2022 05:05 pm	Dera Gulzar Shah	35
6	Sector -4, District West	11-11-2022 06:00 pm	Local Resident House	18 (Females)
7	Baldia, District Keamari	12-11-2022 11:30 am	UC office, Play ground	30
8	Baldia, District Keamari	12-11-2022 12:30 pm	Local Resident House	22 (females)
9	Sadar Market, District South	12-11-2022 03:15 pm	Near Atrium Mall	11

Meetings with Institutional Stakeholders

Sr. No.	Name of Department	Date / Time	Venue	Officials
1	PIU-KWSSIP (Project Proponent)	11.11.2022 01:00 pm	PIU-KWSSIP	<ul style="list-style-type: none"> • Ms. Kiran (PIU) • Ms. Hameeda (PIU) • Mr. Abdul Manan (NESPAK) • Mr. M. Ali (NESPAK)
2	Sindh Environmental	31-10-2022 12:00 pm	SEPA	<ul style="list-style-type: none"> • Mr. Imran Sabir

Meetings with Institutional Stakeholders				
Sr. No.	Name of Department	Date / Time	Venue	Officials
	Protection Agency (SEPA)			(Deputy Director Technical) <ul style="list-style-type: none"> • Mr. Zeeshan (NESPAK) • Mr. Abdul-Manan (NESPAK) • Mr. M Anns Ali (NESPAK)
3	Sui Southern Gas Company (SSGC)	31-10-2022 04:30 pm	Sui Southern Gas Company Head Office Karachi	<ul style="list-style-type: none"> • Mr. Adnan (Senior GM Distribution SSGC) • Mr. Zeeshan (NESPAK) • Mr. Abdul-Manan (NESPAK) • Mr. M Anns Ali (NESPAK)
4	K. Electric	01.11.2022 02:30 pm	K. Electric Office	<ul style="list-style-type: none"> • Mr. Sarmad (Public Affairs Officer) • Mr. Zeeshan (NESPAK) • Mr. Abdul-Manan (NESPAK) • Mr. M Anns Ali (NESPAK)
5	Commissioner's Office	03.11.2022 11:30 am	ADC Office	<ul style="list-style-type: none"> • Ms. Sara (Assistant Commissioner) • Mr. Zeeshan (NESPAK) • Ms. Adeera (Nespak)

The photolog of consultations and attendance of the proposed project sites is attached as **Annex-I**.

4.2 Findings of Consultation Meetings

The findings of public consultation meetings are summarized in **Table 4.2** and those with the government departments are summarized in **Table 4.3**.

Table 4. 2: Findings of Public Consultation Meetings

Sr. No.	Concerns	Responses
Sector -4, District West		
1.	<ul style="list-style-type: none"> • All stakeholders should be engaged in different phases of the proposed project 	The community and stakeholders are being engaged and informed about the various subprojects of KWSSIP.

Sr. No.	Concerns	Responses
2.	<ul style="list-style-type: none"> Old plastic pipes should be removed 	New pipes will be put in place as per given design.
3.	<ul style="list-style-type: none"> Almost half hour is required to get clear water in taps as sewage is being mixed with the potable water. 	Most of the sewage related issues will be resolved after the implementation of the various subprojects under KWSSIP.
4.	<ul style="list-style-type: none"> Roads are totally damaged in many areas of Karachi due to rainy season 	Roads patch-work is being done under CLICK project.
5.	<ul style="list-style-type: none"> Construction of the road should be completed in time without any delay. 	
6.	<ul style="list-style-type: none"> Manholes are open on roads which causes severe incidents / accidents of residents 	The project also involves provision of manhole covers in various areas.
Orangi Town 9, District Keamari		
1.	<ul style="list-style-type: none"> Due to unavailability of poor sewerage system, local residents face difficulties during rainy season 	Sewer related issues will be resolved after the implementation of the project.
2.	<ul style="list-style-type: none"> It should be ensured that both sewerage work and road work should be aligned throughout the project 	The sewer and water leakages will be resolved at first place and the road patch work will be done after that.
3.	<ul style="list-style-type: none"> When sewerage system improvement works started, roads are always not reinstated after construction period is over. 	The roads will be reinstated after completion of the project.
4.	<ul style="list-style-type: none"> Water supply for domestic use should be cleaned and unpolluted 	The water contamination is due to mixing of sewage with potable water which will be resolved after repairing the leakages
5.	<ul style="list-style-type: none"> Sewerage water should not contaminate the drinking water 	
Sarai Road Market, Orangi Town 9, District Keamari & Gari khatta Market (Women Consultation)		
1.	<ul style="list-style-type: none"> Women were unsatisfied with the water quality, they further reported to have the availability of water just two times a month 	Water related issues will be resolved after the implementation of various subprojects under KWSSIP.
2.	<ul style="list-style-type: none"> Most of the households have electric motors/boreholes for domestic use. Females take water from filtration plants for drinking purpose. 	
3.	<ul style="list-style-type: none"> Solid waste exists in most of the areas and no collection system is present. 	The solid waste collection is being done by Sindh Solid Waste Management Board under SWEEP project.
4.	<ul style="list-style-type: none"> No service providers are present to collect solid waste in the communities 	The solid waste collection is being done by Sindh Solid Waste Management Board under SWEEP project, additional areas will also be included in this.
Sector -4, District West (Women Consultation)		
1.	<ul style="list-style-type: none"> Awareness should be raised in the communities regarding water, sanitation and hygiene services 	Local representatives should conduct awareness programs to educate the community regarding water, sanitation and hygiene services.

Sr. No.	Concerns	Responses
2.	<ul style="list-style-type: none"> Family parks for women and children should be constructed in the communities 	These works are being carried out under CLICK project.
3.	<ul style="list-style-type: none"> Proper arrangements should be provided for the safe mobility of women in all communities 	Accessibility will be not blocked completely and alternate passages will be provided.
4.	<ul style="list-style-type: none"> Privacy Issues were also raised by local females during the construction of the proposed project due to the influx of labors. 	Contractor will bound the labors to work and stay in the designated areas.
Sadar Market, District South		
1.	<ul style="list-style-type: none"> Safety signs / banners should be displayed safe healthy systems in and around the project area 	Contractor will display safety signs / banners in and around the project area during execution of the project.
2.	<ul style="list-style-type: none"> Avoid dumping of construction material openly; Excavation during construction time, creates mobility issues for females on the roads 	Contractor will ensure good housekeeping practices to keep the active construction sites tidy and clean.
Sarai Road Market		
1.	<ul style="list-style-type: none"> Solid waste exists in most of the areas and no collection system is present. 	The solid waste collection is being done by Sindh Solid Waste Management Board, additional areas will also be included in this.
2.	<ul style="list-style-type: none"> No service providers are present to collect solid waste in the communities 	
3.	<ul style="list-style-type: none"> Project site should be fenced with corrugated iron sheets to minimize the level of noise and dust on the surrounding areas; 	The contractor will be responsible to minimize impacts on surrounding communities
4.	<ul style="list-style-type: none"> Safety signs / banners should be displayed safe healthy systems in and around the project area 	Contractor will display safety signs / banners in and around the project area during execution of the project.
Gari khatta Market		
1.	<ul style="list-style-type: none"> Traffic will be congested on the access road and main road during the construction phase of the proposed project 	Proper diversion route rather than access road will be provided to minimize the traffic problems of the people during the construction stage.
2.	<ul style="list-style-type: none"> Safety signs / banners should be displayed safe healthy systems in and around the project area 	Contractor will display safety signs / banners in and around the project area during execution of the project.
3.	<ul style="list-style-type: none"> Exposure of noise and dust pollution will cause disturbance and health & safety issues to local residents throughout the construction stage 	Health and safety issues will be addressed during construction phase.
4.	<ul style="list-style-type: none"> Increase in traffic and safety hazards will create problems to local population and surrounding communities. 	A detailed health and safety plan has been developed to mitigate the construction and operation risks of the proposed project on the local residents and surrounding communities.

Table 4. 3: Findings of Meetings with Government Departments

Sr. No.	Department	Venue	Points of Discussion
1	SEPA	SEPA	<ul style="list-style-type: none"> • Discussion on the required instruments to be prepared for No Objection Certificate (NOC) • SEPA demanded the description and cost of the projects to identify the instrument to be prepared for the project to get no objection certificate from SEPA • A detailed meeting with SEPA official regarding NOC requirements for Emergency works was conducted on 14.11.2022 and a detailed presentation was delivered regarding Emergency Works Projects. It was decided in the meeting that since the works will pose minimum environmental impacts so there will not be any need of submission of any environmental document (EIA, IEE or Checklist) to SEPA. SEPA will officially inform PIU in response to their request letter.
2	K- Electric	K-Electric	<ul style="list-style-type: none"> • Proposed activities were briefed to K-Electric officials and the project alignments were discussed. • K-Electric sensitive spots were identified • Methods were discussed to protect the existing K-Electric facilities • K-Electric officials informed that if any of their facilities need to be shifted or relocated, a cost estimate will be prepared and PIU-KWSSIP will be charged for this.
3	SSGC	Sui Southern Gas Company Head Office Karachi	<ul style="list-style-type: none"> • Proposed activities were briefed to SSGC officials and the project alignments were discussed. • SSGC committed to nominate focal persons from different divisions at their project sites who will verify the presence of SSGC installations and will supervise the contractor to protect them and charge against the job accordingly. The timelines will depend on the execution of the project
4	Commissioner Office	Commissioner Office	<ul style="list-style-type: none"> • Project details were shared with the office of Assistant Commissioner (AC), Head Quarter and were requested to provide no objection certificates (NOC) in the selected sub project sites.

5. SCREENING OF SUBPROJECT

5.1 Environmental and Social Screening

Environmental and Social Screening of the proposed subproject was carried out to categorize it based on perceived environmental and social impacts. The proposed subproject activities are minor in nature and their associated impacts are temporary, reversible and localized in nature.

The proposed project under KWSSIP-1 has a prior requirement of screening which is based on three categories; viz., nature of the project, size of the project and location of the project. Based on this assessment, potentially significant environmental and social issues are identified at an early stage for detailed environmental and social impacts assessment.

5.1.1 Methodology of Environment and Social Screening

Following methodology was adopted for environmental and social screening:

- Review of literature, policies and project related documents;
- Public consultations;
- Site visits; and
- Assessment of potential environmental and social impacts.

A. Environment and Social Issues

i. Environmental Issues

The proposed project will have limited, site-specific impacts reversible in nature, mostly confined to the construction phase only. Excavations will be done for repair/ rehabilitation works. Due to excavation work, it is anticipated that health and safety of contractor's staff (construction workers) as well as of local community would be a concern. During construction, there would also be a slight increase in air pollution due to excavation. The proposed works will result in three streams of solid waste: sand and gravel, road debris, and damaged pipes. It is expected that most of the excavated sand and gravel could be used for back filling and remaining excavated material would be disposed of at disposal site. The road debris, depending on the quantity, will be temporarily stored at a site identified by the relevant district administration, to be reused during road construction and rehabilitation. The damaged pipes will be disposed in the Jam Chakro dumping site.

The proposed locations are mostly at the main roads, which are the property of state. The construction activities may cause traffic disruption on the main roads as traffic volume on the roads varies from low to high during various hours of the day. However, the impact will be minor, for a short duration and limited in extent and hence the works will not create major traffic issues.

There are no protected areas or threatened or endangered endemic species in the project area. However, schools, mosques, shrines and basic medical facilities are present in

abundance, however these facilities will not face direct impacts due to construction activities of the project.

Presence of Eco-Sensitive Features/ Natural Habitats

No eco-sensitive features or natural habitats were identified in the project area.

Flooding

The project activities are not likely to create flooding in the project area. Furthermore, the proposed activities are expected to be completed before the next monsoon. In case of water supply lines, the supply will be temporarily closed before the repair works. For sewerage lines, the immediate manholes in the upstream and downstream of the damaged line will be closed and the sewage from preceding manhole will be pumped to the next manhole via a flexible pipe. This will avoid flooding during the construction period.

Disruption to Traffic and Visitors

The project activities are minor interventions which are routine matters of KWSB and will have minor traffic issues in congested areas. Further, sites which may have traffic and severe social issues are not selected under this project. The project activities will create minor disruption for traffic hence a traffic management plan will be required to ensure smooth flow of traffic. A Traffic Management Plan is given in **Figure 7.2**. However, the Construction Contractor will prepare the site-specific plan in liaison with the traffic police/relevant authorities.

Noise and Dust

Dust will be generated due to project activities and will require regular sprinkling of water. Noise levels in the immediate surroundings of the project area might increase during the construction stage, this can be avoided by using well maintained equipment coupled with muffling devices.

Health and Safety of Workers and Communities

The construction activities pose occupational and community health and safety (OCHS) risks. The OCHS issues are also associated with the operation of construction machinery and equipment, which may cause minor and severe injuries to workers and nearby communities as well as pedestrians. Accidental contact of workers with underground electrical cables during excavation will also be a major concern. It will be a long term and severe negative impact. The potential presence of poisonous H₂S gas in the existing sewer lines will also be of concern.

The community will also be exposed to accidental risks due to open trenches, electrical cables, construction machinery as well as dust and noise.

ii. Social Issues

Availability of Land

The proposed subproject does not involve any land acquisition. The proposed subproject involves repair/ rehabilitation of existing bulk water lines, water supply distribution network and sewerage lines on the main roads, which are the properties of the state.

Impact on Livelihood

No adverse impacts on the livelihood are envisaged due to project activities. However, a few locations have been identified where the local business owners may face temporary loss of business due to access restrictions during execution of the project. Therefore, these locations have been excluded from the current emergency works.

Positive impacts in terms of employment opportunities are anticipated as many skilled, semi-skilled and un-skilled personnel will get direct and indirect employment during construction phase.

Women Harassment

Women may face harassment issues during construction due to labor influx. The impact is minor and low adverse in nature since the number of workers involved in the project is very low and the project locations are widespread.

Anti-Encroachment Drive (AED)

In accordance with the SMF of KWSSIP-1, no project works can be undertaken in areas that have been impacted by the AED. In compliance with this requirement, an AED related screening of the subproject was conducted. As per AED screening, no AED has been performed in the subproject area. No-objection certificate (NOC) has been obtained from the concerned Deputy Commissioner (DC) offices for this purpose.

Accessibility

The local community and the commuters may face temporary access issues during the rehabilitation works.

Solid Waste

The following three types of solid waste is expected from the project construction/ rehabilitation activities:

- Soil and gravel
- Damaged pipelines to be replaced
- Fragments of road top layer

If the waste is not managed properly, it will create nuisance in the project area.

Impacts due to Existing Asbestos Cement Pipes

An additional, particularly acute health risk presented by this work derives from the fact that some parts of the existing water supply system include pipes of Asbestos Cement (AC), a material that can be carcinogenic if fibers are inhaled. There is therefore a significant health risk for workers and the public if these pipes become uncovered and damaged or cut accidentally, or deliberately to conduct the necessary pipeline refurbishment. This is in fact not such a major problem in this case, because:

- There is only a small length of AC pipes which will be replaced;
- These pipes are all in the old part of the city and their location is well known and marked on maps prepared by KWSB;
- The design of the project involves the replacement of these pipes with other material pipe and this can be done without removing or disturbing them, so all AC pipes will be left in situ.

B. Findings of Environmental Screening

A summary of findings of Environmental Screening of proposed project is given in **Table 5.1**. Individual screening checklists are attached as **Annex –II**.

Table 5.1: Findings of Environmental Screening

Screening Parameters	Bulk Water Lines		Water Supply Distribution Network		Sewerage System	
	Construction	Operation	Construction	Operation	Construction	Operation
Presence of Eco Sensitive Receptors	x	x	x	x	x	x
Clearance of Trees/ Vegetation	x	x	x	x	x	x
Water Pollution	x	x	x	x	x	x
Flooding	x	x	x	x	x	x
Soil Contamination	✓	x	✓	x	✓	✓
Noise & Dust	✓	x	✓	x	✓	x
Disruption to Traffic and Visitors	✓	x	✓	x	✓	x
Disturbance to Existing Infrastructure	✓	x	✓	x	✓	x
Health & Safety Issues	✓	x	✓	x	✓	✓
Solid Waste	✓	x	✓	x	✓	x

Legend:

- ✓ = Impact triggers due to project activities
 x = Impact does not trigger due to project activities

All the aspects marked as '✓' may get triggered during the execution of the project, however, they will have very low significance and can be easily mitigated by adopting the basic mitigation measures. The contamination of soil may occur during concrete work, minor noise for limited time period will be generated, smaller quantities of dust will be generated during excavation works for the trenches, minor disruption to the localized traffic as well as minor health and safety issues including minor injuries may take place.

C. Categorization Based on Environmental Screening

The impacts identified during the screening process are envisaged to be minor, low adverse, and reversible in nature. The quantum of work and the related activities will not create significant changes. Therefore, the project is categorized as Category C project as given in **Table 5.2**.

Table 5.2: Categorization Based on Environmental Screening

Project	Categorization	Further Studies Required
Repair/ Rehabilitation of leakages in water supply & sewerage system	C	None

D. Findings of Social Screening

A summary of findings of Social Screening of the project is given in **Table 5.3**.

Table 5.3: Initial Findings of Social Screening

Screening Parameters	Bulk Water Lines		Water Supply Distribution Network		Sewerage System	
	Construction	Operation	Construction	Construction	Operation	Operation
Land Acquisition	x	x	x	x	x	x
Loss of Shelter	x	x	x	x	x	x
Loss of Agriculture	x	x	x	x	x	x
Loss of crops, trees and fixed assets	x	x	x	x	x	x
Loss of Business/Livelihood (Temporary)	x	x	x	x	x	x
Loss of Business/Livelihood (Permanent)	x	x	x	x	x	x
Loss of Sources of Income	x	x	x	x	x	x
Dislocation of People	x	x	x	x	x	x
Disturbance to traffic	✓	x	✓	x	✓	x

Screening Parameters	Bulk Water Lines		Water Supply Distribution Network		Sewerage System	
	Construction	Operation	Construction	Construction	Operation	Operation
Indigenous Peoples	x	x	x	x	x	x
Anti-Encroachment Drive	x	x	x	x	x	x
Labour influx	✓	x	✓	x	✓	x
Gender issues	✓	x	✓	x	✓	x
Community Health and Safety	✓	x	✓	x	✓	x

Legend:

- ✓ = Impact triggers due to project activities
- x = Impact does not trigger due to project activities

E. Categorization Based on Social Screening

It is envisaged that the proposed project will pose minimal social impacts and no resettlement impacts. Therefore, the project is categorized as Category C project as given in **Table 5.4** based on the findings of social screening:

Table 5.4: Categorization Based on Social Screening

Project	Categorization	Further Studies Required
Repair/ Rehabilitation of leakages in water supply & sewerage system	C	None
Social/ Resettlement Screening Categorization:		
<i>Number of PAPs ≥ 200, Category A</i>		
<i>Number of PAPs < 200, Category B</i>		
<i>Number of PAPs = 0, Category C</i>		

6. ANTI-ENCROACHMENT DRIVE (AED) SCREENING

6.1. Anti-Encroachment Drive (AED)

Informal settlements and squatters are widespread in Karachi, including residential and commercial encroachers on vacant lands, sidewalks, public spaces etc. A major Anti-Encroachment Drive (AED) was initiated in Karachi in October 2018 on the order of the Supreme Court of Pakistan. The Court ordered to vacate public spaces (parks, footpaths, amenity plots, etc.) across the city from unauthorized uses and occupations. The order is currently under implementation by various civic and local agencies, including Karachi Municipal Corporation (KMC), who are required to report periodically to the Court on progress. The focus of the AED is on commercial activities encroaching public spaces. Thousands of businesses, street vendors and hawkers have been affected, primarily in the most commercial districts. Acknowledging the adverse impacts of AED on the poor and vulnerable groups, the Government of Sindh (GoS) and local agencies like KMC are making efforts to relocate some affected businesses.

6.1.1. Types of Structures and/or Non-structures affected by AED Activities

Types of structures removed or affected by AED activities are listed below:

- Illegal shops/cabins
- Sunshades
- Illegal walls and wall fixtures
- Extended portions (of shops, hotels, cabins, marriage halls)
- Marriage halls/fitness centers/buildings/illegal construction on green
- Belts and plots
- Chabootras (paved terrace, raised platform) and foot steps
- Thailay (pushcarts)/ patharay (selling on rug, or table counter)/counters, misc.

6.1.2. Zone of impact:

In general, for sewer and water network refurbishment and rehabilitation, the zone of impact is defined as the trench for the placement of the sewer or water supply pipe in the street and any additional area required for construction-related activities (construction camp, parking of machinery, stocking of materials, debris, backfill, area used by construction labor, or any other temporary use etc.); and, any areas impacted temporarily by the construction (e.g., due to reduced access). The World Bank policies (particularly Operational Policy 4.12 - OP 4.12) and the screening mechanism apply to the project zone of impact.

6.2. Project's Policy on AED

The KWSSIP policy on AED states that *potential subproject sites (including proposed construction sites and associated zones of impact) located within areas already impacted by the AED on or after October 27, 2018 will not be eligible for financing under the project.*

6.3. Project's Planning in view of AED

In accordance with this policy, the schemes under KWSSIP where AED activities have been carried out in recent times shall be removed from the project scope.

6.4. Screening of AED Affected Areas

Currently, no data is available with the concerned departments regarding AED. However, to address this issue, an AED Cell is established at Commissioner's office which is updating data of ongoing AED activities happening in Karachi, the focal persons of respective departments who are responsible for conducting AED have been trained and equipped with a data collection application, KOBOTOOLBOX through which they collect data of AED, which is uploaded on the GIS platform of AED cell.

A through screening process was conducted to acquire the desired information regarding AED. Commissioner's office was taken on board and a meeting was held with Additional Commissioner – II and Assistant Commissioner. The summary of meeting is given in **Table 6.1** below:

Table 6. 1: Summary of Meetings

Sr. No.	Venue	Date	Time	Participants			Points Discussed
				Name	Department	Designation	
01.	<u>Commissioner's Office</u>	15-10-22	12:00 pm	Mr. Jawad Muzaffar	Commissioner's Office	<u>Additional Commissioner - II</u>	<ul style="list-style-type: none"> • Discussion on previous practice for AED screening • Description of current subprojects/ activities to be undertaken by PIU-KWSSIP • Discussion on the quickest possible methods for AED verification • PIU explained the objectives of the current assignment and shared the list of project sites and timelines of the project.
				Miss Sara	Commissioner's Office	Assistant Commissioner	
				Miss Kiran Bano	KWSSIP	Environmental Expert	
				Mr. Ali Hamid	NESPAK	Team Leader/ E&SS	
				Mr. Syed Zeeshan Abbas	NESPAK	Environmental Engineer	
02.	<u>Commissioner's Office</u>	04-11-22	11:30 pm	Ms. Sara	Commissioner Office	AC Headquarter	<ul style="list-style-type: none"> • Additional subproject locations were shared with the AC for acquisition of No AED Certificate
				Mr. Syed Zeeshan Abbas	NESPAK	Environmental Engineer	
				Ms. Adeera Nasar	NESPAK	Social/ Gender Expert	





Meeting with Commissioner and Additional Commissioner – II

6.5. Date of AED-Related Screening

AED-related screening activities were conducted between 08.11.2022 to 14.11.2022.

6.6. Methodology Adopted for AED-Related Screening

The following methodology was adopted for AED-related screening:



The environmental and social experts of PIU-KWSSIP along with their consultants conducted field visits (05.10.2022 – 15-10.2022) to collect evidence of AED from visual observations and through public consultations. The data was collected through a mobile application 'KOBOTOOLBOX' and was updated in the GIS database of the Commissioner's office dealing with AED. Then the same team convened a meeting with Additional Commissioner – II and requested for issuance of no objection certificates after due verification of collected data from relevant District Municipal Corporations (DMCs) and/or Deputy Commissioners. DMCs verified the data and have issued no objection certificates attached as **Annex –III**.

6.7. Public Consultations

Informal public consultations were held at the subproject sites to ascertain the views and information from the locals including residents and business operators regarding AED-related activities in the project area. People were gathered during consultations and the following points were discussed:

- People were given a brief introduction to the proposed project activities;
- People were enquired about AED activities in their area after October 2018.
- It was briefed that the project has been designed by keeping in view minimum loss of business, hindrance in excess to business premises, and disturbance to local residents by adopting best planning and engineering practices
- Efficient construction management will be ensured throughout the project in order to minimize disturbance during construction.

Based on the information acquired through visual observations and public consultations, it is derived that no AED has been conducted in project sites since October 2018. The site photographs along with the subproject locations are attached as **Annex – IV**.

Table 6. 2: Findings on AED

Sr. No.	Representative	Observations	Concerns/ Apprehensions	Responses
1	Concerned Departments	No AED	--	--
2	KWSSIP	No AED	--	--
3	NESPAK	No AED	--	--
4	Community	No AED	<ul style="list-style-type: none"> • The roads are unpaved. • Mixing of sewage and potable water in lines. • Few sewer lines are old and punctured. • There are traffic issues due to stagnant water and damaged roads. 	<ul style="list-style-type: none"> • All the said issues shall be resolved after the execution of the current project. The road patchwork shall be done after the improvement of underground water supply and sewerage issues.

6.8. Conclusion

The following are the conclusions of AED-related screening:

- No AED has been done in the selected project sites;
- No Objection Certificates (NOCs) have been issued by the Commissioner's office

7. ENVIRONMENTAL AND SOCIAL MITIGATION AND MONITORING PLAN

To ensure environmental and social compliance with regulations and guidelines, a brief Environmental and Social Mitigation and Monitoring Plan has been prepared.

The objective of the Environmental and Social Mitigation and Monitoring Plan (ESMMP) is to ensure implementation of the proposed mitigation measures during design, construction and operational phases of the proposed Project. The ESMMP defines roles and responsibilities, reporting mechanism, training needs and schedules and budget to implement the ESMMP.

The current screening report will be the part of bidding documents and its implementation will be the legal binding on the construction contractor (CC).

7.1. Implementation of ESMMP

The institutional arrangement for the implementation of ESMMP for the subproject is presented in **Figure 7.1**. The PIU-KWSSIP will be responsible for the compliance of environmental and social safeguard requirements of the KWSSIP.

The project activities will be monitored and managed by the PIU-KWSSIP. The Environmental and Social Cell (ESC) staffed by qualified environmental, social and gender specialists have already been established under PIU-KWSSIP. The Environmental & Social Cell (ESC) will be the custodian of the ESMMP. ESC will submit progress reports for the implementation of the ESMMP to WB and Sindh Environmental Protection Agency (SEPA) as per environmental approval/ NOC conditions for the KWSSIP.

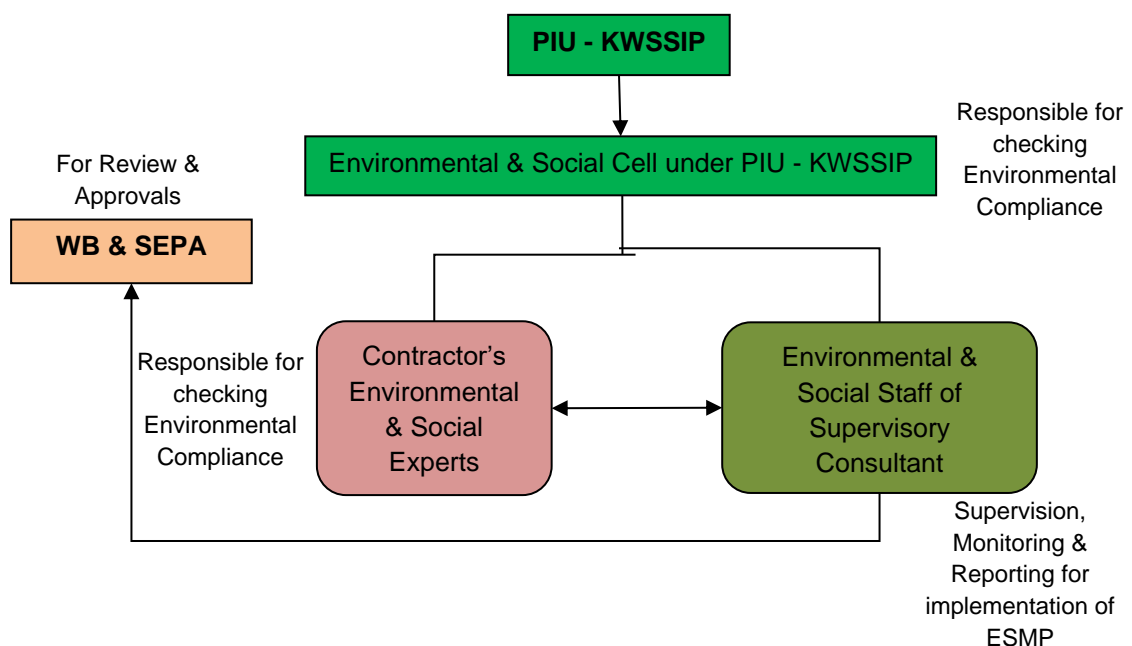


Figure 7. 1: Organizational Setup for Implementation of ESMMP

7.1.1. Roles and Responsibilities of the Functionaries involved in ESMMP Implementation

A. SEPA

As per Sindh Environmental Protection Act, 2014, SEPA is responsible for the approval of the Environmental Assessment reports.

B. PIU-KWSSIP and ESC

The Project Director of PIU-KWSSIP is in-charge for the financial and technical matters related to KWSSIP project. The PIU responsibilities for monitoring the ESMMP will consist of:

- Ensuring the overall E&S management of the project in compliance with the local as well as WB requirements. Ensuring that the measures given in this Screening Report are effectively implemented
- Ensuring that the required environmental, social and gender training are provided to the concerned PIU staff;
- To carrying out random visits to the construction sites to review the environmental and social performance of the Contractor;
- Review monitoring reports for the progress of environment and social management of the Project;
- Make sure that the Contractor is implementing the additional measures suggested by the Supervision Consultant (SC) in environmental and social monitoring reports;
- To assist Contractor for obtaining necessary approvals from the concerned departments;
- Maintaining interface with the other line departments/ stakeholders; and
- Reporting to the SEPA on status of ESMMP implementation.
- Make sure that all the contractual obligations related to the environmental and social compliance are met;
- Monitor the progress regarding implementation of environmental and social safeguards as provided in the ESMMP;
- Oversee the compliance of all the monitoring programs as given in ESMMP;
- Check randomly whether monitoring of the environmental aspects of the Project during construction and operational phases is being properly carried out;
- Document and disclose monitoring results and identify necessary corrective and preventive actions in the periodic monitoring reports, and make follow-up on these actions to ensure progress toward the desired outcomes;
- Make sure that the Contractor implements the additional measures suggested by the monitoring and evaluation (M&E) Contractor; and
- Report the status of ESMMP compliance to Project Director, PIU-KWSSIP.

C. Supervision Consultant (SC)

Roles and responsibilities of SC will be:

- To oversee the performance of the Contractor to make sure that the Contractor is complying with ESMMP;
- Ensuring that the day-to-day construction activities are carried out in an environmentally and socially sound and sustainable manner;
- Strong coordination with the Contractor and PIU-KWSSIP;
- Preparing E&S training materials and implementing programs;
- Ensure the implementation of the mitigation measures suggested in ESMMP;
- To supervise and monitor environmental and social activities being performed at site;
- To organize periodic environmental and social training programs and workshops for the consultant's and contractor's staff;
- Periodic reporting as mentioned in ESMMP; and
- Suggest any additional mitigation measures (if required).

D. Construction Contractor (CC)

The contractor will be primarily responsible for ensuring implementation of the mitigation measures proposed in the ESMMP, which will be part of the contract documents and its implementation will be a contractual binding for the contractors. The provision of the environmental and social mitigation cost will be made in the total cost of project. However, if the contractor fails to comply with the implementation of ESMMP and submission of the monthly compliance reports, deductions will be made from the payments to the Contractor claimed under the heads of environmental and social components.

Contractors will be bound to carry out the following activities:

- Implementation of the mitigation measures as detailed in ESMMP at construction site;
- Contractor will be bound through contract to take actions against all the special and general provisions of the contract document;
- Contractor will make sure the compliance of ESMMP requirements related with construction;
- Implementation of OCHS control measures including provision of proper Personal Protective Equipment (PPE) to the workers and train them for their proper use;
- Compliance with international best SOPs for COVID 19;
- To conduct the environmental and health and safety training to the workers/labour; and
- To assess the site-specific issues and implement mitigation measures accordingly
- Provide harassment free and safe secure environment for the labor and community specially community women and children.

The contractor will prepare a site specific ESMMP based on the current ESMMP and will get it approved from SC. This will ensure the implementation of the ESMMP based on the site conditions at the time of execution, by the contractor.

Table 7.1: Environmental and Social Mitigation and Monitoring Plan

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
A: Design/ Pre-Construction Phase								
1.	Engineering Design	▪ Earthquake	▪ Seismic provisions in all engineering and structural design will be ensure as per Seismic Building Code of Pakistan (2007). i.e., manholes, sewers bedding etc. will be designed with seismic provisions.	DC, PIU-KWSSIP	Design Parameters as defined by Seismic Building Code	Once (after completion of Detailed Design)	PIU	N/A
		▪ Incompatible layout plans	▪ All structural, layout and engineering design of the project are in strict accordance with the applicable national and international guidelines/ codes/ standards and engineering practices.	DC, PIU-KWSSIP	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
2.	Site Selection	▪ Resettlement issues of local people, disturbance to properties/ businesses	▪ Locations with no resettlement of the structures/ people/ businesses have been selected	DC, PIU-KWSSIP	Project site	Once (after completion of Detailed Design)	PIU	N/A
		▪ There will be no tree cutting during construction phase	▪ No mitigation measures will be required.	DC, PIU-KWSSIP	Project site	Once (after completion of Detailed Design)	PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		<ul style="list-style-type: none"> Vehicle and road accident 	<ul style="list-style-type: none"> Designing of traffic management plan. (See Figure 6.2 below) 	DC, PIU-KWSSIP	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
3.	Public and Cultural Properties	<ul style="list-style-type: none"> Disturbance to people visiting public properties i.e., mosque, schools, shrines, and graveyards etc. 	<ul style="list-style-type: none"> Disturbance/ interference with cultural site and public property has been avoided by incorporating technical design features and managing the work schedule. 	DC, PIU-KWSSIP	Project Site	Once (after completion of Detailed Design)	PIU	N/A
4.	Disturbance/ damage to existing infrastructure	<ul style="list-style-type: none"> Possible disturbance to the public and existing infrastructure 	<ul style="list-style-type: none"> Incorporate technical design features to minimize effect on public utilities. All public utilities likely to be affected by the proposed project need to be relocated well ahead of the commencement of construction work. (Since these are repair works, therefore, the chances of relocation of public utilities are negligible. But if in any case, such utilities are encountered, they will 	DC, PIU-KWSSIP	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
				DC, PIU-KWSSIP	Relocation of utilities	Once (after completion of Detailed Design)	PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			be managed in liaison with the concerned department.)					
B: Construction Phase								
1.	Site clearing	▪ Loss of vegetation may occur	▪ Ensure minimum disturbance to native flora during construction by remaining confined to the project area and taking due care in movement of machinery and storing of material.	CC, SC and PIU-KWSSIP	Visual Observation	Twice a week	CC, SC & PIU	Cost of all these mitigation measures will be included in the project estimate
		▪ Soil erosion	▪ Minimize the amount of clearing. Clear small areas for active work, one at a time.		Visual Observation	Twice a week		
			▪ Install temporary erosion control features when permanent ones will be delayed. Use erosion control measures such as hay bales, berms, straw, or fabric barriers.		Visual Observation	Twice a week		
2.	Establishment of construction camp/ tents	▪ Conflict due to use of private land for camp construction	▪ The centralized construction camp will not be required. However, tent facilities may be provided at open spaces away from residential areas to avoid conflicts with the community.	CC, SC and PIU-KWSSIP	Report of issue	Once (at the time of establishment of construction camps i.e., tents)	. CC, SC & PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		<ul style="list-style-type: none"> ▪ Social conflicts due to influx of external workforce 	<ul style="list-style-type: none"> ▪ The contractor will adopt environmental code of practices (ECOPs) as Annex – V ▪ Labor tents will be established away from residential population; these tents will be non-residential ▪ Preference will be given to the local people to work with contractor; ▪ Awareness will be created among the work force to ensure respect for local customs; ▪ Construction work should be completed within the stipulated time to move workers to next location; ▪ Labor force should be shuffled with the time; ▪ An effective GRM has been established for the project to resolve all issues related to the community. Thus, progress regarding resolving the issues should be monitored closely. ▪ Provide adequate personal hygiene 		Report of issue	Twice a week	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>facilities in good condition with adequate supply of clean water;</p> <ul style="list-style-type: none"> ▪ Make arrangements to treat the affected workers on time to control the movement of vectors disease; ▪ Strictly enforce the workers' code of conduct (sample attached as Annex- VI) to regulate behavior in the local communities; ▪ Prohibiting drugs, alcohol, weapons, and ammunition on the worksite among personnel; ▪ Appropriate fencing should be provided at the construction sites to ensure the security of all plant, equipment, machinery and materials, 					
		<ul style="list-style-type: none"> ▪ Health issues in workers due to contaminated drinking water. 	<ul style="list-style-type: none"> ▪ Contractor will ensure provision of safe drinking water to the workers. 		Visual observation	Twice a week	CC, SC & PIU	

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
3.	Excavation of Earth	<ul style="list-style-type: none"> ▪ Air quality may deteriorate 	<ul style="list-style-type: none"> ▪ Excavation should be confined as per approved engineering drawings. ▪ Water sprinkling must be done to suppress the dust. 	DC, Contractor	Design provisions	Once (after completion of Detailed Design)	PIU	N/A
4.	Transportation of construction material	<ul style="list-style-type: none"> ▪ Smoke and dust generation; ▪ Spillage of material; ▪ Air pollution ▪ Water pollution ▪ Noise pollution ▪ Occupational, Health and Safety issues 	<ul style="list-style-type: none"> ▪ Regular inspection, tuning and maintenance of transport vehicles; ▪ Material transport in closed vehicle or covered with canvas/ plastic sheets; ▪ Sprinkling of water on site and on routes near communities; ▪ Selection of up-to-date and well-tuned vehicles or equipment with reduced noise levels ensured by suitable in-built damping techniques or appropriate muffling devices; ▪ Avoiding movement of vehicles at night near communities. ▪ Use of sign board at construction site; ▪ Use of PPE; give awareness to the drivers; Training of construction workers. 	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	Cost of PPEs is already included in Table 13, Table 14 & Table 15

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
5.	Construction Works	<ul style="list-style-type: none"> ▪ Soil erosion and contamination ▪ Accident risks ▪ Loss of natural vegetation and associated fauna ▪ Damage to infrastructure ▪ Noise pollution ▪ Air pollution ▪ Land degradation; soil erosion; pooling of water and drainage problem ▪ Residual wastes; construction material waste 	<ul style="list-style-type: none"> ▪ Proper compaction to minimize wind and water erosion; ▪ Machinery and equipment will not be repaired and maintained at the site; ▪ Usage of PPEs; ▪ Provision of first aid kits and emergency vehicle; ▪ Trained drivers will be hired to operate machinery safely; ▪ Availability of trained operator to operate machinery; ▪ Restoration/ rehabilitation of damaged infrastructure with entire satisfaction of the affected persons ▪ Use of noise reduction devices; ▪ Regular inspection, maintenance and lubrication of the construction vehicle and equipment; ▪ Avoid night time activity. ▪ Water sprinkling particularly at work sites near the communities; ▪ Remove any left-over construction material/wastes from the construction sites; 	<ul style="list-style-type: none"> ▪ CC, SC and PIU-KWSSIP 	Visual observation	Twice a week	CC, SC & PIU	Cost of PPEs and first aid kits is already included in Table 13, Table 14 & Table 15

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<ul style="list-style-type: none"> ▪ The soil and gravel will be used for backfilling; ▪ The debris of damaged pipelines will be disposed of in designated dumping site; ▪ The fragments of road top layer could be stored and recycled for construction of the same roads under CLICK, depending upon their quality; ▪ The contractor will adopt environmental code of practices (ECOPs) as Annex - V 					
6.	Community Health & Safety (CHS)	<ul style="list-style-type: none"> ▪ Accident risks, particularly for local population living within/near the subproject especially women, children and elderly people; ▪ Deterioration of health due to dust. 	<ul style="list-style-type: none"> ▪ Preparation and implementation of CHS Management Plan ▪ Barricading work areas to avoid entry of any unauthorized person in the construction site ▪ Public awareness campaigns through displaying sign board at site and haulage routes; ▪ Interaction with community; ▪ Availability of first aid box for locals; ▪ Strict enforcement keeping non-working persons, particularly 	<ul style="list-style-type: none"> ▪ CC, SC, PIU-KWSSIP 	Visual observation & reporting of accident	Twice a week	CC, SC & PIU	Cost of first aid box is already included in Table 13, Table 14 & Table 15

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>children, away from work sites by cordoning off the sites with the barricade</p> <ul style="list-style-type: none"> ▪ Adequate signage to manage traffic at sites, haulage and access roads; ▪ Ensure water sprinkling. ▪ Maintain a complaint register on site and it must be communicated to the internal staff and the public. ▪ Close consultation with local communities to identify optimal solutions where needed ▪ Community grievances will be recorded and responded to on an urgent basis. ▪ No Hazardous and non-hazardous waste will be dumped outside any community. 					
7.	Handling of solid waste	Solid waste may be generated from the active construction sites and also from the tent facilities	<ul style="list-style-type: none"> ▪ Training of site personnel in waste management, ▪ Recording system for the amount of waste generated, recycled and disposed, 	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<ul style="list-style-type: none"> ▪ Proper storage and site practices to minimize the potential for damage or contamination of construction material, ▪ Contractor will safely remove the general refuse from the site. ▪ Damaged AC pipes should be left in situ without taking it out for disposal. The labor will adopt safety measures, wear mask and use proper PPEs while working on replacement of AC pipes. ▪ The contractor will adopt environmental code of practices (ECOPs) as Annex -V. 					
8.	Excavation, cutting, and filling	<ul style="list-style-type: none"> ▪ The excavated areas are a hazard to community and workers. ▪ The storing or excavated material at site would add on to the access and traffic congestion 	<ul style="list-style-type: none"> ▪ Place fence around excavation; ▪ Have construction crews and supervisors be alert for buried historic, religious, and cultural objects and provide them with procedures to follow if such objects are discovered. Provide incentives for recovery of objects and 	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		<p>issues.</p> <ul style="list-style-type: none"> Soil erosion may occur at the site where excavation will be done Soil un-stability and surface water contamination may also occur. 	<p>disincentives for their destruction; and</p> <ul style="list-style-type: none"> The Chance Find Procedure attached as Annex-VII will be adopted if any physical cultural resource (PCR) is encountered during construction activities. Water sprinkling should be carried out at the temporary access road and all the areas prone to dust generation. 					
9.	Traffic control/issues and accessibility	<ul style="list-style-type: none"> Traffic jams and congestion may take place and cause inconvenience to the people where the construction of interchanges will take place The commuters may face minor accessibility issues during construction (however, the duration of works will be very limited 	<ul style="list-style-type: none"> The contractor will prepare site specific traffic management plan in consultation with traffic police/relevant authorities in the light of traffic diversion plan attached as Figure 7.2 Provision of signboards directing the drivers about the diversion; Providing and maintaining traffic management comprising diversion warning, guiding and regulatory signage, channelizes and delineators, lightening etc.; 	CC, SC and PIU-KWSSIP	Visual observation	Daily	CC, SC & PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		and quantum of work will be low)	<ul style="list-style-type: none"> ▪ Movement of vehicles carrying construction material should be restricted; ▪ Availability of continuous services of the police in the diversion and control of traffic. ▪ Provision of adequate passages for mobility of the commuters where required ▪ Provision of barricades around active construction site to ensure accessibility. 					
10.	Occupational Health & Safety (OHS)	<ul style="list-style-type: none"> ▪ Chances of contact with underground electrical cables during excavations; ▪ Chances of roadside accidents during construction; ▪ Slip and fall hazard of construction workers ▪ Risks associated 	<ul style="list-style-type: none"> ▪ Preparation and implementation of OHS Management Plan ▪ Regular OHS training ▪ Obtain as built drawings of existing infrastructure from concerned departments and plan accordingly Ensure prior shifting/ relocation of existing amenities; ▪ Barricade excavated sites; ▪ Provision of PPEs to workers including H₂S mask kits while working with old sewer lines; 	CC, SC and PIU-KWSSIP	Visual observation & reporting of accident	Twice a week	CC, SC & PIU	Cost of PPEs is included in Table 13, Table 14 & Table 15

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		<p>with working in confined spaces</p> <ul style="list-style-type: none"> Exposure to H₂S gas 	<ul style="list-style-type: none"> Implementation of HSE protocols at site; The labor having transmittable diseases should not be allowed on the construction site; The contractor will ensure and strictly implement the SOPs regarding COVID- 19 (see Annex – VIII), including daily body temperature check, daily disinfection, quarantine management, area access management, PPE, emergency response, and drills; The proposed area is congested, there should be sufficient signage to warn of dangers and hazards on a construction or worksite. Signs should be clear and accompanied by ropes, cones, and other equipment to cordon off dangerous areas. Conduct worksite inspections daily to identify any potential dangers or hazards. Dangers and hazards 					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>should be cordoned off immediately. Properly cordon off the construction area and unauthorized entry should not be allowed, please.</p> <ul style="list-style-type: none"> ▪ Only skilled workers will be allowed to work at the construction site; ▪ Provision of first aid facilities for workers at site for meeting the emergency needs of workers, and providing basic medical training to specified work staff and basic medical service and supplies to workers; ▪ Observe and maintain standards of Health and Safety towards all employees in line with WB EHS Guidelines along with Sindh Occupational Health and Safety Law ▪ The contractor will follow Environmental Code of Practice (ECOPs) attached as Annex – V. ▪ The contractor will ensure that hazards associated with manual 					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>lifting are controlled by proper lifting techniques, Work rotation system will reduce the chances of being exposed to work-related stress associated with construction activities.</p> <ul style="list-style-type: none"> ▪ Unauthorized personnel will not be allowed to access the proposed project site without permission and safety permits. ▪ Workers should be facilitated by providing appropriate work specific personal protective equipment (PPE's). ▪ Health and Safety Management Plan attached as Annex – IX must be adopted. 					
11.	Labor Living and Working Conditions	<ul style="list-style-type: none"> ▪ Provision of inadequate facilities to labour and workforce may arise grievances among them. ▪ Issues related to labor influx 	<ul style="list-style-type: none"> ▪ The worker's Grievance redressal mechanism must be developed and communicated among workers to lodge complains; ▪ Workers should be provided with clean drinking water and hygienic food for free; 	CC, SC and PIU-KWSSIP	Visual observation	Twice a week	CC, SC & PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
		<ul style="list-style-type: none"> ▪ Gender Based Violence (GBV) 	<ul style="list-style-type: none"> ▪ Avoiding Gender Based Violence. Contractor will prepare and implement robust measures to address the risk of gender-based violence that include (i) mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women; (ii) informing workers about national laws that make sexual harassment and gender-based violence a punishable offence which is prosecuted; (iii) Introducing a Worker Code of Conduct as part of the employment contract, and including sanctions for noncompliance (e.g., termination), and (iv) contractors adopting a policy to cooperate with law enforcement agencies in investigating complaints about gender based violence. 					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<ul style="list-style-type: none"> ▪ The contractor will pay equal wages to both male and female workers; ▪ Use of child and forced labor will be strictly prohibited.; ▪ The Contractor will adopt gender sensitive and GBV free code of conduct during the construction ▪ Implement the Labor Management Plan (LMP) that has been prepared for KWSSIP-1. ▪ The contractor will adopt environmental code of practices (ECOPs) as Annex – V. 					
13.	Site Restoration	<ul style="list-style-type: none"> ▪ The excavated sites may not be restored to original 	<ul style="list-style-type: none"> ▪ Contractor will obtain approval for excavation and submit the plan of rehabilitating the site after construction. ▪ Site restoration will be completed immediately after completion of the project. 	CC, SC and PIU-KWSSIP	Visual observation	Once (after completion of construction activities)	CC, SC & PIU	N/A
14.	Construction activities	<ul style="list-style-type: none"> ▪ Labor issues 	<ul style="list-style-type: none"> • The worker's Grievance redress mechanism will be developed and communicated among 	CC, SC and PIU-KWSSIP	Visual inspection GRM Register	During construction phase of the project	CC, SC & PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>workers to lodge complains;</p> <ul style="list-style-type: none"> • Workers will be provided with clean drinking water and hygienic food and safe & healthy environment to work. • Project workers will be paid on a regular basis as required by national law and labor management procedures such as Sindh Minimum Wages Act and Sindh Payment of Wages Act 2015. • Where required by national law or the labor management procedures, project workers will receive written notice of termination of employment and details of severance payments in a timely manner. • A child under the minimum age established in accordance with Employment of Child Act (1991) and no child will be employed or engaged 		Employment Documents of Workers	(Weekly basis)		

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>in connection with the project.</p> <ul style="list-style-type: none"> • Use of child and forced labor will be strictly prohibited. 					
15.	Gender Based Violence (GBV)	<ul style="list-style-type: none"> ▪ Possible gender related issues due to construction activities 	<p>PIU has prepared an umbrella Gender Action Plan for KWSSIP, which will be implemented throughout the project. However, the subproject specific mitigation measures are given hereunder:</p> <ul style="list-style-type: none"> • Workers' code of conduct (CoC) (attached as Annex – VI) will be strictly implemented • Contractor must ensure that workers should not be allowed to accumulate or gather in the residential communities within the site. • Alternative routes/pathways for pedestrian should be provided to avoid mixing of women with workers. • Raise awareness among the stakeholders specifically the resident communities and the 	CC, SC and PIU-KWSSIP	Visual inspection GRM Register	During construction phase of the project (Weekly basis)	CC, SC & PIU	N/A

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>labor of the potential risks of GBV, and establish response services in the nearby communities that can respond to instances of GBV (particularly those related to issues of labor inflow).</p> <ul style="list-style-type: none"> • Provisions of gender disaggregated bathing, changing, and sanitation facilities; and Contractor should take proper measures to address and resolve issues relating to harassment, intimidation, and exploitation, especially in relation to women. • Develop and implement proper Labor Management Plan including a code of conduct for workers providing guidance on allowable behavior. • Preference will be given to the local people to work with contractor, and contractor should hire maximum labor force from the project area, 					

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
			<p>this will reduce the labor inflow.</p> <ul style="list-style-type: none"> Awareness will be created among the work force to ensure respect for local customs, norms and traditions. Construction work will be completed in stipulated period of time. 					
16.	Replacement of Asbestos Pipes	<ul style="list-style-type: none"> OHS and CHS issues due to release of fibrous material from cutting of existing AC pipes 	<ul style="list-style-type: none"> Training of all personnel (including manual laborers) to enable them to understand the dangers of AC pipes and to be able to recognize them in situ; Application of HSMP to protect both workers and citizens; Usage of appropriate breathing apparatus and protective equipment by persons delegated to deal with the AC material; <p>All the AC pipes will be left in situ and will not be transferred with the other waste materials</p>	CC, SC and PIU-KWSSIP	Visual inspection	During construction phase of the project (Weekly basis)	CC, SC & PIU	
C: Operational Phase								

Sr. No	Activity	Impacts	Mitigation	Implementation Responsibility	Monitoring Parameter	Monitoring Frequency	Monitoring Responsibility	Cost
1.	Maintenance & Repair	<ul style="list-style-type: none"> Deterioration/ wear & tear would be caused with the passage of time that requires regular maintenance 	<ul style="list-style-type: none"> Routine checks will be done by the field staff for any leakages in water and sewerage line and immediate actions will be taken to rectify them. 	KWSB	Visual observation	Periodically	KWSB	N/A
2.	Occupational Health & safety (OHS)	<ul style="list-style-type: none"> Workers dealing with the operation and maintenance of sewerage lines may face health issues due to contact with waste water as well as exposure of H₂S gas. 	<ul style="list-style-type: none"> Workers will be provided with PPEs during routine O&M operations. Trainings will be conducted for the work practices and use of equipment 	KWSB	Report of accident	Occasional	KWSB	N/A
3	Community Health & Safety (CHS)	<ul style="list-style-type: none"> Minor issues to local community during maintenance works. 	<ul style="list-style-type: none"> The sites must be properly barricaded to avoid CHS issues during maintenance works 	KWSB	Visual observation	During maintenance	KWSB	N/A
4	Traffic Issues	<ul style="list-style-type: none"> Minor traffic issues may arise during maintenance 	<ul style="list-style-type: none"> Diversion of traffic using diversion cones and barricade the sites 	KWSB	Visual observation	During maintenance	KWSB	N/A

Legend:

DC	Design Consultant	SC	Supervision Consultant
CC	Construction Contractor	PIU	Project Implementation Unit
KWSB	Karachi Water and Sewerage Board		

7.2. Monitoring

The overall objectives of the monitoring activities are to:

- Ensure regulatory requirements are met;
- Check that impacts do not exceed project standards and other environmental standards;
- Verify that mitigation measures are effective and implemented in the manner described in **Table 7.1**;
- Provide early warning of potential environmental impacts; and
- Inform future operations and contribute to continuous improvement in the management of environmental and social issues related to the project.

7.2.1. Monitoring Approach

Monitoring will be carried out by the Supervision Consultants (SC) and Project Implementation Unit (PIU), and its contractors pursuant to their contractual obligations to undertake inspections, monitoring and reporting. The following four types of inspections and monitoring will be employed.

- **Inspections** planned and conducted on a regular basis to ensure that mitigation measures and commitments are properly maintained and implemented, and that specific management procedures are being following (e.g., practices on waste storage and disposal).
- **Receptor monitoring** undertaken to verify predictions made in the screening report and to confirm that the activities at the site are not resulting in an unacceptable deterioration in the quality of habitats or infrastructure (e.g., monitoring disturbance to affected residents through a grievance mechanism).
- **Compliance monitoring** involving periodic sampling or continuous recording of specific environmental quality indicators or discharge levels to ensure compliance of discharges and emissions with project standards (e.g., produced water discharges and air emissions).

The frequency of inspections, monitoring and audits and subsequent reporting will be based on the project risks. The outputs will be used in the following ways.

- To provide early warning for site management and to adjust mitigation measures on a day-to-day basis to cater evolving conditions.
- To enable contractors to demonstrate that mitigation measures and procedures laid down in mitigation plans are being followed and operations are being conducted within compliance limits.
- To provide formal assurance to PIU that the project is compliant with regulations and agreed limits and that relevant mitigation / enhancement measures are being adhered to.

The monitoring checklist is attached as **Annex – X**.

7.3. Reporting

The contractor will prepare and submit monitoring reports for compliance of implementation to supervision consultant environmental team. The distribution of periodic reports is given in **Table 7.2.**

Table 7.2.: Distribution of Periodic Reports

Report	Prepared by	Reviewed by	Distribution
Start of the Project	Contractor	Reviewed by PIU-Environmental, Social & Gender Unit; KWSSIP	The Engineer and Project Implementation Unit
End of the Project	Contractor	Reviewed by PIU-KWSSIP-Environmental Social & Gender Unit; KWSSIP	The Engineer, Project Implementation Unit and The World Bank

7.4. Grievance Redress Mechanism (GRM)

The purpose of the Grievance Redress Mechanism (GRM) is to receive, review and resolve grievances from project affectees or community members and ensure smooth and fair implementation of subproject activities. The Grievance Redress Committee (GRC) and Gender Based Violence (GBV) Committee have been established in PIU-KWSSIP through a notification.

7.4.1. GRM Principles

A GRM is established to address any complaints or grievances arising during the implementation period of the projects. People of the project area may perceive risks to themselves or their property or their legal rights or have concerns about the possible adverse environmental and social impact that a project may have. Any concerns or grievances will be addressed quickly and transparently, and without retribution to the project affectees or community members or complainant.

The primary principle of GRM is that all complaints or grievances are resolved as quickly as possible in a fair and transparent manner. All minor complaints regarding E&S issues, land or property issues or business/livelihood losses will be addressed immediately at community level Grievance Redress Committee (GRC) through involvement of project affectees and community members. In case the grievances cannot be resolved at the community GRC, the project affectees or community members may make a complaint to the project GRC and afterward at PIU-GRC, the details of which are provided under sub-sections. The focus of the GRM is to resolve issues in a customarily appropriate fashion and record details of the complaint, the complainant and the resolution.

7.4.2. Objectives

The objectives of the GRM are to:

- develop an organizational framework to address and resolve the grievances of individual(s) or community(s), fairly and equitably;
- provide enhanced level of satisfaction to the aggrieved;
- provide easy accessibility to the aggrieved/affected individual or community for immediate grievance redress;
- ensure that the targeted communities and individuals are treated fairly at all times;
- identify systemic flaws in the operational functions of the project and suggest corrective measures; and
- ensure that the operation of the project is in line with its conception and transparently to achieve the goals for sustainability of the project.

7.4.3. Type of Complaints

The major complaints that may arise during the execution of the proposed project at site include but not limited to:

- Environment and social issues (dust, noise, air pollution, social and cultural issues);
- Damage and blockage of public utilities;
- Traffic inconvenience;
- GBV and harassment.
- Resettlement issues including loss of livelihood;
- Issues related to compensation of resettlement impacts.

7.4.4. Disclosure of GRM

The GRM will be disclosed at PIU-KWSSIP, KWSB head offices, and concerned Executive Engineer (XEN) and Superintendent Engineer (SE) offices, KWSSIP website as well as on project sites.

7.4.5. Structure of Grievance Redress Mechanism

The project will establish a three-tier GRM comprising Community GRC, project GRC; and PIU-GRC. These tiers are described below.

A. Community GRC (Tier-1)

The community-GRC will provide a platform for project affectees or community members to raise and discuss their concerns, resolve the E&S issues at the community level and coordinate with project management to communicate these E&S issues and concerns. Community-GRC will be established to maintain a close rapport and coordination with affected persons and community members throughout the project implementation. The Social Development Specialist (SDS) of PIU will facilitate for the establishment of community-GRC that is representative of the ethno-cultural and gender diversity within the community. The community-GRC will comprise the following six members with one as the committee convener:

- Three female members (from the project affectees or community members); and
- Three male members (from project affectees or community members).

The project E&S and engineering staff will coordinate with community-GRC to review and resolve the E&S issue or concern related to resettlement planning or implementation as well as environmental and social concerns preferably within five (05) working days from receipt of the grievance. Any complaints that cannot be resolved at community-GRC will be forwarded to the next tier.

B. Project GRC (Tier-2)

Project will constitute a GRC headed by concerned Project Manager (PM) to resolve all grievances and complaints of the project affectees or community members. Project GRC will comprise of the following members:

- Project Manager (PM), as head/convener of project GRC;
- Environment, SDS and Gender specialists of PIU;
- E&S specialists of Supervision Consultant (SC)
- Resident Engineer of supervision consultant;
- A representative (E&S specialist) of contractor will act as focal point; and
- A representative of local community.

Representative from any other district government department may be called as and when required by the project GRC. Environmental Specialist of PIU and SC will join project GRC meeting related to environmental issues only.

Project GRC will meet once a month and when the need arises. The project GRC will review grievances involving all E&S issues that may arise due to project implementation. Project GRC will perform following functions:

- Record, categorize and prioritize the grievances that need to be resolved by the committee and resolve them within ten (10) working days;
- Invite and hear aggrieved persons/parties to produce evidence of their claims and record their view point;
- Communicate its decisions and recommendations on all resolved issues to project executors and the aggrieved persons for smooth implementation;
- Forward the unresolved cases/ complaints to PIU-GRC within an appropriate time frame with reasons recorded and its recommendations;
- Develop an information dissemination system and acknowledge the aggrieved persons/parties about the development regarding their grievance;
- Maintain a complaint register accessible to the project affectees or community members with brief information about complaints and project GRC decision with status report; and,
- Maintain complete record of all complaints received by the project GRC with actions taken.

Any complaint that cannot be resolved by the project GRC, will be forwarded to the next tier – the PIU-GRC.

C. PIU-GRC (Tier-3)

At the third tier, the PIU has constituted a GRC (PIU-GRC). The committee has the following composition:

- Project Director KWSSIP, (Chairman of PIU-GRC);
- SDS, Member
- Gender Specialist, Member;
- Concerned Project Manager – PIU, Member;
- SDS of SC, Member; and
- Representative of Civil Society.

Representative from any other district government department may be called as and when required by the PIU-GRC. Environmental Specialist of PIU and SC will join PIU-GRC meeting related to environmental issues only.

The PIU-GRC through authorized representative, will acknowledge the complainant about his/her complaint, scrutinize the record, investigate the remedies available and request the complainant to produce any record in favour of his/her claim. After thorough review and scrutiny of the available record on the complaint, field visit will be conducted to collect additional information, if required. Once the investigations are completed, the PIU-GRC will give decision within twenty (20) working days of receipt of the complaint. If the complainant is still dissatisfied with the decision, he/she can go to the court of law, if he/she wishes so. Organization of the GRM is shown in **Figure 7.1**.

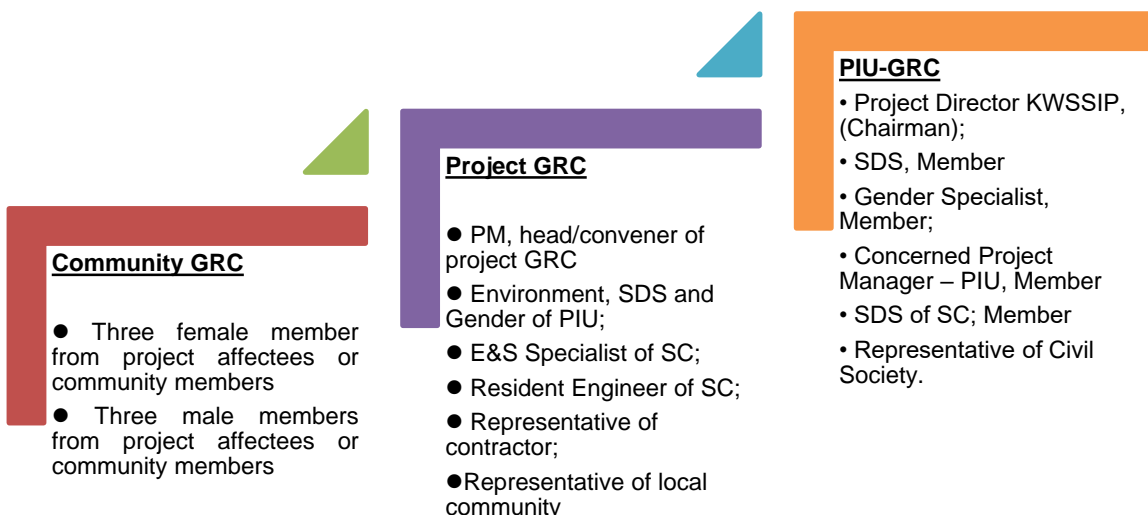


Figure 7.1: Organogram for GRM

Gender representation will be ensured by inducting a female member in all GRCs. The mechanism will ensure the access of project affectees or community members to a GRM

that openly and transparently deals with the grievances and makes decision in consultation with all concerned that are consistent with the WB requirements.

D. Gender Based Violence (GBV) Committee

Besides PIU-GRC, GBV committee has also been established and notified consisting of the following members;

- Concerned Project Manager, Head/ Convener of GBV Committee
- Gender Expert KWSSIP, Secretary
- SDP KWSSIP, Member

GBV Committee will address the gender related issues due to project activities during implementation.

7.4.6. Grievance Redress Procedure

The intention of GRM is to resolve a complaint as quickly and at as low a level as possible to avoid a minor issue becoming a significant grievance. Irrespective of the stage of the process, a complainant has the option to pursue the grievance through the court as is his/her legal right in accordance with law.

The GRCs will work at site, project and PIU levels. The E&S and engineering staff of PIU, in coordination with site staff will inform the project affectees and community members about the GRCs and its mechanism through consultations and by posting at prominent places. The complaints received through any media will be screened by type & category and registered in Community Complaints Register (CCR), where the name and address of complainant, date, description of complaint and action taken will be recorded. The Following procedure will be considered to redress the grievances:

- First, complaint resolution will be attempted to be addressed at community-GRC through the involvement of the field E&S/engineering staff. The community-GRC will give decision within 05 working days of receipt of the complaint. If unsettled, grievance can be lodged to the project GRC by the complainant to proceed under law and communicate decision in least possible time.
- Project GRC will acknowledge the receipt within 02 working days of lodging of complaint. Initial review and consultation with the project GRC will be conducted within 05 working days of receipt of complaint. If required, project GRC will advise the E&S/engineering specialists to conduct field visits in consultation with the aggrieved persons/parties and local community and submit a fact-finding report. Preferably, the fact finding will be completed within 08 working days from receipt of complaints. Subproject GRC will give decision within 10 working days of receipt of the complaint. If unresolved, a grievance will be lodged to the (PIU-GRC) by the complainant.
- The PIU-GRC will give decision within 20 working days of receipt of the complaint. If the complainant is still not satisfied, he/she can pursue further by submitting to the appropriate court of law.

All the E&S issues will be dealt according to the above GRM procedures. GRC will clarify the legal course of action and guide aggrieved persons/parties to approach appropriate legal forum. The GRCs will hear and clarify with the complainant (if required so) about the E&S issue and will conclude and communicate its recommendations for further implementation in due course of time. Complainant will be kept informed during the process and the GRC decision will be communicated accordingly. In case of any delay, the complainants will be informed on the progress and process about their grievances. The GRC proceedings will be documented step by step and all records will be maintained and summarized in the project progress and internal monitoring reports.

7.4.7. Lodging of Complaint

The complainant(s) can lodge their grievances by online, mail, phone, WhatsApp, e-mail and complaint box. Moreover, PIU has established E-Portal for filing and tracking progress of the application online the detail has been provided below:

- An electronic complaint lodging system (application) that will be accessible through a link on the PIU KWSSIP website;
- The focus of the e-portal is the quick complaint lodging for all types of primary stakeholders;
- Any project affectees or community member with internet access can lodge a complaint with option for anonymous complaints. Uploading of photos for better understanding of the problem will also be an option;
- Each complainant will get a unique Grievance Number to track their complaints through the e-portal;
- Each complaint will go through a quick resolution mechanism being managed by a dedicated team at the PIU. Each complainant will be contacted to ensure that his/her issue is resolved;
- The portal will differentiate between types of complaints for targeted decision-making and action on behalf of PIU; and
- The portal will allow a quick and easy method for monitoring of the entire complaint lodging and resolution mechanism.

Direct workers' GRM structure: To mitigate the risks related to direct workers a GRM for Direct Workers will be established. GRM structure for KWSSIP:

- **First level.** The Project Coordinator/Human Resources of PIU-KWSSIP depending on the nature of the issue raised will be responsible to receive, consider and address in a timely manner the grievances, including the concerns on unaccounted working hours and lack of compensation for overtime, delay in/nonpayment of salaries. If the issue cannot be resolved at the first level within 7 working days, then it will be escalated to the next level.
- **Second level.** The Project Director of KWSSIP is a second-level GRM for direct workers if there is a situation in which there is no response from HR or if the response is not satisfactory then complainants and feedback providers have the option to

appeal directly to the Project Director to follow up on the issue. The complaints should be considered and feedback provided within the next 7 working days.

Contracted worker's GM structure: To mitigate the risks related to direct workers a GM for Contracted Workers will also be established:

- **Contractor's level.** Contractors should develop their own GRM and resolve the grievances of contracted workers. Grievance Focal Point (GFP) assigned by the Contractor will file the grievances and appeals of contracted workers and will be responsible to facilitate addressing the grievances. If the issue cannot be resolved at the contractor's level within 7 working days, then it will be escalated to the PIU of the KWSSIP local level.
- **Local level.** The Social Specialist of PIU local level in Karachi will serve as Grievance Focal Point (GFP) to file the grievances and appeals of the project workers. He/She will be responsible to coordinate with relevant departments/organizations and persons to facilitate addressing these grievances. If the issue cannot be resolved at the PIU level within 7 working days, then it will be escalated to the Agency level.
- **Central level:** If there is a situation in which there is no response from the PIU Local level, or if the response is not satisfactory then complainants and feedback providers have the option to contact the Project Director of KWSSIP or Focal Person in KWSB Central Office directly to follow up on the issue.

7.5. Training Program

The primary responsibility of providing the E&S trainings to all project personnel will be that of the contractor and ESC. The trainings will be provided to different professional groups separately such as managers, skilled personnel, unskilled labors etc. Capacity building will be aimed at strengthening the ESC, and operational staff in the field of environmental management, social and gender development. **Table 7.3, Table 7.4 and Table 7.5** provide detail of trainings required for implementation of ESMMP during construction and operational phase.

Table 7. 3 Training Program LOT-1 (District West)

Training Activity	Type of Training	Content	Schedule	Amount (PKR)
Environment code of practices/ Gender Aspects	Presentation	Awareness & applicability of environmental code of practices/ Awareness on gender inequalities/GBV OP 4.20	Once	100,000
Awareness workshop regarding Covid 19 and other vector borne diseases	Presentation	Risk, Prevention and available treatment	Once	100,000

Training Activity	Type of Training	Content	Schedule	Amount (PKR)
Waste Management	Presentation	Awareness associated with waste Storage, collection and safe disposal	Once	100,000
Community/ occupational health and safety	Presentation	Awareness on EHS Guidelines	Once	150,000
			Total	450,000

Table 7. 4 Training Program LOT-2 (District South)

Training Activity	Type of Training	Content	Schedule	Amount (PKR)
Environment code of practices/ Gender Aspects	Presentation	Awareness & applicability of environmental code of practices/ Awareness on gender inequalities/GBV OP 4.20	Once	100,000
Awareness workshop regarding Covid 19 and other vector borne diseases	Presentation	Risk, Prevention and available treatment	Once	100,000
Waste Management	Presentation	Awareness associated with waste Storage, collection and safe disposal	Once	100,000
Community/ occupational health and safety	Presentation	Awareness on EHS Guidelines	Once	150,000
			Total	450,000

Table 7. 5 Training Program LOT- 3 (District Keamari)

Training Activity	Type of Training	Content	Schedule	Amount (PKR)
Environment code of practices/ Gender Aspects	Presentation	Awareness & applicability of environmental code of practices/ Awareness on gender inequalities/GBV OP 4.20	Once	100,000
Awareness workshop regarding Covid 19 and other vector borne diseases	Presentation	Risk, Prevention and available treatment	Once	100,000
Waste Management	Presentation	Awareness associated with waste Storage, collection and safe disposal	Once	100,000
Community/ occupational health and safety	Presentation	Awareness on EHS Guidelines	Once	150,000
			Total	450,000

7.6. Capacity Building & Institutional Strengthening

In order to ensure that the ESMMP provisions are implemented efficiently and effectively, capacity building/ strengthening of the implementing parties are required. Therefore, based on the assessment of the institutional capacities of the parties involved in the implementation of the ESMMP, the following broad areas of capacity building/ strengthening have been identified and recommended for effective implementation of the ESMMP.

Table 7.6 shows the positions proposed for institutional strengthening for an effective implementation of environmental and social mitigation measures along with their responsibilities while **Table 7.7**, **Table 7.8** and **Table 7.9** present cost of institutional strengthening.

Table 7. 6: Institutional Strengthening

Institutional strengthening	Position	Schedule (Months)	Responsibility
Contractor	Environmental/ HSE Expert	02	<ul style="list-style-type: none"> ▪ Complete understanding of WB, local and federal environmental regulations. ▪ Implement environmental guidelines and practices. ▪ Review and recommend improvements to existing environmental programs for compliance assurance. ▪ Generate environmental reports as requested by regulatory agencies. ▪ Provide guidance and direction to management for ensuring environmental compliance. ▪ Prepare permit applications and agreements as needed by regulatory agencies. ▪ Obtain, maintain, modify and renew environmental permits and licenses. ▪ Work with emergency response team to address environmental incidents such as chemical leaks and spills. ▪ Identify and solve environmental violations. ▪ Conduct regular environmental inspections to determine pollution level. ▪ Investigate environmental accidents and propose corrective actions. ▪ Educate workers on environmental health and safety procedures.

Institutional strengthening	Position	Schedule (Months)	Responsibility
	Social/ Resettlement / Gender Expert	02	<ul style="list-style-type: none"> ▪ Collect baseline social data to assess the social impacts associated ▪ Conduct and document surveys, group discussions and interviews with stakeholders and local people. ▪ Identify social negative impacts and benefits likely to result from the construction and operation of the project. ▪ Provide input into the feasibility design of the project based on the preferred option, proposing measures to minimize social impacts during construction and operation. Propose measures to mitigate negative impacts. ▪ Analyze country's gender policies ▪ Provide advice and support to on gender issues. ▪ . ▪ Participate in meetings with the client, project team and other key stakeholders

Table 7. 7: Cost of Institutional Strengthening LOT-1 (District West)

Sr. No.	Position	Schedule (Months)	Number of Staff	Unit Cost (PKR)	Cost Estimates (PKR)
1	Environmental Expert/ HSE Expert	2	1	250,000	500,000
2	Social / Resettlement / Gender Expert	2	1	250,000	500,000
Total Cost					1,000,000

Table 7. 8: Cost of Institutional Strengthening LOT-2 (District South)

Sr. No.	Position	Scheduling (Months)	Number of Staff	Unit Cost (PKR)	Cost Estimates (PKR)
1	Environmental Expert/ HSE Expert	2	1	250,000	500,000
2	Social / Resettlement / Gender Expert	2	1	250,000	500,000
Total Cost					1,000,000

Table 7. 9: Cost of Institutional Strengthening LOT-3 (District Keamari)

Sr. No.	Position	Schedule (Months)	Number of Staff	Unit Cost (PKR)	Cost Estimates (PKR)
1	Environmental Expert/ HSE Expert	2	1	250,000	500,000
2	Social / Resettlement / Gender Expert	2	1	250,000	500,000
Total Cost					1,000,000

7.7. E&S Budget

7.7.1. Health and Safety Cost

Cost of Health and Safety during construction phase is worked out in **Table 7.10**, **Table 7.11** and **Table 7.12** below.

Table 7. 10: Health and Safety Cost during Construction Phase LOT-1 (District West)

Sr. No.	Description	Quantity	Unit	Rate (PKR)	Amount (PKR)
1	Medical screening for workers	50	Persons	5000	250000
2	Tarpaulins	5	Each	30,000	150000
3	Handling of hazardous material	2	Per Month	10,000	20000
4	Handling of solid waste	2	Per Month	50,000	100000
5	DCP Fire extinguishers in case of fire	5	Each	3,500	17500
	CO2 Fire extinguishers in case of fire	5	Each	10,000	50000
	Fire alarm	5	Each	10,000	50000
6	Special Measures for Covid-19		L.S.		1,000,000
7	Cost of Personal Protective Equipment (PPE)* (Breakup given on separate sheet)	-	-	-	515,000
Total Cost					2,152,500

Table 7. 11: Health and Safety Cost during Construction Phase LOT-2 (District South)

Sr. No.	Description	Quantity	Unit	Rate (PKR)	Amount (PKR)
1	Medical screening for workers	120	Persons	5000	600000
2	Tarpaulins	12	Each	30,000	360000
3	Handling of hazardous material	2	Per Month	10,000	20000
4	Handling of solid waste	2	Per Month	50,000	100000

Sr. No.	Description	Quantity	Unit	Rate (PKR)	Amount (PKR)
5	DCP Fire extinguishers in case of fire	12	Each	3,500	42000
	CO2 Fire extinguishers in case of fire	12	Each	10,000	120000
	Fire alarm	12	Each	10,000	120000
6	Special Measures for Covid-19		L.S.		1,000,000
7	Cost of Personal Protective Equipment (PPE)* (Breakup given on separate sheet)	-	-	-	1,236,000
Total Cost					3,598,000

Table 7. 12: Health and Safety Cost during Construction Phase LOT-3 (District Keamari)

Sr. No.	Description	Quantity	Unit	Rate (PKR)	Amount (PKR)
1	Medical screening for workers	10	Persons	5000	50000
2	Tarpaulins	1	Each	30,000	30000
3	Handling of hazardous material	2	Per Month	10,000	20000
4	Handling of solid waste	2	Per Month	50,000	100000
5	DCP Fire extinguishers in case of fire	1	Each	3,500	3500
	CO2 Fire extinguishers in case of fire	1	Each	10,000	10000
	Fire alarm	1	Each	10,000	10000
6	Special Measures for Covid-19		L.S.		1,000,000
7	Cost of Personal Protective Equipment (PPE)* (Breakup given on separate sheet)	-	-	-	266,000
Total Cost					1,489,500

Details of PPE cost are given in tables below

Table 7. 13: Break-up for PPEs Cost during Construction Phase LOT-1 (District West)

Item No.	Description	Quantity	Unit	Rate (PKR)	Amount
					PKR
1	Ear plugs	100	Each	100	10,000
2	Helmets	50	Each	1500	75,000
3	Safety shoes	50	Each	3000	150,000
4	Protective goggles	50	Each	2000	100,000
5	Gloves	100	Each	300	30,000
6	H ₂ S Mask & Kit	5	Each	15000	75,000
7	Dust Mask	400	Each	100	40,000

Item No.	Description	Quantity	Unit	Rate (PKR)	Amount
					PKR
8	Face Shield	5	Each	2000	10,000
9	First Aid Kit	5	Each	5000	25,000
Total					515,000

Table 7. 14: Break-up for PPEs Cost during Construction Phase LOT-2 (District South)

Item No.	Description	Quantity	Unit	Rate (PKR)	Amount
					PKR
1	Ear plugs	240	Each	100	24,000
2	Helmets	120	Each	1500	180,000
3	Safety shoes	120	Each	3000	360,000
4	Protective goggles	120	Each	2000	240,000
5	Gloves	240	Each	300	72,000
6	H ₂ S Mask & Kit	12	Each	15000	180,000
7	Dust Mask	960	Each	100	96,000
8	Face Shield	12	Each	2000	24,000
9	First Aid Kit	12	Each	5000	60,000
Total					1,236,000

Table 7. 15: Break-up for PPEs Cost during Construction Phase LOT-3 (District Keamari)

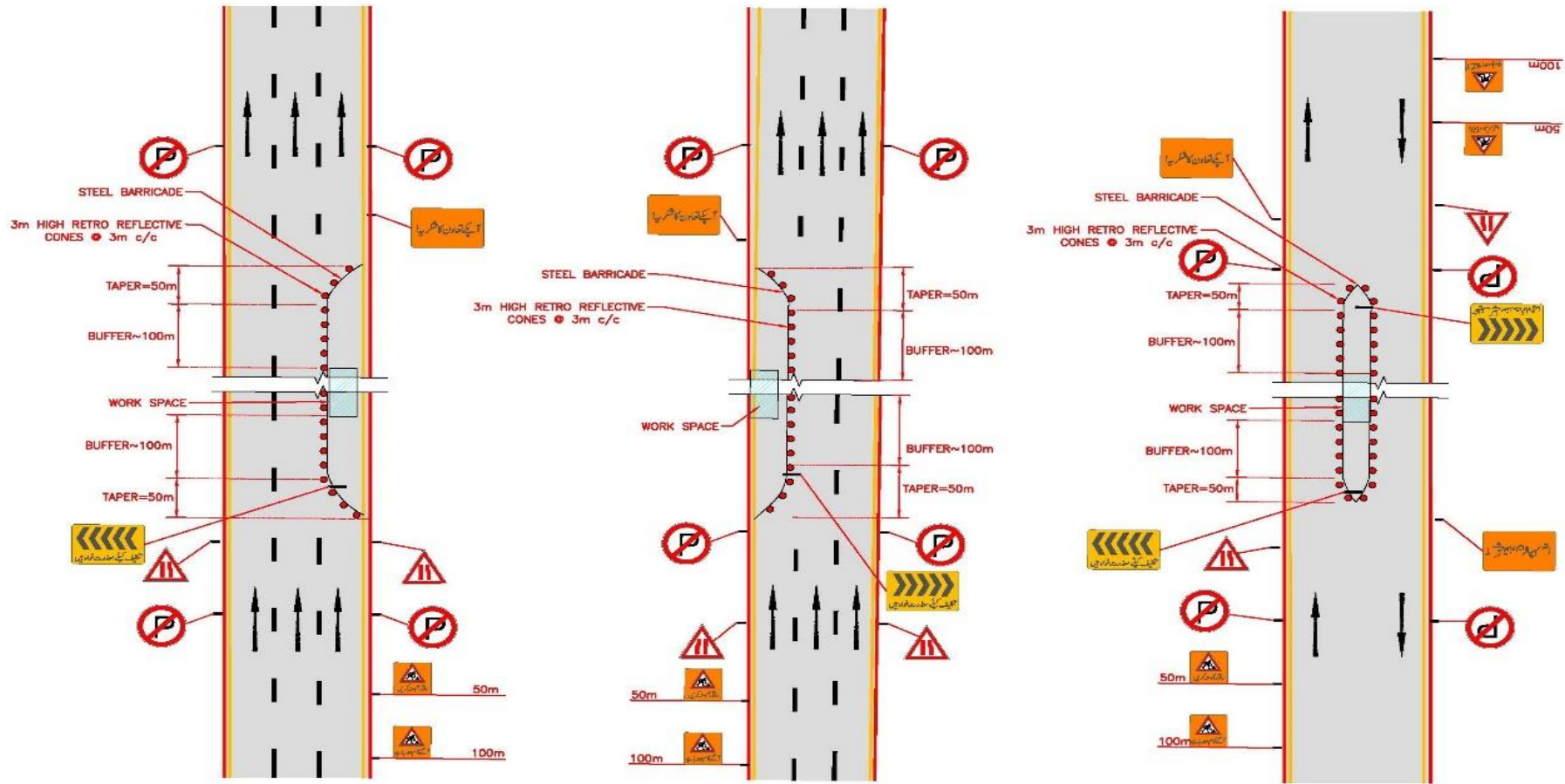
Item No.	Description	Quantity	Unit	Rate (PKR)	Amount
					PKR
1	Ear plugs	20	Each	100	2,000
2	Helmets	10	Each	1500	15,000
3	Safety shoes	10	Each	3000	30,000
4	Protective goggles	10	Each	2000	20,000
5	Gloves	20	Each	300	6,000
6	H ₂ S Mask & Kit	10	Each	15000	150,000
7	Dust Mask	80	Each	100	8,000
8	Face Shield	5	Each	2000	10,000
9	First Aid Kit	5	Each	5000	25,000
Total					266,000

7.7.2. Summary of Cost

The total estimated cost for the implementation of ESMP is worked out to be **PKR 11,590,000**. Summary of cost is given in **Table 7.16**.

Table 7. 16: Summary of Cost

Sr. No.	Description	Amount (PKR)		
		LOT-1	LOT-2	LOT-3
1	Health, Safety & Environment (HSE)	2,152,500	3,598,000	1,489,500
2	Institutional Strengthening Cost	1,000,000	1,000,000	1,000,000
3	Institutional Training	450,000	450,000	450,000
Sub-Total		3,602,500	5,048,000	2,939,500
Grand Total		11,590,000		



NOTES:
 1- FOR ALL SIGNS, HIGH RETRO REFLECTIVE TAPE OF 3M "HIGH INTENSITY PRISMATIC" OR HIGHER GRADE SHALL BE USED.
 2- WARNING LIGHTS/FLASHERS MAY BE USED IN WORK ZONE WHERE DEEMED NECESSARY.

Figure 7. 2: Traffic Diversion Plan

Annex – I
Photolog of Public Consultations & Attendance
Sheets

Photolog of Consultations



Public Consultation at District West Near Post Office Pakistan



Public Consultation at District South



Public Consultation at various Location



Gender Consultation Meeting in Different Districts

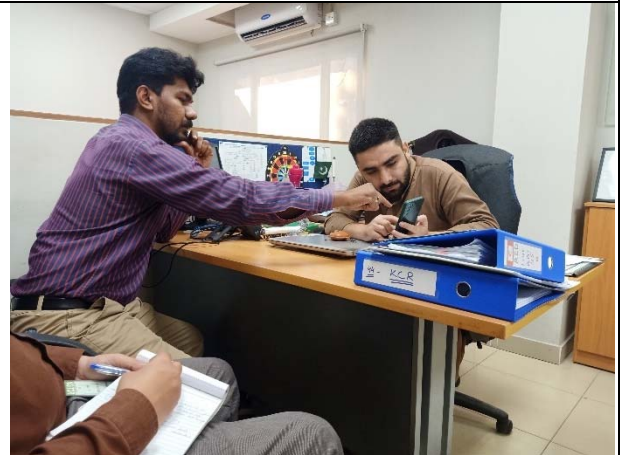
Consultation with Government Departments



Meeting with Deputy Director Technical SEPA



Meeting with Assistant Commissioner, Karachi



Meeting with Public Affairs Officer K. Electric



Meeting with Senior GM Distribution SSGC

District South (Atrium Mall)

3. List of Participants:

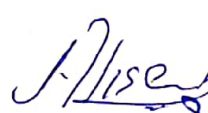


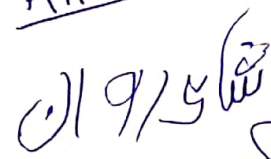
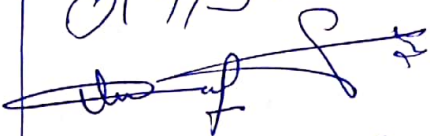
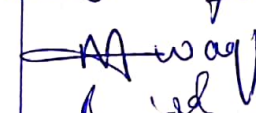
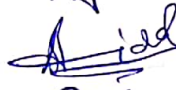
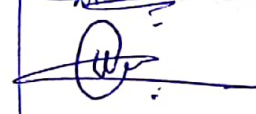



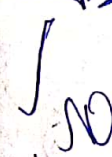
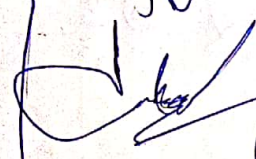
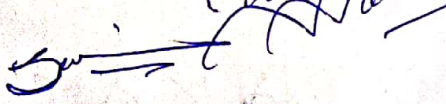
Sr. No.	Name	Cell No.	Signatures
1			
2	Arif		Arif
3	Naveed		Naveed
4	Arshad		Arshad
5	Hasan		Hasan
6	Ashfaq		Ashfaq
7	Rafiq		Rafiq
8	Zohaib		Zohaib
9	Hamza		Hamza
10	Usman		Usman
11	Omar Khan		Omar Khan
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			

3. List of Participants:

District Keamari (UC Office)

Sr. No.	Name	Cell No.	Signatures
1	Syed Altaf Shah	0317-5522213	
2	Shafique		
3	Sarver		Sarver
4	Ammar		
5	M. Ali		
6	Nawaz		NAWAZ
7	Abraham		البراهيم
8	Abid		عبد
9	Rizwan		Rizwan
10	Mansoor		
11	Shahzaib		Shahzaib
12	Qayyom		قويوم
13	Irhan		عزیز
14	Sheikh Yaqoob		Yaqoob
15	Sheikh Qamal		Qamal
16	Shahid Shah		Shahid Shah
17	Hanan		Hanan
18	Asif		Asif
19	Ahmad		ahmad
20			
21			
22			
23			
24			
25			

Chaudhry School to post office district West.


Name	Mb. No.	Signature
M. Ahsam	0300 2363927	
M. SHAHID	0300 7002748	
NASIR Kham	0314 7646899	Nasir
M. Pervez	0300 2395661	M. Pervez
Gbraheem	0302 3938457	
GIULZAR SHAH	0317 0456199	
Ahmed	03000 245561	Ahmed B
Shahinawaz	0315 8251060	
Sheaib	0348 2016609	
Usama	0316 2036318	
Waqar	0306-0376474	Waqar
Sadiq Bonari	0313 6492344	
Umer	0306 2199929	
Latifurrahman	0316 1900 788	Latifurrahman
Ubaidullah	0322 8206545	
Awais	0314 2112557	
Tuseef	0317 7561767	
Jameel	0316 2909279	
Mumtaz Tamoli	0313 2730389	
Qaiser Shah	0310 1132 415	

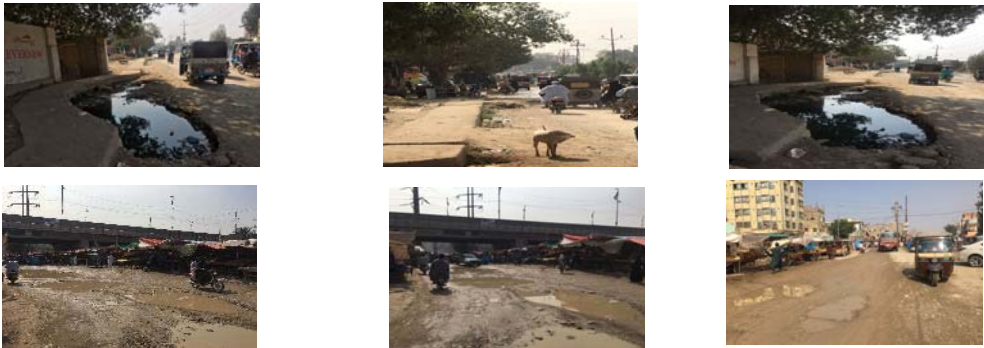
District West (Hotel)


3. List of Participants:

Sr. No.	Name	Cell No.	Signatures
1	Noman Akbar	0310-2643782	Noman
2	Fahad Khatak	0332-3100053	Fahad
3	Adil Sheh		A Sheh
4	Munawal Seith		Munawal
5	Umais Khattak	0343-1375720	Umais
6	Rehmat		Rehmat
7	Umais		U
8	Gulistan		G
9	Aqeel Nook		A
10	Taffir		T
11	Rafique		Rafique
12	Bilal		B
13	Ali		A
14	Laeq Khan		L
15			
16			
17			
18			
19			
20			
21			
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25			


Annex – II
Screening Checklists


1	Sr. No.	1		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Water	
4	Location/Address	Qasba colony Muhammad pur school amenity plot(qasba police station to Kati Pahari road)		
5	Coordinates	Latitude	24 56 28	
		Longitude	67 01 13	
6	District	West		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		Yes	
a	If Yes, Please Specify		Pipeline passing on drain	
b	Approximate distance from subproject Site:		Passing over the pipeline	
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		Yes	
9	Social Screening			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify	Land		
b	Required (Approx. Area)			
c	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque;School	
9.10	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	Shops are existing near 50ft from water line which is to be replaced, depth is just 5ft so work can be done in a cautious way to avoid the livelihood loss		
11	Pictures			


1	Sr. No.	2		
		Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
2	Project Description	Bulk water, Dia: 33", material MS+PRCC, depth 8ft Length:30,	Water Dia 16", Material pRCC, Depth:10ft Length:200, Dia: 18" Material: MS Depth: 8ft Length:100ft	
3	Sector	Water	Water	
4	Location/Address	Mangopir Road from Banaras to new nazimabad		
5	Coordinates	Latitудde	24 55 59	
		Longitude	67 00 56	
6	District	West		
7	Nearby Areas	Residential		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		Yes	No
a	If Yes, Please Specify		Drain	Drain
b	Approximate distance from subproject Site:		20 ft	20 ft
8.4	Disruption to Traffic and Visitors?		Yes	Yes
8.5	Disturbance to Existing Infrastructure?		Yes	Yes
9	Social Screening			
9.1	Land Acquisition?		No	No
a	If Yes, Please Specify Required (Approx. Area)	Land		
b	Government/Private			
9.2	Loss of Shelter?		No	No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	No
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	Yes
a	If Yes, Please Specify		Mosque;School	Mosque;School
9.10	Gender issues?		No	No
a	If Yes, Please Specify			
10	Any Further Observation:	Commercial area exist on left side, but due to availability of service road livelihood will not be loss, a hawkker may cause to dislocate temporary (tyre shop)		
11	Pictures			


1	Sr. No.	3		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
		Bulk water, Dia: 48, Material: PRCC, Depth: 8, joint Leakages.	Water, Dia:10 Material: DADEX, Depth: 8ft Length:150	
3	Sector	Water	Water	
4	Location/Address	Choudary school to post office		
5	Coordinates	Latitude	24 56 08	
		Longitude	67 00 05	
6	District	West		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?	No	No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No	No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No	No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes	Yes	
8.5	Disturbance to Existing Infrastructure?	Yes	Yes	
9	Social Screening			
9.1	Land Acquisition?	No	No	
a	If Yes, Please Specify Required (Approx. Area)	Land		
b	Government/Private			
9.2	Loss of Shelter?	No	No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No	No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	Yes	Yes	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No	No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	Yes	Yes	
a	If Yes, Please Specify			
9.7	Dislocation of People?	No	No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?	No	No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource	Yes	Yes	
a	If Yes, Please Specify	Mosque;School	Mosque;School	
9.10	Gender issues?	Yes	Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	Road is broken, no paps, water issues		
11	Pictures			


1	Sr. No.	4		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Water, Dia: 12" Material: PE Depth: 8' Length:6000ft	
4	Location/Address	Water Ittehad town zero point to Khyber chowk		
5	Coordinates	Latitutte	24 57 36	
		Longitude	67 56 31	
6	District	West		
7	Nearby Areas	Both commercial and residential		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		Yes	
9	Social Screening			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify	Land		
b	Required (Approx. Area)			
	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque;School	
9.10	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	Water new line to be installed, ROW is wide, water line to be installed in a proper care to avoid any livelihood.		
11	Pictures			


1	Sr. No.	5		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
		Bulk Water, Dia: 66" Material: MS, PRCC, Depth: 6' Length:500ft		
3	Sector	Water		
4	Location/Address	Naya Nazimabad to Madinatul Hikmat Road		
5	Coordinates	Latitude	25 00 25	
		Longitude	67 01 49	
6	District	West		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	Yes		
9	Social Screening			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify	Land		
b	Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.9	Physical Cultural Resource	Yes		
a	If Yes, Please Specify	Mosque;School		
9.10	Gender issues?	Yes		
a	If Yes, Please Specify			
10	Any Further Observation:	Road is wide		
11	Pictures			


1	Sr. No.	1		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage Dia: 12" Material: RCC Depth: 8' patch work req: 200ft
3	Sector			Sewerage
4	Location/Address	Merry weather road		
5	Coordinates	Latitude	24 51 01	
		Longitude	67 01 45	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			Yes
8.5	Disturbance to Existing Infrastructure?			Yes
9	Social Screening			
9.1	Land Acquisition?			No
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource			Yes
a	If Yes, Please Specify			Mosque;School
9.10	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	Offices parking will be distributed		
11	Pictures			


1	Sr. No.	2		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
			Water Dia 6" Material AC Depth 5.5 ft Length 200ft.	Sewerage Dia 24" Material RCC Depth 10ft, 100-200ft patch work required
3	Sector		Water	Sewerage
4	Location/Address	Brounten Road		
5	Coordinates	Latitude	24 50 46	
		Longitude	67 01 44	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		Yes	No
a	If Yes, Please Specify		Drain	Drain
b	Approximate distance from subproject Site:		20 ft	20 ft
8.4	Disruption to Traffic and Visitors?		Yes	Yes
8.5	Disturbance to Existing Infrastructure?		Yes	Yes
9	Social Screening			
9.1	Land Acquisition?		No	No
a	If Yes, Please Specify Land Required (Approx. Area)	Land		
b	Government/Private			
9.2	Loss of Shelter?		No	No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	No
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	Yes
a	If Yes, Please Specify		Mosque;School	Mosque;School
9.10	Gender issues?		No	No
a	If Yes, Please Specify			
10	Any Further Observation:	Infront of CM house		
11	Pictures			


1	Sr. No.	3		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
			Water: Dia 6" material AC Depth 4.5 Length 800ft	Sewerage: Dia 12" Material RCC Depth 8-10 ft, 600 patchwork is required
3	Sector		Water	Sewerage
4	Location/Address	Mclever Road		
5	Coordinates	Latitude	24 50 41	
		Longitude	67 01 48	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	Yes
8.5	Disturbance to Existing Infrastructure?		Yes	Yes
9	Social Screening			
9.1	Land Acquisition?		No	No
a	If Yes, Please Specify Required (Approx. Area)	Land		
b	Government/Private			
9.2	Loss of Shelter?		No	No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		Yes	Yes
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		Yes	Yes
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		No	No
a	If Yes, Please Specify			
9.10	Gender issues?		Yes	Yes
a	If Yes, Please Specify			
10	Any Further Observation:	Burhani mehal near to the site		
11	Pictures			


1	Sr. No.	4		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Water	
4	Location/Address	M.Bin Qasim road		
5	Coordinates	Latitude	24 51 17	
		Longitude	67 00 54	
6	District	South		
7	Nearby Areas	Both commercial and residential		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		Yes	
9	Social Screening			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify			
a	Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque; School	
9.10	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	No paps issue, shops are on both sites but ROW is wide so carefully work is to be required to avoid any disturbance		
11	Pictures			


1	Sr. No.	5		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Water	Sewerage
4	Location/Address	OutramRoad		
5	Coordinates	Latitude	24 51 06	
		Longitude	67 00 37	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	Yes
8.5	Disturbance to Existing Infrastructure?		Yes	Yes
9	Social Screening			
9.1	Land Acquisition?		No	No
a	If Yes, Please Specify			
a	Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	No
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	Yes
a	If Yes, Please Specify		Mosque;School	Mosque;School
9.10	Gender issues?		Yes	Yes
a	If Yes, Please Specify			
10	Any Further Observation:	ROW is wide, but traffic issues will be a serious issue during construction.		
11	Pictures			


1	Sr. No.	6		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage Dia: 15" Material: RCC Depth:6' Length: 450ft
3	Sector	Old queens road		
4	Location/Address	Old queens road		
5	Coordinates	Latitude	24 50 43	
		Longitude	67 00 00	
6	District	South		
7	Nearby Areas	Parking		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?			No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?			No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?			No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?			Yes
8.5	Disturbance to Existing Infrastructure?			Yes
9	Social Screening			
9.1	Land Acquisition?			No
a	If Yes, Please Specify			
b	Land Required (Approx. Area)			
c	Government/Private			
9.2	Loss of Shelter?			No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?			No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?			No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?			No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?			No
a	If Yes, Please Specify			
9.7	Dislocation of People?			No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?			No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource			No
a	If Yes, Please Specify			
9.10	Gender issues?			Yes
a	If Yes, Please Specify			
10	Any Further Observation:	No paps		
11	Pictures			


1	Sr. No.	7		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Water	Sewerage
4	Location/Address	Claremont road		
5	Coordinates	Latitude	24 50 34	
		Longitude	67 02 04	
6	District	South		
7	Nearby Areas	Residential		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	Yes
8.5	Disturbance to Existing Infrastructure?		Yes	Yes
9	Social Screening			
9.1	Land Acquisition?		No	No
a	If Yes, Please Specify			
b	Land Required (Approx. Area)			
c	Government/Private			
9.2	Loss of Shelter?		No	No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	No
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	Yes
a	If Yes, Please Specify		Mosque; School	Mosque; School
9.10	Gender issues?		Yes	Yes
a	If Yes, Please Specify			
10	Any Further Observation:	No paps		
11	Pictures			


1	Sr. No.	8		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector	Water, Dia: 6" Material: AC Depth: 5' Length:450'		Water
4	Location/Address	Feroz Nana Road		
5	Coordinates	Latitude	24 50 09	
		Longitude	67 01 56	
6	District	South		
7	Nearby Areas	Residential		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		No	
8.5	Disturbance to Existing Infrastructure?		Yes	
9	Social Screening			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify			
b	Land Required (Approx. Area)			
c	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	
a	If Yes, Please Specify			
9.10	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	No paps		
11	Pictures			

1	Sr. No.	9		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
		Bulk Water, Dia: 66" Material: MS, PRCC, Depth: 6' Length: 500ft		
3	Sector	Water		
4	Location/Address	Naya Nazimabad to Madinatul Hikmat Road		
5	Coordinates	Latitude	25 00 25	
		Longitude	67 01 49	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?	No		
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No		
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No		
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes		
8.5	Disturbance to Existing Infrastructure?	No		
9	Social Screening			
9.1	Land Acquisition?	No		
a	If Yes, Please Specify	Land		
b	Required (Approx. Area)			
c	Government/Private			
9.2	Loss of Shelter?	No		
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No		
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No		
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No		
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No		
a	If Yes, Please Specify			
9.7	Dislocation of People?	No		
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?	No		
a	If Yes, Please Specify			
9.9	Physical Cultural Resource	Yes		
a	If Yes, Please Specify	Mosque, School		
9.10	Gender issues?	Yes		
a	If Yes, Please Specify			
10	Any Further Observation:	Road is wide		
11	Pictures			

1	Sr. No.	10		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Water	Sewerage
4	Location/Address	Siddiqui wahab Road		
5	Coordinates	Latitude	24 52 14	
		Longitude	67 00 46	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	No
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	No
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	No
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	Yes
8.5	Disturbance to Existing Infrastructure?		Yes	Yes
9	Social Screening			
9.1	Land Acquisition?		No	No
a	If Yes, Please Specify			
b	Land Required (Approx. Area)			
c	Government/Private			
9.2	Loss of Shelter?		No	No
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	No
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	No
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	No
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	No
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	No
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	No
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	Yes
a	If Yes, Please Specify		Mosque; School	Mosque; School
9.10	Gender issues?		Yes	Yes
a	If Yes, Please Specify			
10	Any Further Observation:	No PAPs		
11	Pictures			

1	Sr. No.	11		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Water	
4	Location/Address	Lee Market Road		
5	Coordinates	Latitude	24 51 40	
		Longitude	66 59 59	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		Yes	
9	Social Screening			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify			
a	Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque; School	
9.10	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	No paps issue.		
11	Pictures			

1	Sr. No.	12		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
3	Sector		Dia: 8" Material: PE Depth: 4' 1 joint Leakage	
4	Location/Address		Water	
5	Coordinates	Teachers Road		
		Latitude	24 51 17	
		Longitude	66 59 47	
6	District	South		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?		No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?		No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?		No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?		Yes	
8.5	Disturbance to Existing Infrastructure?		Yes	
9	Social Screening			
9.1	Land Acquisition?		No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?		No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?		No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?		No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?		No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?		No	
a	If Yes, Please Specify			
9.7	Dislocation of People?		No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?		No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource		Yes	
a	If Yes, Please Specify		Mosque;School	
9.10	Gender issues?		Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	No paps issue		
11	Pictures			

1	Sr. No.	1		
2	Project Description	Bulk Water Supply Line	Water Supply Distribution Network	Sewerage
		33" Material:PRCC Depth: 8' joint Leakage	Dia: 10" Material:MS Depth:8' Length:150ft	
3	Sector	Water	Water	
4	Location/Address	9C road baldia (hydrant) football ground		
5	Coordinates	Latitutde	24°55' 48"	
		Longitude	66° 57' 31"	
6	District	Keamari		
7	Nearby Areas	Commercial		
8	Environmental Screening			
8.1	Presence of any Eco-Sensitive Features?	No	No	
a	If Yes			
b	Approximate distance from subproject Site:			
8.2	Clearance of Trees/ Vegetation?	No	No	
a	If Yes, Please Specify			
8.3	Any Nearby Water body?	No	No	
a	If Yes, Please Specify			
b	Approximate distance from subproject Site:			
8.4	Disruption to Traffic and Visitors?	Yes	Yes	
8.5	Disturbance to Existing Infrastructure?	Yes	Yes	
9	Social Screening			
9.1	Land Acquisition?	No	No	
a	If Yes, Please Specify Land Required (Approx. Area)			
b	Government/Private			
9.2	Loss of Shelter?	No	No	
a	If Yes, Please Specify			
9.3	Loss of crops, trees and fixed assets?	No	No	
a	If Yes, Please Specify			
9.4	Loss of Business/Livelihood (Temporary)?	No	No	
a	If Yes, Please Specify			
9.5	Loss of Business/Livelihood (Permanent)?	No	No	
a	If Yes, Please Specify			
9.6	Loss of Sources of Income?	No	No	
a	If Yes, Please Specify			
9.7	Dislocation of People?	No	No	
a	If Yes, Please Specify			
9.8	Anti-Encroachment Drive?	No	No	
a	If Yes, Please Specify			
9.9	Physical Cultural Resource	Yes	Yes	
a	If Yes, Please Specify	Mosque;Play ground	Mosque;Play ground	
9.10	Gender issues?	Yes	Yes	
a	If Yes, Please Specify			
10	Any Further Observation:	No PAPS		
11	Pictures			

Annex – III
Anti-Encroachment Drive (AED)
NOC



OFFICE OF THE DEPUTY COMMISSIONER

DISTRICT KEAMARI-KARACHI

No. DC(Keamari)/K/ADC-I/2709/2022
Karachi. Dated: 17/11/2022

To,

The Assistant Commissioner (H.Q),
For Commissioner, Karachi Division,
Karachi.

SUBJECT: ANTI-ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR /REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-I)

With reference to your office letter No. CK/AC(HQ)833/2022, Dated: 14-11-2022, on the subject cited above.

It is, inform you that since 27-Oct-2018, No Anti-Encroachment Drive (AED) was conducted wherein hard encroachments were removed from the sites of District Keamari, mentioned in the enclosure of the letter.

Therefore, the report in the matter may kindly be treated as Nil.

**ADDITIONAL DEPUTY COMMISSIONER-I
FOR: DEPUTY COMMISSIONER
KEAMARI-KARACHI**

Copy to:-

1. P.S to Deputy Commissioner, District Keamari Karachi.



OFFICE OF THE
DEPUTY COMMISSIONER
(SOUTH) KARACHI

Ph. # 99202822
Email: adc1.south@gmail.com

No.ADC-I/S/ ⁶³²⁵ /2022
Dated: 16th November, 2022

To,

The Assistant Commissioner (Head Quarters),
For Commissioner Karachi Division.

SUBJECT: ANTI ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-1).

Reference: Letter No. CK/AC/HQ/833/2022, dated: 14/11/2022.

With reference to the subject cited above, it is stated that the report regarding the subject matter was called from all Assistant Commissioner of District South Karachi. (Copies of reports are attached herewith). The same is sent herewith for further necessary action as desired.

**ADDITIONAL DEPUTY COMMISSIONER-I
SOUTH-KARACHI**



OFFICE OF THE
ASSISTANT COMMISSIONER
GARDEN SOUTH KARACHI

No.AC/Garden/South/ 588 /2022

Karachi Dated 16 / 11 /2022

Office Located at DC South Complex Building,
M.A Jinnah Road, Adjacent Gul Plaza, District
South Karachi.

Ph: 021-99216345

To,

INWARD NO: 10194/2022
DATED: 16/11/2022
DEPUTY COMMISSIONER SOUTH

✓ The Additional Deputy Commissioner-I,
South Karachi

Subject: ANTI ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR /
REPLACEMENT OF DAMAGE SECTIONS OF WATER LINES AND
SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD
EMERGENCY RESPONSE WORK KWSSIP SOP-1).

Please refer to your good office letter No.DC/S/ADC-I/6307/2022,
dated.15.11.2022 regarding subject cited above.

It is certify as per field staff report that no anti-encroachment drive has been taken
place at **Siddiq Wahab Road** pertaining to Sub-division Garden, District South-Karachi.

Bis Ali
16/11/22

ASSISTANT COMMISSIONER
GARDEN SOUTH KARACHI



**OFFICE OF THE
ASSISTANT COMMISSIONER
CIVIL LINES, SUB-DIVISION
SOUTH-KARACHI**

Commissioner Compound, Club Road, Karachi
No.AC/CL/SOUTH/601/2022,Karachi
Dated:16-11-2022

The Additional Deputy Commissioner-I,
South Karachi.

SUBJECT: ANTI ENCROACHMENT VIRIFICATION CERTIFICATE OF REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-1).

Please refer to letter No.DC/S/ADC-I/6307/2022, dated, 15-11-2022, of the Additional Deputy Commissioner-I for Deputy Commissioner South Karachi, along with enclosures, regarding the subject matter. There was no anti encroachment operation carried out in the areas mentioned.

ASSISTANT COMMISSIONER
CIVIL LINES SUB-DIVISION
DISTRICT SOUTH KARACHI

Copy to:

1. P.A to Deputy Commissioner, South Karachi.
2. The Assistant Commissioner (Headquarter), for Commissioner Karachi Division.



OFFICE OF THE
MUKHTIARKAR LYARI SUB-DIVISION
(SOUTH) KARACHI

No. MUKH./LYARI/S/633/2022, Karachi Dated. 15-11-2022.

To,

The Deputy Commissioner,
South-Karachi.

Through: The Assistant Commissioner Lyari South Karachi.

SUBJECT: ANTI/ENCROCHMENT VERIFICATION CERTIFICATE OF REPAIR/REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI UNDER FLOOD EMERGENCY RESPONSE WORK KWSSIP SOP-I

Please refer to your good office letter NO. DC/South/ADC-I/2022-6307, dated: 15-11-2022, received alongwith copy of letter NO. CK/HQ/833/2022, dated : 14-11-2022, and its enclosure on the subject noted above.

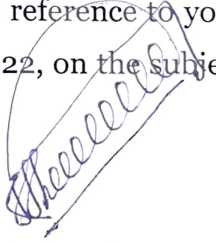
It is submitted that the list of Sites/Roads mentioned in the list/^{do}not fall\$ in Lyari Sub-Division, Hence the requisite report may kindly be treated as nil.


MUKHTIARKAR LYARI
DISTRICT SOUTH KARACHI

OFFICE OF THE ASSISTANT COMMISSIONER LYARI SUB DIVISION SOUTH
KARACHI

No. AC/Lyari/South/524/2022dated : 15-11-2022

Forwarded to the worthy Deputy Commissioner-South, with reference to your good office letter NO. South/ADC-II/2022-5979, dated : Ist November 2022, on the subject captioned above.


ASSISTANT COMMISSIONER
LYARI SUB DIVISION
DISTRICT SOUTH



Ph# 021-9216374

OFFICE OF THE
ASSISTANT COMMISSIONER
ARAMBAGH SUB-DIVISION,
DISTRICT SOUTH KARACHI
**Address: Plot No 31, Garden Road Opp:
IBA University near Anklesyria Hospital
Karachi**

No.AC/ABSK/ 03 / 1063 /2022.
Karachi Dated: 16 -Nov- 2022.

To,

*The Deputy Commissioner,
District South-Karachi.*

SUBJECT:

**ANTI ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR
REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND
SEWERS IN DIFFERENT DISTRICT OF KARACHI (UNDER FLOOD
EMERGENCY RESPONSE WORKS KWSSIP SOP-1).**

Please reference letter No. CK/AC/HQ/826/2022, dated 04-11-2022 and letter No. DC/S/ADC-1/6307/2022, dated, 15-11-2022, of Additional Deputy Commissioner-I South Karachi.

It is certified as per field staff report that no anti-encroachment drive has been taken place at **M. Bin Qassim Road, Outram Road, and Old Queens Road** pertaining to Sub-Division Arambagh District South Karachi.

**Assistant Commissioner Arambagh,
South-Karachi**





OFFICE OF THE
MUKHTIARKAR (REVENUE) ORANGI SUB-DIVISION
DISTRICT WEST KARACHI

No. MUKH/REV/ORANGI/K-W/ 518 /2022,

Dated: 18-11-2022

To,


The Deputy Commissioner
Karachi West

SUBJECT: ANTI-ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR / REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICTS OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-1).

Ref:- Letter No: DC/ADC-II/K/W/ 534 /2022, dated: 05.11.2022, on the subject noted above.

It is certified as per filed staff report that no Anti-encroachment drive has been taken place at Choudhary School to Post office, Under Banaras Bridge, Qasba More, Qasba Colony Muhammadpur School and Qasba Police Chowki to Katti Pahari Road in Sub-Division Orangi Karachi-West.

Therefore the report in the matter may kindly be treated as Nil.


MUKHTIARKAR (REVENUE)
Orangi Sub-Division
Karachi West



OFFICE OF THE ASSISTANT COMMISSIONER ORANGI SUB-DIVISION
KARACHI WEST

NO. AC/ORANGI/KARACHI/WEST/ 518 /2022, KARACHI, Dated: 18-11-2022

Forwarded to Deputy Commissioner Karachi West, with reference to letter No. referred above, for kind information and further necessary action please.


ASSISTANT COMMISSIONER
Orangi Sub-Division
Karachi West



**OFFICE OF THE
MUKHTIARKAR (REVENUE) MANGHOPIR SUB-DIVISION
DISTRICT KARACHI WEST**

No. MUKH/M-P/ KW / 1471 / 2022

Karachi

dated:

18-11-2022.

To,

The Deputy Commissioner,
District Karachi West.

Subject:- ANTI-ENCROACHMENT VERIFICATION CERTIFICATE OF REPAIR / REPLACEMENT OF DAMAGED SECTIONS OF WATER LINES AND SEWERS IN DIFFERENT DISTRICT OF KARACHI (UNDER FLOOD EMERGENCY RESPONSE WORKS KWSSIP SOP-1)

.Ref:- Letter No.DC/ADC-II/K/W/534/2022 dated:05-11-2022, on the subject noted above.

It is certified that as per field staff report that no any encroachment drive has been taken place at Manghopir Road from Banaras to New Nazimabad and Naya Nazimabad to Madinatul Hikmat Road in Sub-Division Manghopir, Karachi West.


MUKHTIARKAR (REVENUE)
SUB-DIVISION MANGHOPIR
KARACHI WEST



**OFFICE OF THE ASSISTANT COMMISSIONER MANGHOPIR
DISTRICT KARACHI WEST**


No. AC /M-P/ KW / 071 / 2022.

Karachi

dated:

10-11-2022.

Forwarded to Deputy Commissioner Karachi West, with reference to letter No. referred above, for kind information and further necessary action please.


ASSISTANT COMMISSIONER
SUB-DIVISION MANGHOPIR
KARACHI WEST

Annex – IV
Photographs along with the
Subproject Locations

Repair/Rehabilitation of Water Supply and Sewerage System in South District of Karachi

Sector	Location/Address:	Latitude:	Longitude:	District	Visual Representation				
Sewerage	Merry weather road	24 51 01	67 01 45	South					
Water;Sewerage	Brounten Road	24 50 46	67 01 44	South					
Water;Sewerage	Mclever Road	24 50 41	67 01 48	South					
Water	M.Bin Qasim road	24 51 17	67 00 54	South					
Water;Sewerage	OutramRoad	24 51 06	67 00 37	South					

Sewerage	Old queens road	24 50 43	67 00 00	South					
Water;Sewerage	Claremontroad	24 50 34	67 02 04	South					
Water	MC Neil road (Sr.no.55)	24 50 24	67 02 11	South					
Water	Feroz Nana Road	24 50 09	67 01 56	South					
Water;Sewerage	Siddiqui wahab Road	24 52 14	67 00 46	South					

Water	Lee Market Road	24 51 40	66 59 59	South					
Water	Teachers Road	24 51 17	66 59 47	South					

Repair/ Rehabilitation of Water Supply and Sewerage System in West District of Karachi

Sr. No.	Sector	Location/Address:	Latitude:	Longitude:	District	Visual Representation				
1	Water	Qasba colony Muhammad pur school amenity plot(qasba police station to Kati Pahari road)	24 56' 28"	67 01' 13"	West					
2	Water,Bulk Water	Mangopir Road from Banaras to new nazimabad	24 55' 59"	67 00' 56"	West					
3	Water,Bulk Water	Choudary school to post office	24 56' 08"	67 00' 05"	West					
4	Water	Ittehad town zero point to Khyber chowk	24 57' 36"	67 56' 31"	West					
5	Bulk Water	Naya Nazimabad to Madinatul Hikmat Road	25 00' 25"	67 01' 49"	West					

Repair/ Rehabilitation of Water Supply and Sewerage System in Keamari District of Karachi

Sr. No.	Sector	Location/Address:	Latitude:	Longitude:	District	Visual Representation			
1	Water;Bulk Water	9C road baldia (hydrant) football ground	24°55' 48"	66° 57' 31"	Keamari				

Annex – V
Environmental Codes of Practice (ECOP)

Environmental Codes of Practice

1. Rationale of this ECOPs

This Environmental Codes of Practice (ECOPs) sets out standards and procedures for managing the potential environmental impacts associating with the minor construction activities for repair/ rehabilitation of damaged sections of existing water lines and sewers under SOP-1 for KWSSIP. The environmental impacts associated with this small civil work are considered to be minor, temporary and reversible, and readily managed with good practices during implementation. The ECOPs lay out outline simple rules and procedures regarding identification, monitoring and mitigation of those environmental impacts. The ECOPs shall be included in all relevant contracts.

2. Environmental Screening and Assessment

During construction, the potential impacts include dust and solid waste generation associated with minor civil work activities. These impacts are small, localized and can be mitigated by incorporating good civil work practices, including proper housekeeping measures, proper material storage and disposal of solid waste and pollution control.

In addition, to ensure the environmental sanitation and safety during operation, it is requested that design for chlorination stations shall be in line with the quality standards including appropriate ventilation, trash bin, lighting, fire extinguisher, eye-wash facilities and toilet facilities etc.

3. Project ECOP Implementation Arrangements

a. The Project Implementation Unit (PIU) – KWSSIP

The PIU-KWSSIP will be responsible for over-sighting the implementation of project. During implementation, the PIU is responsible for ensuring that the ECOPs will be incorporated in the bidding document and complied by contractors. The PIU has ultimate responsibility in the event of non-compliance with the ECOP during construction.

b. The Contractor

The Contractor, has the responsibility of establishing and maintaining contact with the PIU or delegated agencies and local residents and keeping them informed of construction matters likely to affect them. The Contractor and any agents or Sub-Contractors will be contractually required to comply with the requirements as specified in the ECOPs. The Contractor will responsible for implementation of the ECOPs, including workplace safety, and will ensure adequate resources are available for the implementation of the ECOPs throughout the construction period.

The Contractor has a duty to inform local residents likely to be affected by such activities at least 14 days prior to undertaking the works, as well as applying for the appropriate permits and licenses.

4. Construction Activities and Environmental Rules for Contractors

a. Management of Construction Site

This part describes basic requirements for all Contractors carrying out minor construction activities. It will be included in all construction contracts of the civil works. The Contractor is required to minimize, as far as reasonably practicable, any adverse environmental impact of their construction activities.

Prohibitions

The following activities are prohibited on or near the project site:

- (a) Cutting of trees for any reason outside the approved construction area;
- (b) Illegal dumping of demolition material and debris.
- (c) Use of unapproved toxic materials, including lead-based paints, asbestos, etc.;
- (d) Disturbance to anything with architectural or historical value;
- (e) No burning of waste
- (f) Use of alcohol by workers.

Working hours: Core working hours will be from 0800 to 1800 on weekdays and 0800 to 1300 on weekend. Individual site requirements which differ from the above will be considered on a site-by-site basis. Noisy operations shall not take place outside these hours without prior approval from the PIU and/or delegated agencies and local authorities.

Good housekeeping: The Contractor will follow a 'good housekeeping' policy at all times. This will include, but not necessarily be limited to the following: Ensure considerate site behavior of the Contractor's staff; Prohibit open fires; Ensure that appropriate provisions for dust control and road cleanliness are implemented; Remove rubbish at frequent intervals, leaving the site clean and tidy; Remove food waste; Frequently inspect, repair and re-paint as necessary all site hoardings to comply with the local conditions and local regulations, all flying post/ board is to be removed as soon as reasonably practicable and within 24 hours of notice; Maintain toilet facilities and other welfare facilities for its staff;

Public information and site access: As a minimum, the Contractor will provide public information on the site program (start and finish dates), plus the telephone for public contacts and/or requests especially during the school year. Any un-authorized entry to or exit from the sites should be control as much as possible.

Site layout and facilities: Location of site huts, office accommodation, toilets and welfare facilities should be accommodated within the boundaries of the site.

Emergency Procedures: The Contractor will ensure that emergency procedures are developed to facilitate effective actions in case of medical/fire emergency as well as environmental pollution (major spillage of gasoline, used oil, and/or toxic chemicals, etc.). The emergency procedure will contain emergency phone numbers and the method of notifying the statutory authorities. Contact numbers for the key staff of the contractor will also be included.

Fire prevention and control: All construction sites and associated accommodation or welfare facilities will have in place appropriate plans and management controls to prevent fires. The site fire plans will be prepared and will have due regard to the GoS regulations. During operation and maintenance of equipment and vehicles, the Contractor will ensure that its workers are well aware of the procedures and have enough knowledge to comply with them. The specification of non-combustible materials, products and packaging will be pursued wherever reasonably practicable. The project will also have to comply with GoS requirements as may be appropriate at specific sites.

Operation of equipment: The Contractor must take all reasonable precautions to ensure that equipment is operated in a manner so as not to cause safety risk and/or nuisance to surrounding residents and occupiers. Operations of crane and other large equipment will have to be closely supervised. Permission may be required as per GoS regulations.

Clearance of the construction site after completion: On completion of the works the Contractor will clear away and remove all materials and rubbish and temporary works of every kind. The site will be left clean and in a condition to the satisfaction of the PIU and/or delegated agencies.

5. Management of Environment and Sanitation

Nuisance, Dust and Noise Control

To control nuisance, dust and noise in the construction sites the Contractor should:

- (a) To the extent possible, maintain noise levels associated with all machinery and equipment at or below 90 db.
- (b) In sensitive areas (including residential neighborhoods, hospitals, etc.) more strict measures may need to be implemented to prevent undesirable noise levels. Minimize production of dust and particulate materials at all times, to avoid impacts on surrounding families and businesses, and especially to vulnerable people (children, elders).
- (c) Place dust screens around construction areas, fencing should be provided along the boundary so that the emissions do not affect the immediate neighbors, paying particular attention to areas close to housing, commercial areas, and recreational areas.
- (d) Spray water periodically as needed on construction areas, especially at site located near residential area
- (e) Apply proper measures to minimize disruptions from vibration or noise coming from construction activities.

Disposal of Construction Waste

The Contractor shall establish and enforce daily site clean-up procedures, including maintenance of adequate disposal facilities for construction debris.

Debris generated due to the demolition of the existing structures shall be suitably reused, to the extent feasible. The disposal of remaining debris shall be carried out only at sites identified and approved by local authorities. The contractor should ensure that these disposal sites: (a) are not located within designated forest areas; (b) do not impact natural drainage courses; Under no circumstances shall the contractor dispose of any material in environmentally sensitive areas. Dispose in authorized areas all of garbage, metals, used oils, and excess material generated during construction, incorporating recycling systems and the separation of materials. In the event

any debris or silt from the sites is deposited on adjacent land, the Contractor shall immediately remove such debris and restore the affected area to its original state to the satisfaction of the PIU and/or delegated agencies and local communities.

Water quality

The Contractor must take all the efforts to prevent wastes (solid and liquid) discharge into all rivers and canals and to protect surface and groundwater from pollution and other adverse impacts including changes to water levels, flows and general water quality. Whenever possible, the Contractor must minimize the amounts of wastewater that need to be discharged and find alternative means of disposal. Liquid spills of lubricant, fuel and oil within the site should be attended at the earliest in order to minimize land & groundwater contamination. The Contractor will ensure that any seepage and wastewater arising from the works must be collected and discharged via a settlement tank. Water drainage must be designed to avoid stagnant conditions that could create bad smell and unsanitary condition in the construction area and surrounding environment.

Workforce and Workers; Sanitation

The Contractor should whenever possible locally recruit the majority of the workforce and shall provide appropriate training as necessary.

The Contractor shall not allow the use of fuel wood for cooking or heating at the construction site or surrounding area.

The Contractor shall ensure that site offices, depots, and workshops are located in appropriate areas. Clean and well-maintained toilets should be made available.

Clean water shall be adequately provided for workers by the Contractor.

Safety during Construction

The Contractor's responsibilities include the protection of every person and nearby property from construction accidents. The Contractor shall be responsible for complying with all government safety requirements and any other measures necessary to avoid accidents, including the following:

- (a) Notice signs/board shall properly be installed at the construction sites
- (b) If school children are in the vicinity, include traffic safety personnel to direct traffic during school hours;
- (c) Conduct safety training for construction workers prior to beginning work;
- (d) Provide necessary personal protective equipment and clothing (goggles, gloves, respirators, dust masks, hard hats, steel-toed and –shanked boots, etc.,) for construction workers and enforce their use;
- (e) During emergencies of any kind, suspend all work.

Community Relations

To enhance adequate community relations the Contractor shall:

- (a) Inform the local authorities and community about construction and work schedules, interruption of services, traffic detour routes and provisional bus routes, as appropriate.

- (b) Limit construction activities at night. When necessary, ensure that night work is carefully scheduled and the community is properly informed so they can take necessary measures.

Physical Cultural Property Chance-finds Procedures

If the Contractor discovers archeological sites, historical sites, remains and objects the Contractor shall:

- (c) Stop the construction activities in the area of the chance find;
- (d) Delineate the discovered site or area;
- (e) Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the Directorate of Archeology take over;
- (f) Notify the supervisory Engineer who in turn will notify the responsible local authorities immediately (within 24 hours or less);
- (g) Responsible local authorities, would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
- (h) Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
- (i) Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities; and
- (j) Construction work could resume only after permission is given from the responsible local authorities concerning safeguard of the heritage.

Annex – VI
Workers' Code of Conduct

Annex - VI

Workers' Code of Conduct

I, _____, acknowledge that preventing any misconduct as stipulated in this code of conduct, including sexual exploitation and abuse (SEA), sexual harassment (SH), and child abuse/exploitation are important. Any activity, which constitute acts of gross misconduct are therefore grounds for sanctions, penalties or even termination of employment. All forms of misconduct are unacceptable be it on the work site, the work site surroundings, or at worker's camps. Prosecution of those who commit any such misconduct will be pursued as appropriate. I agree that while working on this project, I will:

1. Consent to security background check;
2. Treat women, children (persons under the age of 18) and persons with disability with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, birth or other status;
3. Not use language or behaviour towards men, women or children/learners that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate;
4. Carry out his/her duties competently and diligently;
5. Comply with this Code of Conduct and all applicable laws, regulations and other requirements, including requirements to protect the health, safety and well-being of other Contractor's Personnel and any other person;
6. Maintain a safe working environment including by:
 - a. Ensuring that workplaces, machinery, equipment and processes under each person's control are safe and without risk to health;
 - b. Wearing required personal protective equipment;
 - c. Using appropriate measures relating to chemical, physical and biological substances and agents; and
 - d. Following applicable emergency operating procedures.
7. Report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and danger to his/her life or health;
8. Treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers or children;
9. Not engage in any form of sexual harassment including unwelcome sexual advances, requests for sexual favours, and other unwanted verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
10. Not participate in sexual activity with children/learners—including grooming or through digital media. Mistaken belief regarding the age of a child and consent from the child is not a defence;
11. Not exchange money, employment, goods, or services for sex, with community members including sexual favours or other forms of humiliating, degrading or exploitative behaviour;
12. Attend trainings related to HIV and AIDS, SAE/SH, occupational health and any other relevant courses on safety as requested by my employer;

13. Report to the relevant committee any situation where I may have concerns or suspicions regarding acts of misconduct by a fellow worker, whether in my company or not, or any breaches of this code of conduct provided it is done in good faith;
14. Regarding children (under the age of 18):
 - a) Refrain from hiring children for domestic or other labour, which is inappropriate given their age, or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
 - b) Comply with all relevant local legislation, including labour laws in relation to child labour.
15. Refrain from any form of theft for assets and facilities including from surrounding communities.
16. Remain in designated working area during working hours;
17. Refrain from possession of alcohol and illegal drugs and other controlled substances in the workplace and being under influence of these substances on the job and during working hours;
18. Follow prescribed environmental occupation health and safety standards;
19. Channel grievances through the established grievance redress mechanism.

I understand that the onus is on me to use common sense and avoid actions or behaviours that could be construed as misconduct or breach this code of conduct.

I acknowledge that I have read and understand this Code of Conduct, and the implications have been explained with regard to sanctions on-going employment should I not comply.

Signed by: _____

Signature: _____

Date: _____

For the Employer/Contractor

Signed by: _____

Signature: _____

Date: _____

Annex – VII
Chance Find Procedures

CHANCE FIND PROCEDURES

Project may involve deep excavation. Therefore, the possibility of chance find is not ignorable. In case of any chance find, the contractor will immediately report through Supervision Consultant to Directorate General (DG) of Antiquities & Archaeology, Government of Sindh to take further suitable action to preserve those antique or sensitive remains. Representative of the “Director Archaeology and Museum (DAM)” will visit the site and observed the significance of the antique, artifact and Cultural (religious) properties and significance of the project. The documentation will be completed and if required suitable action will be taken to preserve those antiques and sensitive remains.

In case any artifact, antiques and sensitive remains are discovered, chance find procedures should be adopted by contractor workers as follows:

- Stop the construction activities in the areas of chance find;
- Delineate the discovered site or area;
- Consult with the local community and provincial Archeological Department
- The suggestion of the local communities and the concerned authorities will be suitably incorporated during taking the preventive measures to conserve the antique, artifact and cultural (religious) properties
- Secure the site to prevent any damage or loss of removable objects. In case of removable antiquities or sensitive remain, a night guard shall be arranged until the responsible local authorities take over;
- After stopping work, the contractor must immediately report the discovery to the Supervision Engineer.

The contact Address of Directorate General of Antiquities & Archaeology is given below:

Antiquities House. C/82, Block-2,
Near Bilal Masjid, Clifton, Karachi,
Sindh 75600

Tel: 021-99212126
021-99212127

Annex – VIII

Standard Operating Procedures (SOPs) for COVID-19

STANDARD OPERATING PROCEDURES (SOPs) FOR COVID-19

(Based on World Bank Guidelines)

1 Introduction

The COVID-19 pandemic presents Governments with unprecedented challenges. Addressing COVID-19 related issues in both existing and new operations starts with recognizing that this is not business as usual and that circumstances require a highly adaptive responsive management design to avoid, minimize and manage what may be a rapidly evolving situation. In many cases, reasonable efforts must be put in during the circumstances, recognizing that what may be possible today may be different next week (both positively, because more supplies and guidance may be available, and negatively, because the spread of the virus may have accelerated).

2 Challenges with Construction/ Civil Works

Projects involving construction/ civil works frequently involve a large work force, together with suppliers and supporting functions and services at the designated location. The work force may comprise workers from local areas more specifically. They may need to live in on-site accommodation, lodge within communities close to work sites or return to their homes after work. There may be different contractors permanently present on site, carrying out different activities, each with their own dedicated workers.

Given the complexity and the concentrated number of workers, the potential for the spread of infectious disease in projects involving construction is extremely serious, as are the implications of such a spread. Projects may experience large numbers of the work force becoming ill, which will strain the project's health facilities, have implications for local emergency and health services and may jeopardize the progress of the construction work and the schedule of the project. Such impacts will be exacerbated where a work force is large and/or the project is in remote or under-serviced areas. In such circumstances, relationships with the community can be strained or difficult and conflict can arise, particularly if people feel they are being exposed to disease by the project or are having to compete for scarce resources. The project must also exercise appropriate precautions against introducing the infection to local communities.

3 Responsibility/ Planning of the PIU of KWSSIP

PIU shall ensure that sub projects (i) are taking adequate precautions to prevent or minimize an outbreak of COVID-19, and (ii) have identified what to do in the event of an outbreak.

4 Contractor cover

The Contractor should identify measures to address the COVID-19 situation. What will be possible will depend on the context of the project: the location, existing project resources, availability of supplies, capacity of local emergency/ health services, the extent to which the virus already exist in the area. A systematic approach to planning, recognizing the challenges associated with rapidly changing circumstances, will help the project put in place the best measures possible to address the situation. As discussed above, measures to address COVID-19 may be presented in different ways (as a contingency plan, as an extension of the existing project emergency and preparedness plan or as standalone procedures). PIU and contractor should refer to guidance issued by relevant authorities, both national and international (e.g., WHO).

Addressing COVID-19 at a project site goes beyond occupational health and safety, and is a broader project issue which will require the involvement of different members of a project management team in all selected areas where repair/ rehabilitation works are to be carried out. In many cases, the most effective approach will be to establish procedures to address the issues, and then to ensure that these procedures are implemented systematically. Where appropriate given the project context, a designated team should be established to address COVID-19 issues, including PIU representatives, the Supervising Engineer, management (e.g. the project manager) of the contractor and sub-contractors, security, and medical and OHS professionals. Procedures should be clear and straightforward, improved as necessary, and supervised and monitored by the COVID-19 focal point(s). Procedures should be documented, distributed to all contractors, and discussed at regular meetings to facilitate adaptive management. The issues set out below include a number that represent expected good workplace management but are especially pertinent in preparing the project response to COVID-19.

(a) Assessing Workforce Characteristics

Many construction sites will have a mix of workers e.g., workers from the local communities specifically; workers from a different part of the country. Workers will be employed under different terms and conditions and be accommodated in different ways. Assessing these different aspects of the workforce will help in identifying appropriate mitigation measures:

- The Contractor should prepare a detailed profile of the project work force, key work activities, schedule for carrying out such activities, different durations of contract and rotations (e.g., 4 weeks on, 4 weeks off).
- This should include a breakdown of workers who reside at home (i.e., workers from the community), workers who lodge within the local community and workers in on-site accommodation. Where possible, it should also identify workers that may be more at risk from COVID-19, those with underlying health issues or who may be otherwise at risk.
- Consideration should be given to ways in which to minimize movement in and out of site. This could include lengthening the term of existing contracts, to avoid workers returning home to affected areas, or returning to site from affected areas.
- Workers accommodated on site should be required to minimize contact with people near the site, and in certain cases be prohibited from leaving the site for the duration of their contract, so that contact with local communities is avoided.
- Consideration should be given to requiring workers lodging in the local community to move to site accommodation (subject to availability) where they would be subject to the same restrictions.
- Workers from local communities, who return home daily, weekly or monthly, will be more difficult to manage. They should be subject to health checks at entry to the site (as set out above) and at some point, circumstances may make it necessary to require them to either use accommodation on site or not to come to work.

(b) Entry/ Exit to the Work Site and Checks on Commencement of Work

Entry/ exit to the work site should be controlled and documented for both workers and other parties, including support staff and suppliers. Possible measures may include:

Establishing a system for controlling entry/ exit to the site, securing the boundaries of the site, and establishing designating entry/ exit points (if they do not already exist). Entry/ exit to the site should be documented.

- Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID -19 specific considerations.
- Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry.
- Confirming that workers are fit for work before they enter the site or start work. While procedures should already be in place for this, special attention should be paid to workers with underlying health issues or who may be otherwise at risk. Consideration should be given to demobilization of staff with underlying health issues.
- Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site.
- Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.
- During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.
- Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days.
- Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days.

(c) General Hygiene

Requirements on general hygiene should be communicated and monitored, to include:

- Training workers and staff on site on the signs and symptoms of COVID-19, how it is spread, how to protect themselves (including regular handwashing and social distancing) and what to do if they or other people have symptoms (for further information see WHO COVID-19 advice for the public).
- Placing posters and signs around the site, with images and text in local languages.
- Ensuring handwashing facilities supplied with soap, disposable paper towels and closed waste bins exist at key places throughout site, including at entrances/exits to work areas; where there is a toilet, canteen or food distribution, or provision of drinking water; in worker accommodation; at waste stations; at stores; and in common spaces. Where handwashing facilities do not exist or are not adequate, arrangements should be made to set them up. Alcohol based sanitizer (if available, 60-95% alcohol) can also be used.
- Review worker accommodations, and assess them in light of the requirements set out in IFC/EBRD guidance on Workers' Accommodation: processes and standards, which provides valuable guidance as to good practice for accommodation.
- Setting aside part of worker accommodation for precautionary self-quarantine as well as more formal isolation of staff who may be infected (see paragraph (f)).

(d) Cleaning and Waste Disposal

Conduct regular and thorough cleaning of all site facilities. Review cleaning protocols for key construction equipment (particularly if it is being operated by different workers). This should include:

- Providing cleaning staff with adequate cleaning equipment, materials and disinfectant.
- Review general cleaning systems, training cleaning staff on appropriate cleaning procedures and appropriate frequency in high use or high-risk areas.
- Where it is anticipated that cleaners will be required to clean areas that have been or are suspected to have been contaminated with COVID-19, providing them with appropriate PPE: gowns or aprons, gloves, eye protection (masks, goggles or face screens) and boots or closed work shoes. If appropriate PPE is not available, cleaners should be provided with best available alternatives.
- Training cleaners in proper hygiene (including handwashing) prior to, during and after conducting cleaning activities; how to safely use PPE (where required); in waste control (including for used PPE and cleaning materials).

(e) Adjusting Work Practices

Consider changes to work processes and timings to reduce or minimize contact between workers, recognizing that this is likely to impact the project schedule. Such measures could include:

- Decreasing the size of work teams.
- Limiting the number of workers on site at any one time.
- Adapting or redesigning work processes for specific work activities and tasks to enable social distancing, and training workers on these processes.
- Continuing with the usual safety trainings, adding COVID-19 specific considerations. Training should include proper use of normal PPE. While as of the date of this note, general advice is that construction workers do not require COVID-19 specific PPE, this should be kept under review (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- Reviewing work methods to reduce use of construction PPE, in case supplies become scarce or the PPE is needed for medical workers or cleaners. This could include, e.g. trying to reduce the need for dust masks by checking that water sprinkling systems are in good working order and are maintained or reducing the speed limit for haul trucks.
- Arranging (where possible) for work breaks to be taken in outdoor areas within the site.

At some point, it may be necessary to review the overall project schedule, to assess the extent to which it needs to be adjusted (or work stopped completely) to reflect prudent work practices, potential exposure of both workers and the community and availability of supplies, taking into account Government advice and instructions.

(f) Project Medical Services

- Training medical staff, which should include current WHO advice on COVID-19 and recommendations on the specifics of COVID-19. Where COVID-19 infection is suspected, medical providers on site should follow WHO interim guidance on infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected.

- Training medical staff in testing, if testing is available.
- Assessing the current stock of equipment, supplies and medicines on site, and obtaining additional stock, where required and possible. This could include medical PPE, such as gowns, aprons, medical masks, gloves, and eye protection. Refer to WHO guidance as to what is advised (for further information see WHO interim guidance on rational use of personal protective equipment (PPE) for COVID-19).
- If PPE items are unavailable due to world-wide shortages, medical staff on the project should agree on alternatives and try to procure them. Alternatives that may commonly be found on construction sites include dust masks, construction gloves and eye goggles. While these items are not recommended, they should be used as a last resort if no medical PPE is available.
- Ventilators will not normally be available on work sites, and in any event, intubation should only be conducted by experienced medical staff. If a worker is extremely ill and unable to breathe properly on his or her own, they should be referred immediately to the local hospital (see (g) below).
- Review existing methods for dealing with medical waste, including systems for storage and disposal (for further information see WHO interim guidance on water, sanitation and waste management for COVID-19, and WHO guidance on safe management of wastes from health-care activities).

(g) Local Medical and Other Services

Given the limited scope of project medical services, the project may need to refer sick workers to local medical services. Preparation for this includes:

- Obtaining information as to the resources and capacity of local medical services (e.g. number of beds, availability of trained staff and essential supplies).
- Conducting preliminary discussions with specific medical facilities, to agree what should be done in the event of ill workers needing to be referred.
- Considering ways in which the project may be able to support local medical services in preparing for members of the community becoming ill, recognizing that the elderly or those with pre-existing medical conditions require additional support to access appropriate treatment if they become ill.
- Clarifying the way in which an ill worker will be transported to the medical facility, and checking availability of such transportation.
- Establishing an agreed protocol for communications with local emergency/medical services.
- Agreeing with the local medical services/specific medical facilities the scope of services to be provided, the procedure for in-take of patients and (where relevant) any costs or payments that may be involved.
- A procedure should also be prepared so that project management knows what to do in the unfortunate event that a worker ill with COVID-19 dies. While normal project procedures will continue to apply, COVID-19 may raise other issues because of the infectious nature of the disease. The project should liaise with the relevant local authorities to coordinate what should be done, including any reporting or other requirements under national law.

(h) Instances or Spread of The Virus

- If a worker has symptoms of COVID-19 (e.g. fever, dry cough, fatigue) the worker should be removed immediately from work activities and isolated on site.
- If testing is available on site, the worker should be tested on site. If a test is not available at site, the worker should be transported to the local health facilities to be tested (if testing is available).
- If the test is positive for COVID-19 or no testing is available, the worker should continue to be isolated. This will either be at the work site or at home. If at home, the worker should be transported to their home in transportation provided by the project.
- Extensive cleaning procedures with high-alcohol content disinfectant should be undertaken in the area where the worker was present, prior to any further work being undertaken in that area. Tools used by the worker should be cleaned using disinfectant and PPE disposed of.
- Co-workers (i.e. workers with whom the sick worker was in close contact) should be required to stop work, and be required to quarantine themselves for 14 days, even if they have no symptoms.
- Family and other close contacts of the worker should be required to quarantine themselves for 14 days, even if they have no symptoms.
- If a case of COVID-19 is confirmed in a worker on the site, visitors should be restricted from entering the site and worker groups should be isolated from each other as much as possible.
- If workers live at home and has a family member who has a confirmed or suspected case of COVID-19, the worker should quarantine themselves and not be allowed on the project site for 14 days, even if they have no symptoms.

(i) Training and Communication with Workers

- Training of workers should be conducted regularly, as discussed in the sections above, providing workers with a clear understanding of how they are expected to behave and carry out their work duties.
- Training should address issues of discrimination or prejudice if a worker becomes ill and provide an understanding of the trajectory of the virus, where workers return to work.
- Training should cover all issues that would normally be required on the work site, including use of safety procedures, use of construction PPE, occupational health and safety issues, and code of conduct, taking into account that work practices may have been adjusted.
- Communications should be clear, based on fact and designed to be easily understood by workers, for example by displaying posters on handwashing and social distancing, and what to do if a worker displays symptoms.

Annex – IX

Health & Safety Management Plan (HSMP)

Health & Safety Management Plan (HSMP)

1.0 Introduction

This health and safety management plan has been prepared to identify and outline the manner in which construction site health and safety aspects will be managed to ensure the safe and efficient performance of the construction phase activities and to minimize adverse effects on the existing community and workers arising from construction activities. HSMP plan is prepared under the guidelines given in Health and Safety Framework for South Asia Region by the World Bank.

This plan is designed to identify, evaluate, and control health and safety hazards for the purpose of protecting employees. The plan provides for emergency response activities at the job site as well as covering site hazard analysis, training requirements, engineering controls, materials handling, and safe construction operations. This plan is intended to provide guidance and information in dealing with the hazards that may be faced on the construction site by the contractor and its workers.

The consultant as a third-party validator will monitor the compliance of the plan by the contractor and its workers on each construction site.

The purpose of this plan is to illustrate safety issues specific to the KWSSIP. This plan is intended to maintain a safe work environment and effectively reduce the number of accidents resulting in personal injury, property damage, and damage to construction equipment.

2.0 Scope of Project

2.1 Scope of Work

KWSB has conceived KWSSIP in the form of a series of projects (SOPs), which form a long-term program to address the serious water and sewerage service gaps in the rapidly growing city of Karachi.

This HSMP focuses on the repair/ rehabilitation of leakages of existing water supply and sewerage system.

2.2 Site Location

The proposed project locations are spread in all seven districts of Karachi.

3.0 Health and Safety Responsibilities

The effectiveness and success of the safety plan implementation depend upon the active participation and cooperation of all employees. The duties and responsibilities of all employees under this policy are the following:

3.1 Project Engineer

- Prepare the Site-Specific Safety Plan.
- Direct and coordinate health and safety regulations related to the construction site.
- Participate in post-accident investigations.
- Assist in formulating policy matters.
- Implement contractor Safety Program and Policy

3.2 Foremen/Supervisors

- Be familiar with, explain, and enforce health and safety plan under his jurisdiction.
- Direct and coordinate health and safety activities within the area or responsibility
- Ensure safety devices and proper PPE are used by employees under supervision.
- Instruct and train all employees within the area of responsibility in job health and safety requirements, including (but, not limited to) hazard recognition and avoidance. Also, foreman/front-line supervisors must require compliance by employees with the established safety rules.
- Direct the correction of unsafe conditions.
- Ensure safety equipment is available, maintained, used, and stored correctly.
- Ensure injuries are treated promptly and reported properly.
- Participate in post-accident investigations.
- Coordinate daily job site inspection.
- Implement health and safety plan at each site as per required.

3.3 Construction Workers

The main responsibility of every worker at the construction site will be to follow the health and safety instructions and procedures.

- Be familiar with and comply with proper health and safety practices.
- Use the required safety devices and proper PPE.
- Notify the supervisor immediately of unsafe conditions/- acts, accidents, and injuries.
- Implement the health and safety plan

3.4 Subcontractors

By the contract, the subcontractors will have to comply with and ensure the compliance of their employees with the provisions of health and safety policy as well as their own safety program. Failure to fulfill this requirement is a failure to meet the conditions of the subcontract.

3.5 Supervision Consultant (SC)

SC will validate the effective implementation of the health and safety plan at the site. PIU-KWSSIP will be overall responsible for the safe construction work at each site.

4.0 General Health and Safety Procedures

4.1 Personal Protective Equipment (PPE)

The contractor provides Personal Protective Equipment (PPE) to all employees. Hard hats, safety glasses, and safety work boots are required to be worn at all times when on the job site. Reflective vests are required when working outside around equipment or traffic. Exceptions may be made to this PPE requirement only under an approved contractor work plan. Employees learn where to get PPE during their new-hire orientation and are responsible for wearing and maintaining the required PPE. Additional PPE may be required depending on the task and if there is a potential for exposure to hazardous conditions. PPE requirements are reviewed by the foreman. Employees are expected to use reasonable judgment regarding whether additional PPE (beyond the required) is necessary for certain tasks. If employees are unsure of the type of PPE required for a specific task or job, they should ask the supervisor.

4.2 Equipment Use and Operation

Equipment is used only for its intended use and as recommended by the manufacturer. Using equipment for purposes other than what it is designed for is prohibited. Employees are prohibited from operating a vehicle in a reckless manner or at a speed greater than is reasonable and proper, with due regard for weather, traffic, the character of roadway, load, type of vehicle, and any other conditions which may affect the safe operation of the vehicle. The vehicle must be kept under control at all times and special care is exercised when transporting personnel.

Employees may only ride equipment if there are seats or equal protection available for each person. Seatbelts are worn at all times while operating equipment with seats. No cell phone or earbud is used while operating equipment.

4.3 Repair

Employees are prohibited from making repairs, alterations, or attachments to equipment in the field except with the permission of the superintendent, foreman, or equipment mechanic. Only qualified personnel will perform repairs on equipment. Such repairs, alterations, or attachments are documented on the appropriate shop forms.

Employees are prohibited from removing a guard, safety device, or appliance from equipment or machinery except to make repairs. While making repairs, employees use appropriate lockout/tag-out procedures. When repairs are complete, the guard, safety device, or appliance is replaced immediately.

4.4 Conduct

The following conduct is prohibited and may result in discipline up to and including termination:

- Horseplay and scuffling on the job.
- Making a false report or misrepresentation.
- Fighting.
- Use of alcohol or any other drugs
- Dishonesty and theft of the property.
- Deliberate misuse of the equipment.
- Unnecessary risk-taking.
- Violating or disobeying any instruction given by a supervisor

5.0 General Jobsite Procedures

5.1 New Hire Orientation

New-hire orientation may consist of, but is not limited to, the following:

- Have the employee read the health and safety plan and other safety requirements, guidelines etc. Answer any questions the new hire may have about these policies and request a signature on the Statement of Understanding.
- Orient the employee to the job site indicating the location of the emergency facilities, portable fire extinguishers, first-aid station, emergency phone numbers, public notices, and any job site-specific information.
- Explain the injury and accident policy.
- Review the written hazard communication program. Discuss hazards, container labeling, and the use of protective equipment.
- Explain the emergency response plan for catastrophic events such as fire, explosion, etc.
- Issue PPE as required for the job

5.2 Training

Training and education are necessary for the success of this policy. Employees are trained to recognize job site hazards and the procedures to follow to minimize these hazards. Training may consist of (but is not limited to) the following:

- Weekly job site safety meetings.
- Orientation training for new hires.
- Individual job/task training, including the applicable regulations/standards for the specific job/task.

Supervisors and management receive ongoing safety training throughout the year.

5.3 Safety Meetings

Weekly safety meetings are held on the job site. All employees and subcontractors are required to attend. The meetings may cover a range of safety-related topics. The format and content of the

meetings are up to the discretion of the superintendent. Monthly safety meetings are held for all foremen, superintendents, project managers, project engineers, contractors, and other management personnel. These meetings are for the purpose of discussing companywide safety issues and providing continued safety training and education.

5.4 Safety Inspections

The superintendent and foreman conduct an initial safety inspection at the beginning of each project. In addition, a daily safety inspection of the job site is conducted by the contractor employees, employees of a subcontractor, or some combination thereof. The inspection is rotated between all workers on the job site. Any safety concern found during the inspection is reported. If a worker is unclear about any safety aspect, the foreman or project Engineer helps. If the area being inspected requires a *competent person*, the employee conducts the inspection with the competent person. Also, if time allows, the foreman for the worker conducting the inspection is encouraged to walk through it with them.

5.5 Hazard Communication

The contractor needs to develop a written hazard communication plan. It will be explained to each employee during the new-hire orientation. The purpose of the hazard communication plan is to provide employees with information on the chemical and physical hazards that may be present at the job site. Safety Data Sheets for all chemicals will be kept on site.

5.6 Job Hazard Analysis

A job hazard analysis may be developed covering the major activities of construction, the hazards associated with these activities, and ways to mitigate these hazards.

5.7 Housekeeping

Housekeeping is one of the most important factors for a safe job site. Form material should be scraped and all protruding nails pounded down. All other debris is cleared from work areas, passageways, and stairs. Excess materials are stacked neatly out of the way. Tools should be stored in the toolbox so these are available for all employees to use.

Combustible scrap and debris are removed at regular intervals during the course of construction. Containers with covers are provided for the collection and separation of waste, trash, oily and used rags, and other such refuse, which is removed safely and on a regular basis.

Foreign object and debris (FOD) is a significant concern in nearby occupied spaces and construction areas. It is extremely important to keep all trash and debris contained at this site. Housekeeping will be strictly enforced

5.8 Fall Protection

The contractor provides fall protection when employees are exposed to fall hazards.

Fall protection may consist of, but is not limited to, the following:

- A stairway or ladder is provided at any point of access where there is a break in elevation of 19 inches or more.
- Guardrails are installed for all leading-edge work. For loading bay locations fall-arrest systems or fall-restraint systems are used.
- Safety harnesses with approved lanyards and tie-off points are used for all other fall protection unless an appropriate procedure or device was approved in advance by a competent person.
- Stilts may be used on job sites but work area floors must be clean/clear of all debris, materials, and equipment.

5.9 Electrical Safety

Electrical safety may consist of, but is not limited to, the following:

- Live electrical parts are guarded against accidental contact by cabinets, enclosure, location, or guarding.
- Extension cords are kept in safe, working condition.
- All lamps for general illumination have the bulbs protected against breakage. All light sockets are filled with a working bulb.
- Employees will not work in such close (able to contact) proximity to any part of an electric power circuit unless the circuit is de-energized, grounded, or guarded by insulation.
- De-energized equipment or circuits are locked out and tagged out. The tags identify the equipment or circuits being worked on.
- All generators used for temporary power shall be grounded according to manufacturers' specifications.
- Equipment shall not be operated closer than 10 feet from power lines less than 50kV. Safe distance will increase near higher voltage power lines, (over 50kV)

5.10 Tools

The contractor provides tools for employees to use. Only trained employees are allowed to use such tools. The safe use of tools may consist of, but is not limited to the following:

- Unsafe or defective tools are removed from service and tagged out.
- Power tools are turned off and motion stopped before setting down.
- Tools are disconnected from the power source before changing drills, blades, or bits and before any repair or adjustment is made. Running tools are not left unattended.

- Portable abrasive grinders have guards installed covering the upper and back portions of the abrasive wheel.

5.11 Scaffolds

Scaffolds are erected, moved, dismantled, or altered under the supervision of a competent person for scaffolding. Scaffold use consists of, but is not limited to, the following procedures:

- Standard guardrails are installed on all open sides and ends of scaffold platforms and/or work levels more than ten feet below the ground.
- Scaffolds four to ten feet in height with a minimum horizontal dimension in any direction less than 45 inches have standard railings installed on all open sides/ends.
- Platforms at all working levels are fully planked. Planking is laid tight with no more than one inch space between them, overlap at least 12 inches, and extends over end supports 6-12 inches unless cleats are used.
- The front edge of all platforms is no more than 14 inches from the face of the work, except plastering/lathing may be 18 inches.
- Mobile scaffolds are erected no more than a maximum height of four times their minimum base dimension.
- Scaffold casters/wheels are locked whenever the platform is occupied.
- Scaffolds are not overloaded beyond their design loadings.
- Scaffold components are not used as tie-off/anchor points for fall-protection devices.
- Portable ladders, hook-on ladders, attachable ladders, integral prefabricated scaffold frames, walkways, or direct access from another scaffold or structure are used for access when platforms are more than two feet above or below a point of access.
- Cross braces are not used as a means of access to scaffolds.
- Scaffolds are not erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come close to exposed and energized power lines than the following:
 - Three feet from insulated lines of less than 300 volts;
 - Ten feet plus for any other insulated or uninsulated Lines

5.12 Excavation and Trenches

Excavation and trenching are done in the presence of a competent person and in compliance with, but not limited to, the following procedures:

- Any excavation or trench five feet or more in-depth is provided cave-in protection through shoring, sloping, benching, or the use of hydraulic shoring, trench shields, or trench boxes. Trenches less than five feet in depth and showing potential of cave-in are also provided cave-in protection. Specific requirements of each system are dependent upon the soil classification as determined by a competent person.
- A competent person inspects each excavation/trench daily prior to the start of work, after every rainstorm or other hazard-increasing occurrence, and as needed throughout the shift.

- Any material and equipment are kept at least two feet from the edge of the trench or excavation.

5.13 Ladders

Ladders are inspected during the weekly inspections to identify any unsafe conditions. Any ladders found to be unsafe are taken out of service. Extension ladders extend three feet above the work surface and are 100 percent tied off. Step ladders are only used in the open position. Ladders are stored lying down. No standing on the top step or first rung below the top of a step ladder.

5.14 Illumination

Construction areas and storage areas where work is in progress are lighted with either natural or artificial illumination.

5.15 Motor Vehicles and Mechanized Equipment

Vehicles and equipment are only operated by qualified persons (training or experience). All equipment operators are responsible for checking, on a daily basis, all fluid levels, drive components, and hydraulics. In addition, operators visually inspect the engine and look for structural breaks and cracks on the machine. Any and all deficiencies must be reported to a supervisor immediately.

When equipment is stopped or parked, parking brakes are set and other safety precautions are taken as required for the type of equipment such as placing the forks flat on the ground. Keys shall be removed from equipment at the end of each shift.

5.16 Severe Weather

Outside construction operations including, but not limited to site work, and concrete work are suspended if severe wind or rain conditions present safety hazards at the worksite. Rain and wind storm hazards are evaluated and appropriate measures are taken to abate potential hazards.

5.17 Accident

All accidents and near misses must be reported immediately to the foreman or superintendent. An accident report is then filled out by the employee and the supervisor. Filling out an accident report does not require the delay of medical attention. Any injury is treated first. Employees file such reports without fear of reprisal by management. The accident or incident may be discussed at weekly safety meetings to avoid that sort of accident in the future.

5.18 First Aid

First-aid kits are available in the project office, at the appropriate and accessible locations as indicated during orientation. In addition, foremen and superintendents maintain current first aid boxes at the site.

5.19 Fire Protection

The contractor maintains appropriate fire extinguishers at the fire-prone areas of the construction site. All equipment is fitted with portable fire extinguishers. Employees are instructed on the location and usage of these fire extinguishers. Emergency telephone numbers for fire protection and emergency medical services are posted on the field office bulletin board.

5.20 Emergency Action Plan

Each job site develops an emergency action plan that is reviewed with each employee during orientation. The emergency action plan covers emergency escape procedures, procedures followed by employees remaining to operate critical operations before they evacuate, procedures to account for all employees, rescue and medical duties, and how to report emergencies.

5.21 Environmental Protection Plan

This health and safety plan also contains an Environmental Protection Plan for the control, prevention, management, containment, cleanup, and disposal of petroleum products or other hazardous substances which may be generated on each project site. The Project Engineer directs measures to control and prevent accidental discharge of petroleum products or other hazardous substances during storage and transfer on all job sites. Any onsite storage is in approved containers. Absorbent pads and other recovery equipment shall be available to contain and recover any fuel accidentally spilled. Any spills and contaminated soils are cleaned and disposed of in accordance with applicable requirements.

5.22 Traffic and Pedestrian Control

A traffic control plan will be developed and put in place prior to beginning work on the project for the protection of workers and the general public. Barricades and signage must be placed around job site areas to reroute vehicle traffic and keep pedestrians out of the job site.

Project Engineers and Superintendents will evaluate the site before work starts to plan site control. Fencing, signage, and barricades shall be erected and secured as to keep pedestrians out.

Any time while performing work near or on a roadway and a worker has a sense of traffic patterns not being controlled properly or speeds too extreme for conditions, the worker should remove

himself from the area and notify Supervisor. The Project Engineer shall stress and discuss, at weekly meetings, for all workers to be aware of traffic hazards and pedestrians.

5.24 Concrete Work

The project involves concrete work. There are many hazards associated with this work including but not limited to; Slips Trips, Falls, Strains and Sprains, Eye Injuries, Chemical Burns, and Silica Exposure. The risk assessment shall be performed for all concrete work to minimize the associated hazards

6.0 Monitoring and Reporting

Monitoring the implementation of the health and safety plan and progress reporting will be very important for the effective enforcement of the plan. PIU project team along with the supervision consultant will validate effective reinforcement of HSMP. The supervision consultant will frequently visit the construction sites and monitor the effectiveness of the plan implementation. The status of implementation will be reported to the PIU fortnightly.

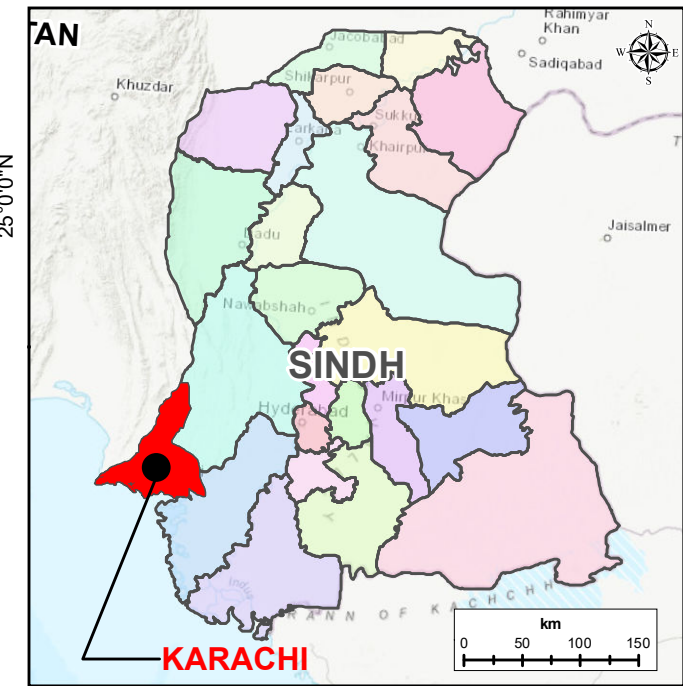
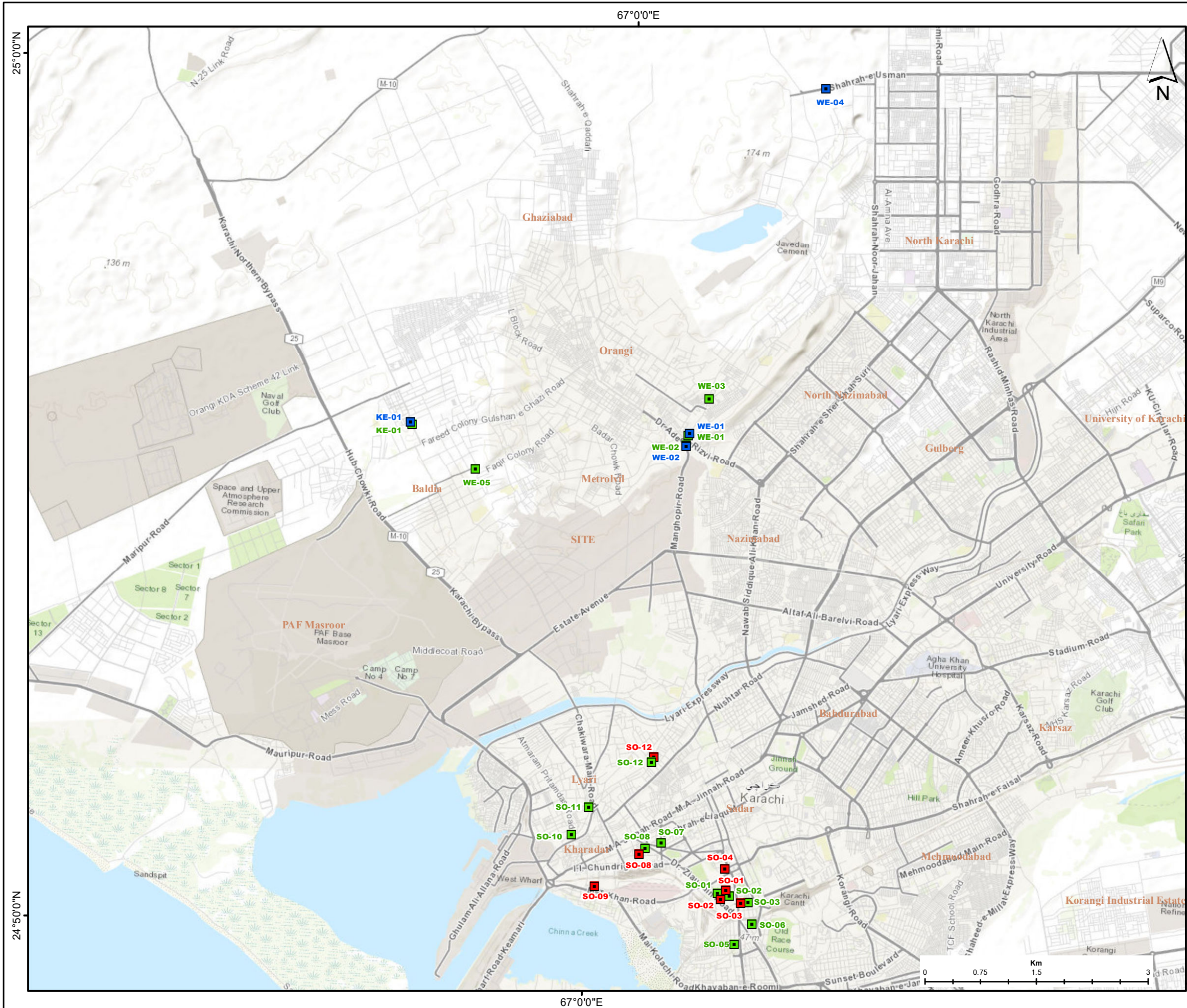
Annex – X
Environmental Monitoring Checklist

Monitoring and Supervision Checklist

Project				
Site Location				
Current Status				
Supervision Date				
Supervised By				
Inspection Items	Implementation			Remarks (i.e., specify location, good practices, problem observed, possible cause of nonconformity, and/or proposed corrective/preventative actions)
	Yes	No*	N/A	
1. Air Pollution Control				
1.1. Vehicle loads covered with any suitable material while transporting construction material?				
1.2. Are stockpiles of dusty materials covered or watered?				
1.3. Does the Construction Contractor (CC) have the proper material handling practices at the site?				
1.4. Others (please specify)				
2. Surface and Ground Water Pollution Control				
2.1. Area chemicals or hazardous material stored at designated places?				
2.2. Are effluents from the construction sites released to drinking water sources, cultivation fields, irrigation channels, and critical habitats?				
2.3. Does the CC have tarpaulin sheets available at the site?				
2.4. Others (please specify)				
3. Noise Control				
3.1. Are machinery operations and high noise activities carefully planned and scheduled?				
3.2. Are high noise activities ceased between 20:00 and 06:00hrs?				
3.3. Is the noise level monitoring carried out periodically? And is the monitoring register maintained?				
3.4. Others (please specify)				
4. Solid Waste Management				
4.1. Is recycling of solid waste carried out?				
4.2. Are the construction sites equipped with temporary refuse bins?				
4.3. Is the waste dumped or thrown?				

around the project site?				
4.4. Is the waste tracking register maintained at the site?				
4.5. Is the waste properly disposed of in designated areas and not affecting the drinking water sources, cultivation fields, irrigation channels, natural drainage paths, the existing waste management system in the area, local routes, and the general aesthetic value of the area?				
4.6 Is Covid 19 prevention waste being handled and stored properly?				
4.7. Others (please specify)				
5. Occupational Health and Safety				
5.1. Are WB Group's Environment, Health, and Safety (EHS) Guidelines implemented in letter and spirit?				
5.2. Are appropriate personal protective equipment (PPE) provided to minimize risks, such as appropriate outerwear, boots, and gloves; safety helmets as well as per COVID-19 requirements?				
5.3. Are first-aid equipment at works provided?				
5.4. Is water stagnation observed near the construction site?				
5.5 Are protocols for slips and trips being followed?				
5.6. Are protocols for work at height being followed?				
5.7. Is training for workers for the use of PPE provided?				
5.8. Are procedures for documenting and reporting accidents, diseases, and incidents implemented at the site?				
5.9. Others (please specify)				
6. Labor Issues				
6.1. Are labor locally procured for the construction activities?				
6.2. Is there any child working?				
6.3. Others (please specify)				
7. Project Exclusions				
7.1. Is the GRM implemented for the amicable resolution of disputes or conflicts?				
7.2. Others (please specify)				

Annex – XI
Location Maps



Repair Work Locations

- Sewerage
- Water Supply Bulk
- Water Supply Distribution

ABBREVIATIONS: (DISTRICT WISE)

CE = CENTRAL	MA = MALIR
EA = EAST	SO = SOUTH
KE = KEAMARI	WE = WEST
KO = KORANGI	

NOTE:

- THESE LOCATIONS ARE REPRESENTATIVE POINTS (START, END OR ANY OTHER REFERENCE) TO REACH AT THE SITE. EXACT LOCATION OF REPAIR WORKS WILL BE IDENTIFIED BY THE CONCERNED OFFICIALS OF KW&SB
- FOR LAYOUT & ATTRIBUTE DATA PERTAINING TO REPAIR WORKS, REFER TO DRAWING NO 4321/11/TD/LM02

CLIENT:
 PIU-KWSSIP, KW&SB

CONSULTANT:
 NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD
 HEAD OFFICE:- NESPAK HOUSE 1-C, BLOCK N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED

PROJECT:
 DRWAN ATHAR
 SUBMITTED
 RECOMMENDED
 CHD/VER.
 APPROVED

TENTATIVE LOCATION PLAN OF REPAIR WORKS

DATE	DRAWING NO	REV.
NOVEMBER, 2022	4321/11/TD/LM01	

SCALE: 1:83,511