GOVERNMENT OF KHYBER PAKHTUNKHWA

Public Health Engineering Department (PHED) (KP-RIISP)

Environmental & Social Management Plan (ESMP)

For The Rehabilitation & Solarization of Existing Drinking Water Supply Schemes in District Khyber (Phase I)

April, 2026

Submitted to: PHED, Government of Khyber Pakhtunkhwa
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Annexes

List of Acronyms

Public Health Engineering Department	PHED
Construction Contractors	CC
Contractor Environmental and Social Management Plan	CESMP
Environmental Engineer	EE
Environmental Impact Assessment	EIA
Environmental Protection Agency	EPA
Environmental Protection Ordinance	EPO
Environmental and Social Framework	ESF
Environmental and Social Management Plan	ESMP
Environmental and Social Standards	ESS
Federally Administered Tribal Area	FATA
Frontier Regions	FRs
General Environmental Assessment	GEA
Government of Khyber Pakhtunkhwa	GoKP
Government of Pakistan	GOP
Grievance Redress Mechanism	GRM
Initial Environmental Examination	IEE
Khyber Pakhtunkhwa	KP
KP Rural Infrastructure and Institutional Support Project	KPRIISP
Newly Merged Districts	NMDs
National Environmental Quality Standards	NEQS
Planning & Development Department	P&D Department
Pakistan Environmental Protection Act	PEPA
Pakistan Environment Protection Agency	Pak-EPA
Personal Protective Equipment	PPEs
Project Coordination & Management Unit	PCMU
Project Director	PD
Project Implementation Unit	PIU
Pakistani Rupees	PKR
Supervision Consultants	SC
Contractor Health, Safety and Environment Officer	C-HSE Officer
Drinking water Supply Scheme	DWSS

1. Executive Summary

In the wake of the merger of the Federally Administered Tribal Areas (FATA) with Khyber Pakhtunkhwa (KP), the Government of Khyber Pakhtunkhwa (GoKP), with support from the World Bank, has launched the Khyber Pakhtunkhwa Rural Investment and Institutional Support Project (KP-RIISP). This initiative aligns with the GoKP's Tribal Decade Strategy (TDS) 2020–2030, focusing on citizen-centric service delivery and institutional reform. Access to safe drinking water and adequate sanitation is fundamental to public health and sustainable development. Under KP-RIISP, the Public Health Engineering Department (PHED) is responsible for implementing various water supply and sanitation schemes across the Newly Merged Districts (NMDs). The aim is to develop a guided and strategic approach for improving the provision of drinking water and sanitation services in accordance with the Khyber Pakhtunkhwa Drinking Water and Sanitation Policies. Special emphasis is placed on participatory local governance, institutional strengthening, and empowering women in decision-making processes.

As part of this sub-project titled ***"Rehabilitation & Solarization of Existing Drinking Water Supply Schemes in District Khyber (Phase I)"***, a total of 21 government-operated Drinking Water Supply (DWS) schemes have been identified for rehabilitation and solarization works. The 21 Nos. selected schemes are listed in the following table. These schemes are spread across all four (04) Tehsils of Khyber District. Each scheme was examined in terms of its operational capacity, infrastructure condition, energy requirements, population coverage, and service delivery efficiency.

The overall aim of the proposed rehabilitation and solarization works is to ensure the efficient working and operational capacity of the existing water supply schemes to ensure supply of water to all the households, public places (mosques, markets, schools etc.) that are located in the vicinity of the sub-project DWS schemes. The specific objectives are:

1. The sub-project involves rehabilitation of existing PHED schemes in the Khyber district which includes following civil, mechanical and electrical works; Pumping machinery, Micro Controller Unit (MCU), Complete Solar system including PV Panels, Charge Controller/Inverter and allied accessories, Water reservoirs including Ground and Overhead reservoirs, Supply Main and Distribution lines including repair of existing pipelines, Pumping Room/Chamber and Chowkidar Hut including architectural and structural assessment, Boundary Wall

2. The sub-project also includes solarization of those schemes which are grid-tied and those that don't have any alternate source of power. Solarization of those schemes will ensure cheap and uninterrupted source of power for water supply.

The ESMP ensures compliance with the World Bank's Environmental and Social Framework (ESF) and KP's Environmental Protection Act (2014), adopting proactive measures to mitigate risks. A stakeholder consultation, involving key district stakeholders, at the Tehsil level was held, aimed at evaluating the site's accessibility, safety, and sustainability**.** Environmental protection measures include waste management, a proper drainage system, and additional plantation of native species, recommended to promote sustainability. Continuous stakeholder consultations via community briefings and a Grievance Redress Mechanism (GRM) accessible via phone, email, or in-person (resolution within 15 days) are part of the ESMP.

The ESMP provides a structured framework for potential environmental and social risks, defining mitigation targets, assigning responsibilities, and ensuring adequate resource allocation. Key focus areas during the design/pre-construction phase include compliance with sustainable drainage planning, solid waste management, and detailed health and safety measures. In the construction phase, it addresses critical concerns such as air and water pollution control, noise and vibration mitigation, soil conservation, traffic management, labor safety, communicable disease prevention, and preservation of flora and fauna. It emphasizes proactive planning, continual monitoring, and strict adherence to environmental safety protocols.

A Capacity Building and Training component provides support to the effective implementation of the ESMP by enhancing the skills and environmental awareness of project personnel. This includes targeted training programs for the contractor's workforce and client-side professionals. A well-defined institutional framework that assigns clear roles and responsibilities across project stakeholders. The primary entities responsible include the Project Implementation Unit (PIU), the Supervision Consultant's Environmental and Social Specialists, the Contractor Health, Safety and Environment Officer, and the Khyber Pakhtunkhwa Environmental Protection Agency (EPA) as the regulatory authority. A project's reporting framework is developed to ensure transparency, accountability, and timely communication with all relevant stakeholders, particularly concerning environmental and social performance.

The total Environmental & Social (E&S) implementation budget is **PKR 6,036,880/-**, covering mitigation measures, GRM operation, community engagement, and monitoring. This integrated approach prioritizes sustainability, social inclusion, and transparency throughout the project lifecycle.

2. INTRODUCTION

2.1 Project Description with scope of work

Access to safe drinking water and adequate sanitation is fundamental to public health and sustainable development. In the wake of the merger of the Federally Administered Tribal Areas (FATA) with Khyber Pakhtunkhwa (KP), the Government of Khyber Pakhtunkhwa (GoKP), with support from the World Bank, has launched the Khyber Pakhtunkhwa Rural Investment and Institutional Support Project (KP-RIISP). This initiative aligns with the GoKP's Tribal Decade Strategy (TDS) 2020–2030, focusing on citizen-centric service delivery and institutional reform.

2.2 PROJECT BACKGROUND

Khyber Pakhtunkhwa, Pakistan's third-most populous province, has made strides in poverty reduction, but significant disparities remain, particularly in rural and underserved areas, where approximately 85% of the population resides. Basic services, such as access to clean drinking water, remain inadequate. For instance, access to piped water in rural KP declined from 40% in 2005 to 29% in 2015, largely due to aging infrastructure. Coupled with poor sanitation and hygiene, this has led to critical public health challenges, including high rates of childhood stunting, approximately 40% in KP and 49% in the Newly Merged Areas (NMA).

The merger of FATA into KP in 2018 presented an opportunity to enhance service delivery in the Newly Merged Districts (Bajaur, Mohmand, Khyber, Kurram, Orakzai, North Waziristan, and South Waziristan), which, along with six Frontier Regions (FRs), cover over 27,200 square kilometers and house nearly 4.8 million people. Historically marginalized, these areas have long lacked adequate infrastructure, education, healthcare, and clean water. The local population has since expressed strong expectations for improved access to essential services, particularly in clean water, food security, health, and education.

2.3 Project Development Objective

Under KP-RIISP, the Public Health Engineering Department (PHED) is responsible for implementing various water supply and sanitation schemes across the Newly Merged Districts (NMDs). The aim is to develop a guided and strategic approach for improving the provision of drinking water and sanitation services in accordance with the Khyber Pakhtunkhwa Drinking Water and Sanitation Policies. Special emphasis is placed on participatory local governance, institutional strengthening, and empowering women in decision-making processes.

SUB-PROJECT DETAILS

As part of this sub-project titled ***"Rehabilitation & Solarization of Existing Drinking Water Supply Schemes in District Khyber (Phase I)"***, a total of 21 government-operated Drinking Water Supply (DWS) schemes have been identified for rehabilitation and solarization works. The 21 Nos. selected schemes are listed in the following table. These schemes are spread across all four (04) Tehsils of Khyber District. Each scheme was examined in terms of its operational capacity, infrastructure condition, energy requirements, population coverage, and service delivery efficiency.

The overall aim of the proposed rehabilitation and solarization works is to ensure the efficient working and operational capacity of the existing water supply schemes to ensure supply of water to all the households, public places (mosques, markets, schools etc.) that are located in the vicinity of the sub-project DWS schemes. The specific objectives are:

1. The sub-project involves rehabilitation of existing PHED schemes in the Khyber district which includes following civil, mechanical and electrical works; Pumping machinery, Micro Controller Unit (MCU), Complete Solar system

including PV Panels, Charge Controller/Inverter and allied accessories, Water reservoirs including Ground and Overhead reservoirs, Supply Main and Distribution lines including repair of existing pipelines, Pumping Room/Chamber and Chowkidar Hut including architectural and structural assessment, Boundary Wall

2. The sub-project also includes solarization of those schemes which are grid-tied and those that don't have any alternate source of power. Solarization of those schemes will ensure cheap and uninterrupted source of power for water supply.

Out of the total 21 DWS schemes; 11 schemes do not involve any type of land acquisition and the rehabilitation/ solarization works will be performed in the existing PHED (GoKP) owned lands. While for the remaining 10 schemes, land acquisition will be performed, following the guidelines of the KPRIISP ESMF, Voluntary Land Donation (VLD) mechanism has been adopted for this purpose. The VLD procedure is under process and it will be ensured by the PIU-PHED that the VLD procedure is completed before the start of the construction activities at sites. VLD document template attached as annex - 14

Project Components

A total of 21 government-operated Drinking Water Supply (DWS) schemes have been identified for rehabilitation and solarization works. The 21 Nos. selected schemes are listed in the following table. These schemes are spread across all four (04) Tehsils of Khyber District. Each scheme was examined in terms of its operational capacity, infrastructure condition, energy requirements, population coverage, and service delivery efficiency.

The 21 Nos. selected schemes and scope of work are listed in the table below

S. No	Tehsils	DWS Rehabilitation Schemes	Civil Works	Solarization Works
1.	Bara	• DWS Hissara Shalobar	OHR repair, Repair of distribution line pipes.	Upgradation of solar system
		• DWS Ghazi Tubewell Nala MDK	Renovation of pump chamber and compound wall, Replacement of Valves. OHR repair.	No solar works
		• DWS Hakim Khan Killi	Complete laying of rising main & distribution system, new bore hole, Construction of 10,000 gallons OHR	Installation of new solar system
		• DWS Bara Tehsil	OHR repair, Installation of pumping machinery, Renovation of pump house	Upgradation of solar system
		• DWS Malik Doran Gul Fort Slop MDK	new bore hole, Re-laying and repair of distribution system. Installation of pumping machinery with all required accessories.	Installation of new solar system
		• DWS Sam Baba Zone-B	new bore hole, OHR repair, Rising main laying and repair of distribution line.	Installation of new solar system
		• DWS Sam Baba Zone A (Spin Dand)	repair of pump room, OHR repair, Rising main laying and repair of distribution line.	Installation of new solar system
		• DWS Haji Abdul Qayum Toot Dand BQK	new bore hole, Replacement of distribution network	Installation of new solar system

S. No	Tehsils	DWS Rehabilitation Schemes	Civil Works	Solarization Works
		• DWS Nowgazi Baba Remaining Area	New bore hole, OHR repair, Rising main and distribution line replacement, Installation of pumping machinery with all required accessories.	No solar works
		• DWS Janis/Tawas Khan Killi BQK	new bore hole, OHR repair, Rising main and distribution line replacement	Installation of new solar system
		• DWS Ghulam Sakhi Arjali Nadi	new bore hole, replacement of distribution line.	Installation of new solar system
		• DWS Fazal Malik Killi Shalobar	OHR repair, repair of distribution line, Installation of pumping machinery with all required accessories.	No solar works
		• DWS Malik Jan Killi BQK Bara (Faresh Kallay)	OHR repair, Rising main and distribution line replacement, Installation of pumping machinery with all required accessories.	Installation of new solar system
2.	Jamrud	• DWS Ghundi Sher Khan Khel	Repair, laying of rising main & damaged distribution pipeline, Construction of new compound wall for PV system	Installation of new solar system
		• DWS Malak Sadullah Khan	Renovation of pump house, Replacement of valves. Pressure gauge and flow meter installation, OHR repair	No solar works
		• DWS TD Bazar Jamrud Wali Baba	OHR repair, Repair and laying of missing distribution line pipes, new borehole	Upgradation of solar system
		• DWS Jamal Khel	Renovation of pump house, Replacement of valves. Pressure gauge and flow meter installation.	Installation of new solar system
3.	Landi Kotal	• DWS H. Hayat Niki Khel	Renovation of pump house, Rising main repair and replacement of distribution line.	Installation of new solar system
		• DWS Wali Khel Gul Wali	Construction of Compound wall for PV system and pumping chamber, Installation of pumping machinery with all required accessories	Installation of new solar system
4.	Mula Gori	• DWS Lowera Maina	Renovation of pump house, Replacement of valves. Repair of existing pumping machinery. Repair of rising main & replacement of damaged distribution pipeline	No solar works
		• DWS Kam Shalman	Pump house renovation, Installation of pumping machinery	Upgradation of solar system

2.4 Area of Influence of the Subproject

As part of this sub-project, a total of 21 government-operated Drinking Water Supply (DWS) schemes have been identified for rehabilitation. The 21 Nos. selected schemes are listed in the following table. These schemes are spread across all four (04) Tehsils of Khyber District.

The 21 Nos. selected schemes are listed in the table below:

Table 1: DWS Rehabilitation Schemes names and location coordinates

S. No	Tehsils	DWS Rehabilitation Schemes	Location Coordinates
1.	Bara	• DWS Hissara Shalobar	33.928699, 71.417222
		• DWS Ghazi Tubewell Nala MDK	33.917473, 71.46415
		• DWS Hakim Khan Killi	33.899656 71.446711
		• DWS Bara Tehsil	33.917473, 71.46415
		• DWS Malik Doran Gul Fort Slop MDK	33.903041, 71.344107
		• DWS Sam Baba Zone-B	33.938099, 71.372276
		• DWS Sam Baba Zone A (Spin Dand)	33.932468, 71.381724
		• DWS Haji Abdul Qayum Toot Dand BQK	33.940787, 71.35788
		• DWS Nowgazi Baba Remaining Area	33.929693, 71.439073
		• DWS Janis/Tawas Khan Killi BQK	33.93998, 71.36746
		• DWS Ghulam Sakhi Arjali Nadi	33.915397, 71.410956
		• DWS Fazal Malik Killi Shalobar	33.936007, 71.441686
		• DWS Malik Jan Killi BQK Bara (Faresh Kallay)	33.92156, 71.358635

S. No	Tehsils	DWS Rehabilitation Schemes	Location Coordinates
2.	Jamrud	• DWS Ghundi Sher Khan Khel	34.056263, 71.392029
		• DWS Malak Sadullah Khan	34.006808, 71.388019
		• DWS TD Bazar Jamrud Wali Baba	33.998905, 71.365928
		• DWS Jamal Khel	33.99555, 71.56666
3.	Landi Kotal	• DWS H. Hayat Niki Khel	34.068081, 71.196927
		• DWS Wali Khel Gul Wali	34.072718, 71.215728
4.	Mula Gori	• DWS Lowera Maina	34.158407, 71.344880
		• DWS Kam Shalman	33.932971, 71.381512

Location Map of 21 Nos. selected schemes is provided below.

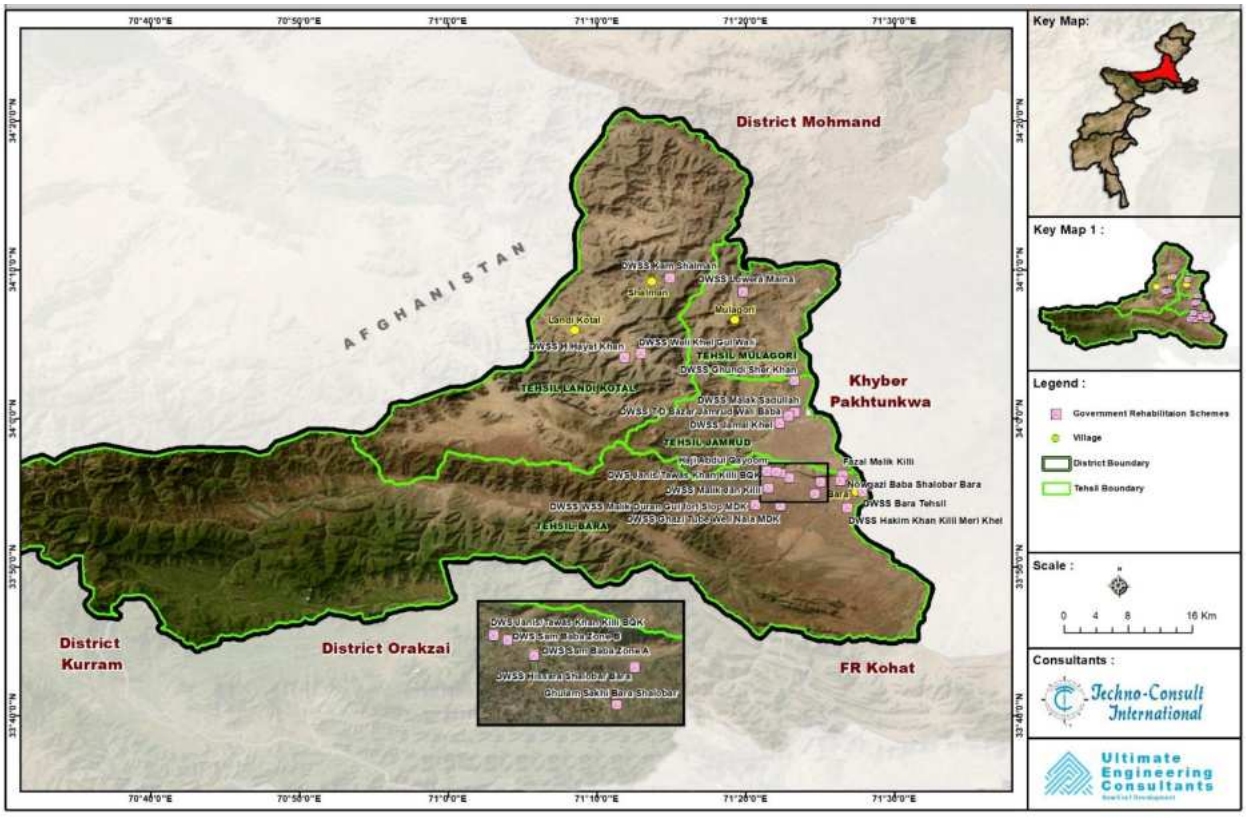


Figure 1: Location of Selected Schemes (21) for Rehabilitation in District Khyber

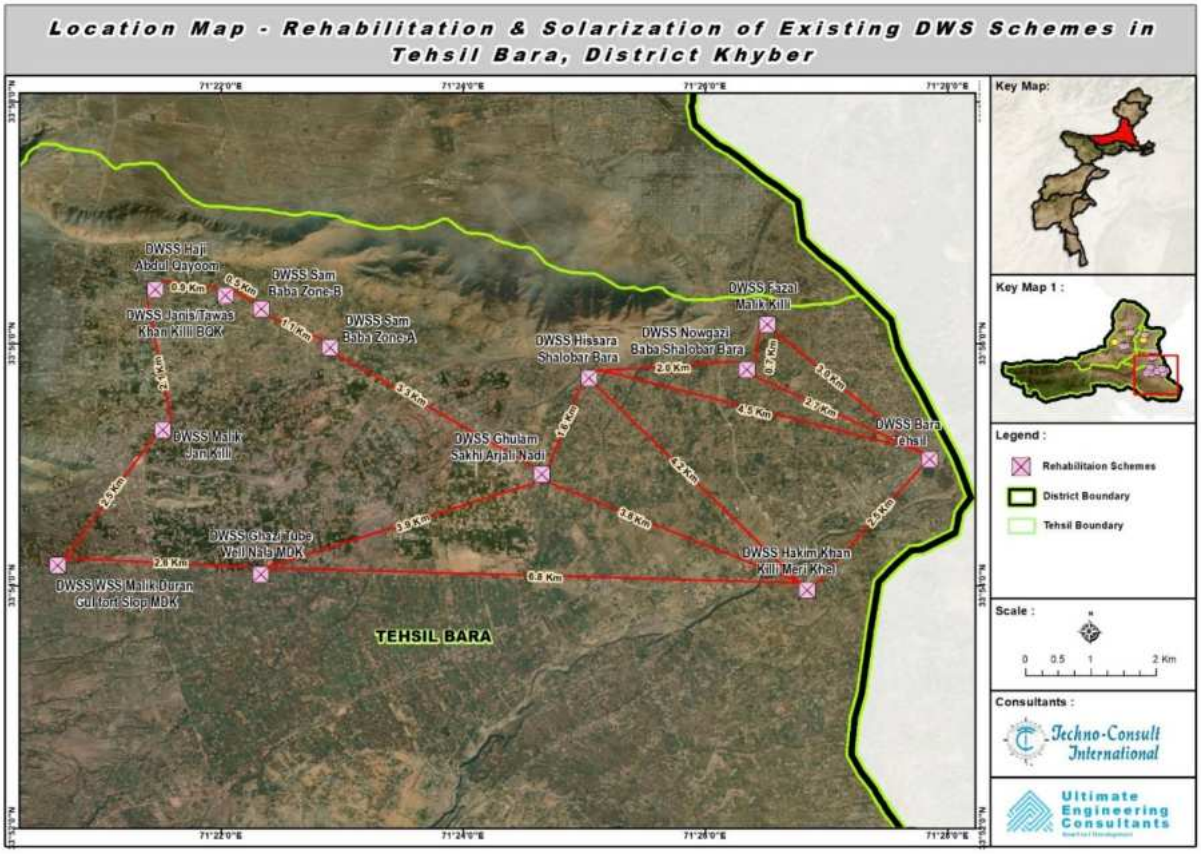


Figure 2: Location of Selected Schemes (13) for Rehabilitation in Tehsil Bara, District Khyber

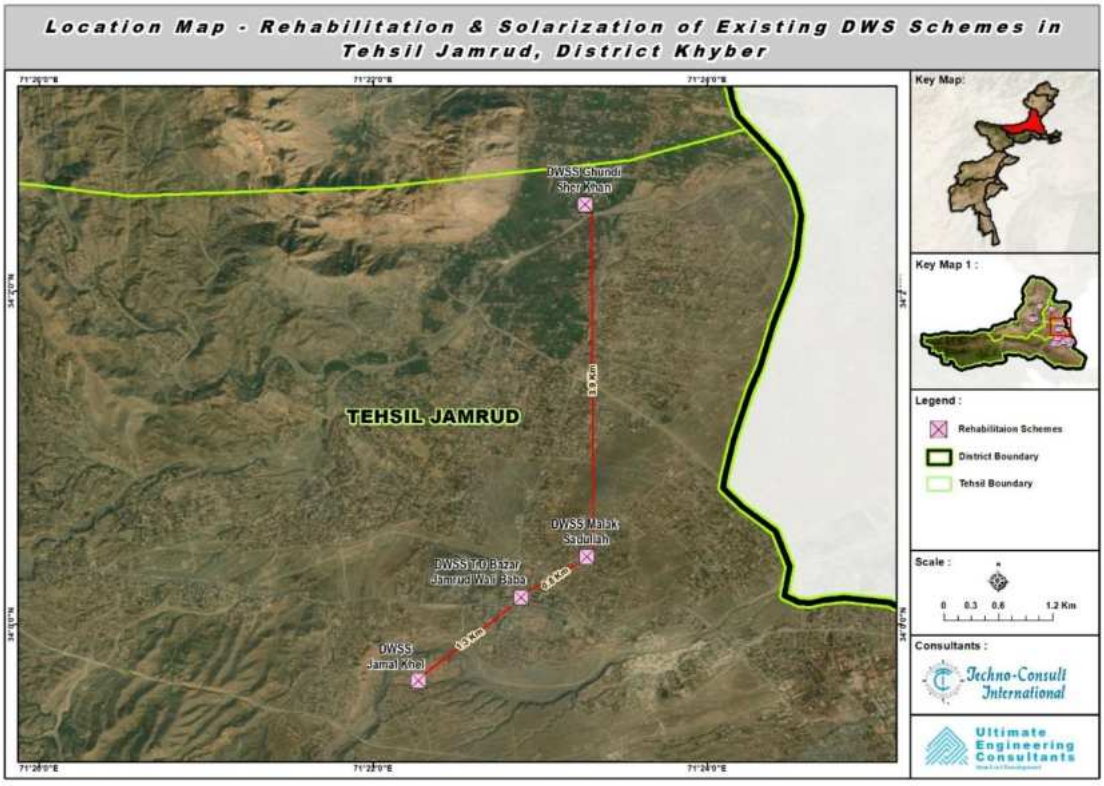


Figure 3: Location of Selected Schemes (4) for Rehabilitation in Tehsil Jamrud, District Khyber

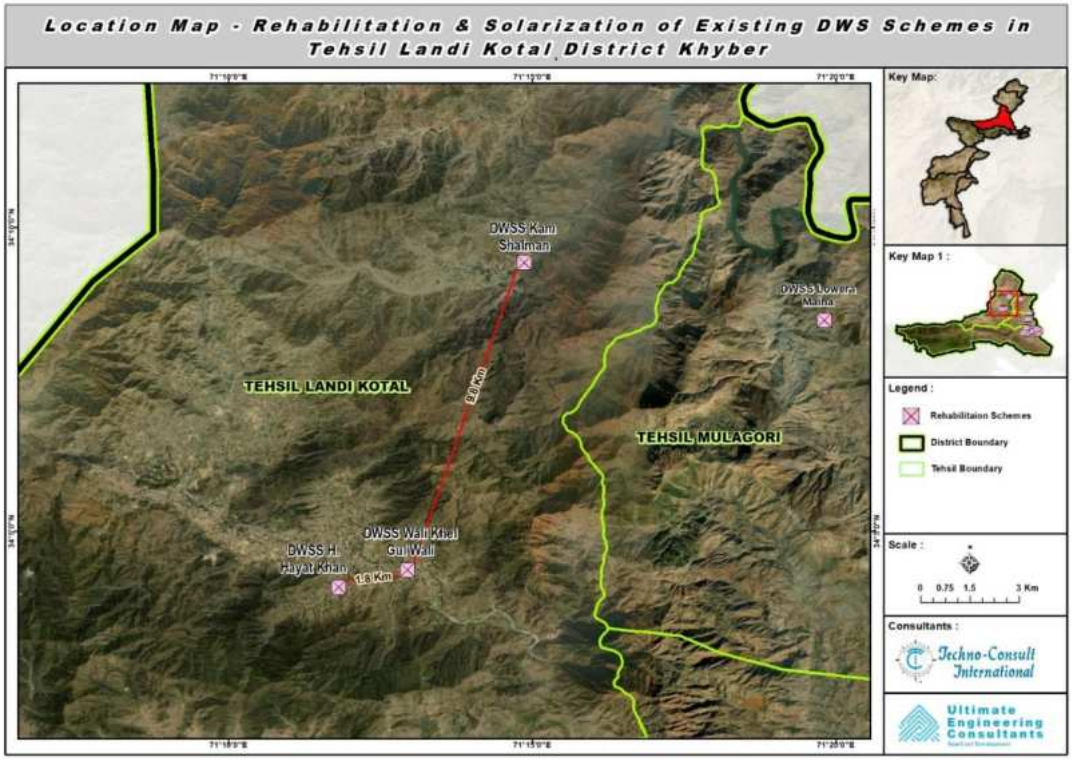


Figure 4: Location of Selected Schemes (3) for Rehabilitation in Tehsil Landi Kotal, District Khyber

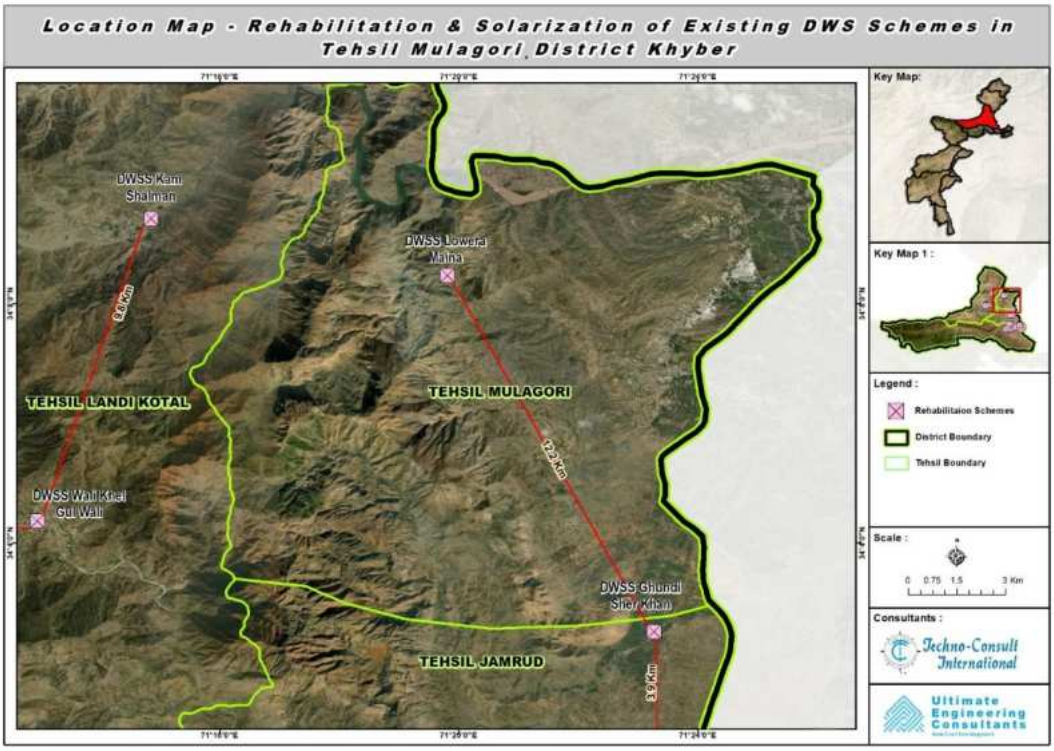


Figure 5: Location of Selected Scheme (1) for Rehabilitation in Tehsil Mula Gori, District Khyber

3. LEGAL, POLICY FRAMEWORK, AND REGULATORY REQUIREMENTS

3.1 Applicable Environmental and Social Policies

The World Bank Environmental and Social Framework sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity. The WB's ESF Environmental and Social Standards related to this subproject are as follows:

- ***Environmental and Social Standard 1:*** Assessment and Management of Environmental and Social Risks and Impacts;
- ***Environmental and Social Standard 2:*** Labor and Working Conditions;
- ***Environmental and Social Standard 3:*** Resource Efficiency and Pollution Prevention and Management;
- ***Environmental and Social Standard 4:*** Community Health and Safety;
- ***Environmental and Social Standard 10:*** Stakeholder Engagement and Information Disclosure.

These Standards establish objectives and requirements to avoid, minimize, reduce, and mitigate risks and impacts, and where significant residual impacts remain, to compensate for or offset such impacts.

3.2 National and Provincial Legal and Regulatory Framework

Environmental governance in Pakistan has evolved significantly since the introduction of the Environmental Protection Ordinance (EPO) of 1983, providing a legal framework for addressing pollution and environmental degradation. The EPO 1983 was improved after an extensive and prolonged consultative process with all stakeholders, and a new law, the Pakistan Environmental Protection Act (PEPA), was promulgated in December 1997. In 2000, the Pakistan Environmental Protection Agency (Review of IEE and EIA) PEPA Rules were prepared for the operationalization and application of the Act. The 18th Constitutional Amendment devolved environmental governance to the provincial level**,** allowing provinces to legislate and enforce their environmental laws. Under the 18th Amendment, the Provincial Government enacted the Khyber Pakhtunkhwa Environmental Protection Act of 2014 to protect, conserve, rehabilitate, and improve the environment within the province. Under section 31 of the Khyber Pakhtunkhwa Environmental Protection Act, 2014, the Government of Khyber Pakhtunkhwa makes the Khyber Pakhtunkhwa Environmental Assessment Rules 2022. The KP Environmental Assessment Rules in Section 2 provide the rules for the proposed assessment of projects. The details of the rules are as under:

4. Projects requiring an EIA or IEE, or GEA. **---**Where the project falls within the categories mentioned in Schedules II, III, and IV, the proponent shall file EIA or IEE, or GEA, respectively, with the Agency.

5. 6. Preparation of guidelines for EIA, IEE and GEA. **---** Guidelines for the preparation of EIA or IEE, or GEA of general and sectoral applicability may be specified by the Agency, provided that such guidelines may indicate specific assessment requirements for planning, construction, and operation of a project relating to a particular sector.

This subproject has low to moderate environmental and social risks and therefore falls in the General Environment Assessment category.

3.3 Institutional Responsibilities

While the Pak-EPA is the federal agency, each province also has its own Environmental Protection Agency (EPA), which works independently within its respective jurisdiction. Khyber Pakhtunkhwa (KP) has its EPA. The KPRIISP project operates in the NMAs, and they are now part of the KP, so the regulatory authority for the KPRIISP and its subprojects is the EPA, KP.

The subproject is committed to ensuring environmental compliance. Accordingly, General Environmental Approval (GEA) will be obtained from the EPA-KP, in line with the Environmental Protection Act, 2014, and the Environmental

Assessment Rules, 2021, before initiating any construction activities under the proposed subprojects. The relevant section of the EPA Environmental Assessment Rules, 2021, is placed at Annexure 4.

4. ENVIRONMENTAL AND SOCIAL BASELINE (District Khyber)

District Khyber, named after the world-famous Khyber Pass, previously known as Khyber Agency, is located in the northwestern part of Pakistan and was among the Federally Administered Tribal Areas (FATA) until 2018. Following the 25th Constitutional Amendment, it was integrated into Khyber Pakhtunkhwa province and granted the status of a district. The district covers an area of about 2576 square kilometers and is bordered by Nangarhar province of Afghanistan to the west, Orakzai District to the south, Kurram District to the southwest, Peshawar to the east, and Mohmand District to the north. The district is characterized by its barren and rugged mountainous terrain, comprising mainly hilly tracks and mountains interspersed with narrow valleys.

4.1 Environmental Baseline

The environmental baseline of Khyber District includes its Biological and physical environmental characteristics, potential sources of pollution, and its challenges.

Biological Environment

District Khyber is characterized by a diverse floristic composition adapted to its semi-arid, mountainous environment. The ecological/climate region is hot semi-arid (steppe), distinct from the more humid subtropical climate. The biological environment has a diverse vascular plant flora adapted to its semi-arid, mountainous terrain.

Flora and Fauna: The region boasts a diverse range of plant species, including species like deodar ((cedrous deodara), Deodar (Cedrus deodara), fir (Abies pindrow), blue pine (Pinus wallichiana), chir pine (Pinus roxburghii), elm (Ulmus wallichiana), walnut (Juglans regia), oak (Ouercus incana), yew (Taxus baccata), birch (betula). Eucalyptus camadulensis (Laachi). The project site has the plant species of Chir Pine (*Pinus roxburghii),* Black Mulberry (*Morus nigra),* Kikar (Acacia nilotica) and Banyan (Bar, Ficus benghalensis). Local communities utilize various plant species for medicinal purposes. The area's vegetation is generally sparse due to limited irrigation and the rugged landscape, but some areas have relatively thick forests. A diverse range of mammals, birds, reptiles, and amphibians is found in the district.

Physical Environment

The water, air, and soil quality in District Khyber, present mixed conditions, especially concerning drinking water quality contamination and high levels of particulate matter in the air.

Topography: The district is typically a Barren and rocky landscape, much of the area is rugged. The climate is dry, limited rainfall and water resources. But Tirah valley is an exception, known for its beauty and potentially more fertile land. The region's agriculture relies heavily on:

1. Barani (rainfed) cultivation: Crops depend on rainfall rather than irrigation.
2. Seasonal productivity: Good agricultural production occurs when sufficient rains fall.

This highlights the region's unique challenges and opportunities for sustainable development.

Climate: The climate of district Khyber is a hot semi-arid (steppe) climate, with long, hot summers and cold, snowy winters. The temperature in summer highs reach up to about 39°C, and winter lows drop to near 5°C or below. Khyber has moderate annual rainfall, roughly in the range of 90–230 mm, with most precipitation occurring in spring and monsoon months; snowfall occurs in winter.

Soil Morphology: The soil characteristics are shallow to moderately deep soils, i.e., limited depth, potentially affecting root growth. Soils contain calcium carbonate, influencing nutrient availability. Soils have a mix of particle sizes, impacting water retention. The area's geological composition features, unconsolidated rocks, loose and unbound rock particles. Deposits of clay, gravel, boulders, and sand at varying depths.

Water Quality and Resources: Drinking water in Landi Kotal is sourced mainly from tube wells and springs. Physicochemical parameters such as pH, electrical conductivity (EC), total dissolved solids (TDS), hardness, chloride, and nitrate generally fall within WHO permissible limits**.** However, turbidity in both surface and underground water sources

is a concern. A significant problem is the declining groundwater level due to prolonged drought and over-extraction. The average underground water table varies from 350 feet to 550 feet in depth. Test results of ground water samples of some of the DWS schemes of the sub-project from each of the four tehsils of the district are attached as annex-5 for reference as a baseline condition.

Ambient Air and Noise Quality: Given the District's mountainous and semi-arid environment with limited industrial activity, air pollution is likely less severe compared to urban centers, but could be affected by dust and particulate matter due to dry conditions and local activities. The Particulate Matter (with a diameter less than 2.5 micrometers and with a diameter less than 10 micrometers) and Nitrogen Dioxide (NO2) are of concern due to their increased levels above the standards, thus causing health risks for the residents.

4.2 Social Baseline

District Khyber's social landscape is characterized by a growing population, significant gender disparities in education, challenges in healthcare access, and a reliance on trade and agriculture for livelihoods. Addressing the socio-economic challenges, particularly in education and healthcare, remains crucial for sustainable development.

Population: The 2023 census records that Khyber has a population of 1,146,267, a male population of 598,342 persons, and a female population of 547,925 persons. The population is growing at a rate of 2.58% annually from 2017 to 2023. The recorded average household size is 8.1 persons, indicating large family units.

Literacy Rate: The overall literacy rate in Khyber is 38.92%. A significant gender disparity exists, with male literacy at 62.99% and female literacy at 12.66%. The low female literacy rate highlights barriers such as limited access to schools, cultural norms, and security concerns that hinder educational attainment for women and girls.

Healthcare Challenges: The primary healthcare system in District Khyber is mainly based on Basic Health Units (BHUs) and a limited number of higher-level public facilities. In the district there are around 13 BHUs along with one District Headquarter (DHQ) Hospital and a few civil dispensaries, while Rural Health Centers (RHCs) are either very limited or not functional in some areas, making BHUs the main service providers for most communities. These BHUs serve a population of up to 20,000–25,000 people each, providing essential services such as maternal and child health care, immunization, treatment of common diseases and initial referrals. Due to scattered settlements and hilly terrain, access to healthcare can be challenging, so these primary healthcare facilities play a critical role in ensuring basic health services are available to local communities.

Economic and livelihood: The local community's main source of income comes from farming activities and livestock, as it caters to around 50% of the employment of the local population either directly or indirectly. While the rest of the people are mainly daily wage laborers, very few people are involved in trading, shopkeeping, poultry farms, and a very minimum are employed in the public sector. Many people, for better job opportunities, have gone to work as migrant workers in Gulf countries, while a few have gone for employment in other provinces of Pakistan.

Religious and Linguistic Diversity: The majority population of Khyber is Muslim; however, a few religious minorities reside in the town. Pashto is the dominant language; however, Punjabi and Sindhi are also spoken primarily due to the presence of Armed Forces personnel.

5. STAKEHOLDER ENGAGEMENT AND INFORMATION DISCLOSURE

5.1 Stakeholder Identification and Public Consultation

The potential stakeholders for the subprojects were identified and consultation sessions were conducted in 21 schemes in District Khyber, with the relevant government department and communities. The objectives of the consultation were to inform the stakeholders about the subproject design and environmental and social impacts during the project implementation. Suggestions and concerns were recorded and addressed in this ESMP for compliance during the execution phase. Stakeholder consultations will remain a continuous process under the subproject and will be further carried out as per the guidelines given in stakeholder engagement plan (SEP). Consistent with the KPRIISP SEP, this subproject adopts the principles of openness, cultural appropriateness, and inclusiveness. Special attention is paid to vulnerable groups to ensure they are not disproportionately affected.

The suggestions that the stakeholders made in the consultation and their respective responses are presented in the following table:

Table 2: Stakeholder Recommendations and the Respective Response

Serial No.	Stakeholder Recommendation	Response to the Recommendation
1.	Installation of solar systems to ensure uninterrupted water supply throughout the day and to meet community water needs.	As per project scope, all water supply schemes will be upgraded to ensure reliable and uninterrupted service. In schemes where a solar system already exists, the system will be rehabilitated or upgraded as required to improve efficiency and performance. For schemes without an existing solar system, a new solar-powered system will be installed to ensure sustainable and continuous water supply.
2.	Construction/rehabilitation activities should be initiated and completed at the earliest to avoid prolonged inconvenience to the community.	The project implementation schedule will prioritize timely execution. Construction and rehabilitation activities will be carried out in accordance with the approved work plan to minimize delays and community inconvenience.
3.	Provision of door-to-door water supply connections to eliminate the burden of water fetching, particularly for women and children.	As per the project scope, each household will be provided water connection.
4.	Regular water quality testing should be conducted to ensure safe and potable water for the community.	Regular water quality monitoring will be carried out in accordance with national standards and project guidelines to ensure the provision of safe drinking water.
5.	The project should be designed with long-term sustainability considerations.	Sustainability measures including durable construction materials, operation & maintenance planning and institutional coordination have been

		integrated into the project design to ensure long-term functionality.
6.	In case of any tree cutting during project implementation, new trees should be planted to compensate for the environmental loss.	In case of tree cutting, compensatory plantation will be carried out in accordance with environmental guidelines. A minimum of ten new trees will be planted for every one tree removed to offset environmental impacts & promote ecological sustainability.
7.	Regular maintenance to avoid system breakdown after project completion.	It will be ensured by the concerned PHED divisional office that regular inspection and maintenance of the sub-project schemes is performed to ensure uninterrupted supply of water to the local community.

5.2 Stakeholder Analysis

The purpose of stakeholder identification and analysis is to systematically identify individuals, groups and institutions that may be directly or indirectly affected by the proposed subproject, or that may have an interest in its implementation. It also helps to understand their level of interest, influence and potential role in the project. This process ensures that stakeholder engagement is inclusive, context-specific and effective in addressing potential risks while maximizing project benefits. For this purpose, stakeholders have been categorized according to their relationship with the subproject. Primary stakeholders include individuals and groups who are directly affected either positively or negatively by the subproject activities. Secondary stakeholders include those who have an interest in the project but are not directly impacted by its implementation. The following table represents the identified stakeholders and their potential interest in the project

Table 3: Stakeholders Identification and their respective Interest and roles

Serial No.	Stakeholders	Project Impact, their Interest, and role
	Primary Stakeholders	
1.	Tehsildar Bara, Jamrud and Landi Kotal, District Khyber	The role of the Tehsildar is to verify the land agreements executed under Voluntary Land Donation (VLD) to ensure their legal validity and to eliminate the risk of land-related disputes in the future. Proper execution of land donation process will avoid any kind of conflict in future.
2.	XEN PHED, District Khyber. SDO's PHED, Tehsil Bara, Jamrud and Landi kotal	Providing assistance/facilitation to the relevant PIU, consultant and contractor's staff during the sub-project execution. To provide improved water supply to the sub-project communities.

3.	Local Government VC/NC secretary and chairman	The VC/NC Chairman and Secretary from Local Government Department participate in the Voluntary Land Donation (VLD) process as witnesses to the legal agreements, helping to verify that the land donation has been made willingly and with the knowledge of the local community. To ensure transparent, community-supported land donation process that facilitate smooth implementation and long-term sustainability.
4.	Community members, Teachers, students	Concerned about timely execution of the project and potential impacts such as noise, dust, land use, water access, and disturbance in routine activities due to construction. Benefit from improved facilities.
5.	Vulnerable and Marginalized Groups	Vulnerable and marginalized groups (women and elderly) participated in the consultation process and highlighting their specific needs and challenges related to access to water and sanitation services, ensuring that the project design remains inclusive and equitable. Benefit from improved facilities.
6.	Land Owners	Landowners play a vital role in the project by voluntarily providing the required land, thereby enabling project implementation and contributing to the welfare of their community. Benefit from improved facilities.
Secondary Stakeholders		
7.	Local Religious and Political Leaders	Hold moral authority and can influence public perception of the project.
8.	Environmental Protection Agency, Khyber Pakhtunkhwa (EPA-KP)	Regulatory authority responsible for ensuring environmental compliance and reviewing ESMP documentation.
9.	Contractor (s) and Construction Workers	Involved in implementation, requires clear orientation on social and environmental safeguards.
10.	Media and Information Channels (Local Radio Channels)	Important for public disclosure, awareness-raising and helping to spread accurate information.
11.	Local civil society organizations	Important for public disclosure, awareness-raising and helping to spread accurate information.

5.3 Stakeholder Engagement Plan (SEP) & Disclosure

This Stakeholder Engagement and Disclosure Plan outline how stakeholders will be involved and informed during the construction phase of the project under the ESMP in District Khyber. Its purpose is to ensure continuous two-way communication, enhance social accountability, reduce conflicts and foster community support through timely and culturally appropriate engagement. Consultations with women will be held in "private spaces" or "gender-neutral spaces" by female staff. Communication materials will use images/infographics for those with low literacy.

Table 4: Engagement Activities and Methods (During Construction)

Activity	Target Stakeholders	Frequency	Communication Method	Responsibility
Community Briefings	Community Residents (male & female), tribal elders' local community-based organizations	Monthly	Public meetings, mosque announcements, and community centers (Hujra's)	Contractor's social staff, PIU PHED
Information Disclosure	General public	Ongoing	Posters, notice boards, Urdu & Pashto pamphlets	Communication Officer, PIU PHED
Focused Group Discussions (FGDs)	Local Residents	Bi-monthly	Small group meetings, female outreach through the Gender staff	E&S and gender staff at PCMU and PIU PHED
Grievance Redress Mechanism (GRM) Activation	All stakeholders	Continuous	Complaint boxes, hotline, in-person reporting, and all intake measures as these become available	GRM Focal Points at PCMU and PIU PHED
On-site Signage & Safety Notices	Public, labor, commuters	Continuous	Visual safety signs, barriers, and flagmen	Contractor HSE team
Coordination Meetings	PCMU	Quarterly	Formal briefings, email reports, and written updates	PIU PHED

6. ENVIRONMENTAL AND SOCIAL MONITORING PLAN

6.1 Potential Environmental and Social Impacts, Mitigation Measures, and Monitoring Plan

The Environmental and Social Management Plan (ESMP) provides the framework for implementation of the mitigation measures, environmental management, and monitoring during the construction and operation phases of the proposed subproject. The proper implementation of the ESMP will ensure that any adverse environmental impacts are adequately mitigated, either totally, prevented, or minimized to an acceptable level, and required actions to achieve its above stated objectives are successfully taken by the concerned institutions or regulatory agencies. The implementation of ESMP will be carefully coordinated with the design, construction, and operation programs of the project to ensure that relevant mitigation measures are implemented at the appropriate stage and adequate resources are properly allocated to achieve the desired results.

Table 5, below, provides the Environmental Management Plan. The proposed schedule for the ESMP is 1 year, comprising the first month for the pre-construction phase, for the contractor mobilization, and carrying out the required initial stage preparation. The next 11 months will be for the construction phase to complete the rehabilitation/solarization of the sub-project DWS schemes. However, the ESMP schedule is contingent upon the subproject's approval from the relevant Government forums and initiation. The actual timeline will be defined once those formalities are completed. The plan outlines impacts, targets, mitigations, and the responsible authorities for the implementation of the mitigation measures during design, construction, and operational phases.

Table 5: Environmental Management Plan

Sr. No.	Parameters	Target	Mitigation	Status of Activity	Implementation Responsibility
Design/pre-construction Phase					
1	Drainage	To prevent standing water, flooding, and water ponding in and around the DWS schemes.	▪ Provision of appropriate drainage facilities and structures should be provided in the DWS schemes; and ▪ Proper slopes shall be incorporated in the design feature to avoid accumulation of water inside the DWS	Done	PIU, PHED
5	Traffic Management	To minimize traffic problems in the project area	▪ Once the contractor is mobilized, in the first months of the project time, Contractor will prepare a comprehensive Traffic Management Plan and disclose it before construction begins, ensuring measures are in place to prevent traffic	To be Prepared.	Contractor to provide plan, PIU, PHED to ensure and monitor

			congestion and safeguard community convenience. Vehicle movements for transporting construction materials shall be strategically timed to minimize traffic impacts and avoid inconvenience to residents; ▪ Plan the timing for the movement of vehicles carrying construction materials to reduce traffic load and avoid inconvenience to the local community.		
6	Health and Safety	To minimize health risks	▪ The contractor will prepare a detailed health and safety plan with all necessary and required mitigation measures that will minimize health risks to the surrounding community and the labor involved in construction. The proposed plan will be submitted to the PIU and will be made public before the construction activity begins; and ▪ An emergency response plan will be formulated by the contractor that emphasizes a line of action for rescue, medical emergencies, natural disasters, and firefighting operations at the construction site and will be submitted to	To be Prepared.	Contractor to provide plan, PIU, PHED to ensure and monitor

			PIU before the construction activity begins.		
7	Solid Waste Management	To manage (i.e., collect and dispose) the solid waste safely at appropriate sites.	▪ The contractor will prepare a comprehensive solid waste management plan incorporating the technical design features for refuse collection from the rehabilitation sites, and its safe disposal at the designated places to ensure it is not at sites that would minimize burning on site; and ▪ The contractor will devise plan(s) for safe handling, storage, and disposal of harmful waste and materials. ▪ Guidelines for preparing the Waste Management Plan have been attached as Annex - 13	To be Prepared.	Contractor to provide plan, PIU, PHED to ensure and monitor.
Construction Phase					
1	Noise and Vibration	To minimize noise pollution and fulfill the Regulatory Compliance under the NEQs.	▪ Selection of up-to-date and well-maintained plant or equipment with reduced noise levels ensured by suitable in-built damping techniques or appropriate muffling devices; ▪ Confining excessively noisy work to normal working hours in the day, as far as possible; ▪ Restricting construction vehicles' movement during night time;	To be carried out.	Contractor Health, Safety and Environment (C-HSE) Officer and Supervision Consultant (SC) team to monitor

			▪ Avoid the use of heavy drill machines to avoid the vibration effect on the surrounding buildings; ▪ Vehicles and equipment used should be fitted, as applicable, with silencers and properly maintained; ▪ Use of low noise machinery, or machinery with noise shielding and absorption; ▪ Contractors should comply with the submitted work schedule, keeping noisy operations away from sensitive points; ▪ implement regular maintenance and repairs; ▪ Employ strict implementation of operation procedures; and ▪ Providing the construction workers with suitable hearing protection, like ear caps or earmuffs, and training them in their use.		
2	Soil Erosion	To minimize soil erosion and contamination.	▪ All kinds of oil spills from construction machinery on the ground shall be scrubbed until the clear surface of soil, and the removed clay shall be safely disposed of as desired, and the site will be restored to its original conditions;	To be carried out.	C-HSE Officer and Supervision Consultant (SC) to monitor.

			▪ Unnecessary excavations should be avoided; ▪ Septic tanks connected to soakage pits of adequate capacities will be constructed for receiving and treating wastewater from all temporary worksite toilets and at the temporary container offices, if any; ▪ The toilet wastewater should not be discharged untreated onto the adjacent lands/sewers/disposal station; and ▪ Washout from washing of equipment and gadgets will be drained into either a septic tank or a sand-gravel bed for removal of the grit and contaminants.		
3	Air Pollution	To minimize air pollution and fulfill the Regulatory Compliance under the NEQs.	▪ All sites where excavation work will be carried out will be regularly sprinkled with water to control dust; ▪ The excavated material shall be covered and shall not be stored for long intervals; ▪ Preventive measures like batching and mixing operations shall be performed in enclosed or controlled areas, installing screens around the mixing and unloading operation areas at the	To be carried out.	C-HSE Officer, and Supervision Consultant (SC) to monitor.

			site, and no "Overloading" shall be enforced to prevent spillage of fine materials during transport operation; ▪ All vehicles, machinery, equipment, and generators deployed during construction shall be maintained in sound working condition, regularly serviced (as prescribed by the manufacturer), and properly tuned to minimize exhaust emissions and ensure compliance with applicable environmental standards; ▪ All vehicles, machinery, and equipment used for the construction shall be plugged off or switched off immediately after completion of their work to avoid idling conditions; ▪ Emissions from power generators and construction machinery are important point sources at the construction sites. The filter shall be installed at the point sources of air emissions and shall be replaced regularly as prescribed by the manufacturer. Proper maintenance and repairs of the		

			equipment are needed to minimize hazardous emissions; ▪ Open burning of solid waste from the Contractor's camps should be strictly banned; ▪ Construction workers should be provided with masks for protection against the inhalation of dust; and		
4	Water Quality and Availability.	To protect the ground and surface water resources from any pollution due to the construction of the subproject and fulfill the Regulatory Compliance under the NEQs. .	▪ Protection of surface and groundwater reserves from any contamination sources, such as construction and oily wastes that could degrade their potable quality; ▪ Wastewater effluent from the contractor's workshop and equipment washing yards should be passed through gravel/ sand beds to remove oil/ grease contaminants before discharging to the final disposal point; ▪ Water required for construction is obtained in such a way that the water availability and supply to nearby communities remain unaffected; ▪ For construction purposes, water shall be drawn from surface water bodies on priority and as available; ▪ Regular water quality monitoring according	To be carried out.	C-HSE Officer, and Supervision Consultant (SC) to monitor.

			to a determined sampling schedule provided in Table 7, below; ▪ During all rehabilitation activities, the contractor shall implement effective controls to prevent construction debris and other waste from entering the drainage system. Appropriate measures—such as installing silt traps and regular site housekeeping—must be applied to ensure that no materials obstruct the drainage network; ▪ Contractor and his/her staff will not allow wastewater from the washing of machinery to mix with surface waters; instead, sealed washing basins shall be used, and all the wastewater shall be directed to a sedimentation or retention pond; ▪ Any waste (liquid/ solid/hazardous) shall not be discharged into any nearby surface water body. All such disposals must follow designated and approved methods; ▪ During the rehabilitation works, the contractor will clear culverts/drains; avoid material		

			dumping in existing waterways;		
5	Solid, Construction Waste, and Hazardous Waste	To minimize the solid, construction, and hazardous waste	▪ Schedule training and awareness sessions for the workforce before the start of the construction work on the proper storage and handling of materials and chemicals that may pose a risk to soil; ▪ A comprehensive waste management plan shall be prepared by the contractor and implemented. All the solid waste generated during construction and from camp sites shall be safely managed and handed over to the responsible Tehsil Municipal Administration (TMA) for safe disposal; ▪ Burning of waste will be prohibited; ▪ The hazardous waste shall be stored in closed containers, with proper labelling of containers, including the identification and quantity of the contents, hazard contact information. It will be safely disposed of in an EPA-registered hazardous waste facility within the province; ▪ Training of employees involved in the transportation of hazardous material regarding emergency procedures;	To be carried out.	C-HSE Officer, and Supervision Consultant (SC) to monitor.

			▪ Ensure the availability of emergency response services on a 24-hour basis, including trained medical staff, first-aid and medical kits, firefighting equipment (such as extinguishers and breathing apparatus), and ambulance services; ▪ The sewage system for the workers' rest area will be properly designed (pit latrines or, as required, septic tanks) to receive all sanitary wastewaters; ▪ Lined wash areas will be constructed at the site for the receipt of wash waters from construction machinery; ▪ All the stored hazardous materials shall be securely covered to prevent any possible leakage during heavy rainfall; ▪ Locating stockpiles of material at such places to minimize potential visual impact; and ▪ Minimizing the land intake of stockpile areas as far as possible.		
6	Health and safety of workers and associated communities	To reduce the health and safety risks to construction workers and the nearby communities arising from general construction activities, working at heights, fire and explosion, slips,	▪ Obligatory insurance against accidents for laborers/workers shall be ensured; ▪ Basic medical training shall be imparted to specified work staff, and basic medical service and supplies	To be carried out.	C-HSE Officer, Supervision Consultant (SC), and PIU to monitor.

		trips and falls, electro-mechanical hazards, exposure to hazardous materials and biological agents, and risks associated with unstable foundations.	to workers (first aid medical supplies and medicine, ambulance service) shall be made available at the site; ▪ Layout plan for rehabilitation site, indicating safety measures taken by the contractor, e.g., firefighting equipment, safe storage of hazardous material, first aid, security, fencing, and contingency measures in case of accidents; ▪ Work safety measures and good workmanship practices are to be followed by the contractor to ensure no health risks for laborers; ▪ Protection devices (ear muffs) should be provided to the workers doing a job in the vicinity of high noise-generating machines; ▪ Provision of protective clothing for laborers handling hazardous materials, e.g., a helmet, adequate footwear for bituminous pavement works, protective goggles, and gloves, etc; ▪ Ensure strict use of protective clothing and other necessary equipment during work activities;		

			▪ Emergency number shall be placed at worksites; ▪ Develop a contingency plan to address major accidents, including fires, explosions, chemical spills, structural failures, and natural disasters; ▪ The construction supervisor must ensure that only authorized workers shall be allowed inside the construction site boundary, and that all non-workers — including visitors, passersby, and especially children — are strictly prohibited from entering. The contractor shall develop a procedure/protocol to be followed by all official visitors at the specific site. The PIU, PHED shall approve the said procedure/protocol; ▪ The contractor shall provide and maintain adequate traffic management and safety controls at the rehabilitation sites. This includes installing clear and visible signage, lighting devices, physical barriers, and warning tape, as well as deploying trained flag personnel to ensure safe		

			movement of vehicles and equipment; ▪ There shall be proper control on construction activities, and the oil spillage and leakage from vehicles could be controlled on site by conducting routine inspections of the engine, transmission, and hydraulic systems, checking and replacing worn-out seals, gaskets, hoses, and filters, and monitoring oil levels frequently to detect abnormal loss; ▪ Efforts will be made to create awareness about road safety among the drivers operating construction material transportation vehicles; ▪ The contractor shall ensure timely and accessible public notification regarding all planned road improvement activities. Notifications shall include the nature of works, expected start and end dates, potential traffic or access disruptions, and available detour routes. Information must be disseminated through appropriate channels—such as local notice boards, community meetings, nearby mosques to allow the public to		

			prepare and minimize inconvenience; ▪ Workers who shall be reported as ill or exhibit possible symptoms shall be restricted from entering the work site. They shall be promptly isolated and referred to local medical facilities for immediate care; ▪ The communicable disease of most concern during the construction phase, like sexually-transmitted diseases (STDs) such as HIV/AIDS, should be prevented by successful initiatives typically involving health awareness, education initiatives, training of workers in disease treatment, immunization programs, regular medical checkups of labor and staff, and providing health services; ▪ Reducing the impacts of vector-borne diseases on long-term health effects of workers should be accomplished through the implementation of diverse interventions aimed at eliminating the factors that lead to disease, which include prevention of larval and adult propagation of vectors through		

			sanitary improvements and elimination of breeding habitat close to human settlements, and by eliminating any unusable impounding of water; ▪ A supply of safe drinking water will be made available and maintained at the project site(s); ▪ Chlorinated disinfecting spraying must be conducted at the work site(s); and ▪ Proper hygiene practices in the toilets and washrooms will be implemented with proper and adequate use of soaps and disinfectant spray. In addition to the above general protective measures for the laborer and adjoining community, the contractor and his/her supervisory staff will provide and ensure the specific protective measures, such as: ▪ Provide training and awareness to the concerned staff on handling, storage, and safety of gas cylinders; ▪ Approved demolition plan, utility isolation, barricading, and dust suppression; ▪ Guardrails, certified scaffolding, safety nets, harnesses, and other required PPEs to be made		

			mandatory for Work at Height activities; ▪ Fire prevention plan, controlled storage of flammables, hot-work permits, provision and location of firefighting equipment; ▪ Good housekeeping, clear walkways, adequate lighting, and spill control.		
8	Labor Camp	To minimize loss of assets and vegetation due to labor movements, prevent environmental degradation from construction camps, and ensure the camp's presence does not cause any concerns for the nearby community.	▪ Considering the sub-project activities being spread across 21 DWS schemes, a small worker's camp having basic facilities/arrangements of rest area, washroom shall be provided at each of these 21 schemes. ▪ All the workers staying in the camp will be issued ID cards for security purposes; ▪ Provision of all required medical health facilities (first aid boxes, reasonable stock of commonly used medicines) in the camp for emergency health services; ▪ The camp will be properly fenced and gated to prevent the entry of outsiders into the camp; ▪ Entry for the local community/any unauthorized persons at the campsite will be prohibited; ▪ Preparation of Waste Management Plan addressing the	To be established.	Contractor

			classification, storage, and disposal of all solid wastes and the training of employees for handling the hazardous materials; ▪ Training will be provided to all staff members and laborers on camp management rules and overall discipline, and cultural awareness; and ▪ The contractor will submit a labor camp management plan.		
9	Flora and fauna	To protect, conserve, and minimize the impact on flora and fauna	▪ All efforts will be made to protect and conserve the existing trees and shrubs; ▪ At the 21 subproject sites, 2 sites involve tree cutting for rehabilitation/solarization works; 1. DWSS Ghundi Sher Khan Khel (3 trees); Guava tree (1 No) and Murberry tree (2 Nos) 2. WSS Malik Doran Gul Fort Slop MDK (2 trees); Eucalyptus (1 No) and Nimtree (1 No) ▪ Each cut-down tree will be replaced with 10 trees of local species in the available land. The cost of the additional plantation is covered in PC I of the subproject under the "E&S BOQ" head;	To be initiated, once the construction activities are completed.	C-HSE Officer and, Supervision Consultant (SC) to monitor

			▪ The Contractor's staff and labor will be strictly directed not to damage any vegetation, such as trees or bushes; ▪ Contractor will provide gas cylinders at the camps for cooking purposes, and cutting of trees/bushes for fuel will not be allowed; ▪ Hunting and poaching of animals will be strictly prohibited, and the Contractor will warn their labor accordingly; ▪ The camps will be properly fenced and gated to prevent the entry of animals in search of edible goods; ▪ Waste from the camps will be properly disposed of to prevent the chances of being eaten by animals, which may become hazardous to them; ▪ Special measures will be adopted to minimize impacts on the birds, such as avoiding noise-generating activities during critical periods of breeding; and ▪ Staff working on the project should be given clear orders not to shoot, snare, or trap any bird.		
10	Traffic Management	To minimize traffic problems in the project area	▪ A proper traffic management plan will be prepared by the contractor at the time	To be prepared before the	C-HSE Officer, Supervision Consultant (SC),

			of starting the construction in accordance with the on-ground site conditions, submit it to the PIU PHED for approval, and later, for monitoring purposes, and implemented to avoid traffic jams/public inconvenience within the colony; ▪ Movement of vehicles carrying construction materials should be restricted during the daytime to reduce traffic load and inconvenience to the residents; and ▪ The executing agency must maintain liaison between the residents/visitors, travelers, and the contractor to facilitate traffic movement during the construction stage.	construction begins.	and PIU to monitor.
11	Communicable diseases	To minimize the spread of Communicable diseases	A communicable disease prevention program will be prepared by the contractor for construction workers or residents near the construction sites and made public before the construction work starts. ▪ Reporting employees and laborers showing symptoms such as fever or high body temperature, coughing, difficulty breathing, or chest pain, and sending them to a clinic or the nearest hospital immediately;	To be prepared before the construction begins.	Contractor H&S person.

			▪ Awareness and implementation of the Quarantine Procedure for all employees who have come back from vacation after suffering from any communicable disease; ▪ Ensure Disinfection of offices, work areas, and machinery periodically; and ▪ Provision of face masks, instruction boards, and signage at different locations for health hazards awareness.		
Operational Phase					
1	Waste	To minimize and store the solid waste	▪ An appropriate waste management system shall be in place during the operational phase. It will integrate technical measures (segregation, treatment, disposal), administrative controls (planning, monitoring, compliance), and community engagement (awareness, collaboration) to ensure sustainability and regulatory alignment.	To be carried out.	PIU
3	Drainage	To prevent flooding and pooling	▪ Routine inspection and maintenance of the drainage system, to make sure that the drains are not blocked due to solid waste, shall be	To be carried out.	PIU

			scheduled and implemented.		
4	Flora	To maintain the flora in the Tehsil complex	▪ Routine monthly inspection will be carried out to check the maintenance of the Tehsil complex; ▪ Weeds will be monitored weekly and removed no less than every two weeks; ▪ Any tree that poses a concern to public safety will be immediately barricaded and evaluated by an ecologist. Issues of immediate concern would be trees or branches that are leaning or broken, that may fall onto an area of pedestrian or vehicular activity; ▪ Use of fertilizers in open spaces should be strictly monitored to avoid any incidents such as direct contact with humans, eating by the birds; and ▪ Natural nutrients should be preferred.	To be carried out.	PIU

Environmental Monitoring is undertaken during both the construction and operational phases to ensure the effectiveness of the proposed mitigation measures. Certain environmental parameters are selected, and quantitative & qualitative analyses will be carried out by the contractor from an EPA, KP's registered laboratory. The results of the analysis will be compared with the guidelines, standards, and pre-project conditions to determine whether the EMP and its implementation are effective in mitigating impacts.

Parameters to be analyzed during pre-construction, construction & operation of the project, responsibilities for monitoring have been discussed and provided in Tables 6 to 8 below:

Table 6: 'Pre-Construction' Monitoring Plan for Baseline Development

Parameter to be measured	Objective of Monitoring	Parameters to be Monitored	Measurements	Location*	Frequency	Responsibility
Ambient Noise	To establish a baseline for noise levels	Ambient noise level near the receptors in the project area	A-weighted noise levels – 24 hours, readings taken at 15s intervals over 15 min. every hour, and then averaged	At two locations of each of the 4 Tehsils of the District	Once	C-HSE Officer
Groundwater Quality	To establish the groundwater quality in the project area	Groundwater quality in the project area	Water samples for comparison against NEQS parameters	At two locations of each of the 4 Tehsils of the District	Once	C-HSE Officer
Surface water quality	To establish surface quality in the project area	Surface water quality in the project area	Water samples for comparison against NEQS parameters	At two locations in the sub-project area	Once	C-HSE Officer

* Monitoring Locations to be finalized jointly between PIU Safeguards staff and the Supervision Consultant (SC).

Table 7: Construction Phase Monitoring Requirements

Project Activity and Potential Impact	Objective of Monitoring	Parameters to be Monitored	Measurements	Location	Frequency	Responsibility
Noise Disturbance due to noise from construction activity	To determine the effectiveness of noise abatement measures on sound pressure levels	Ambient noise level at different locations in the project area	A-weighted noise levels – 24 hours, readings taken at 15 s intervals over 15 min. every hour at 15 m from the receptors, and then averaged	At five random receptor locations in the project area	Every month on a typical working day	Contractor's HSE (C-HSE) Officer, SC
Groundwater Quality	To establish the groundwater	Groundwater quality in the project area	Water samples for comparison	At each of the 21 DWS sites	Twice during the	C-HSE Officer, SC

	quality in the project area		against NEQS parameters	in the sub-project	construction period	
Safety precautions by workers	To prevent accidents for workers and the general public	The number of near-miss events and accidents taking place	Visual inspections Compliance with Monitoring checklist	Each site	Once Daily	C-HSE Officer, SC
Soil Contamination	To prevent contamination of soil from oil and toxic chemical spills and leakages	Incidents of oil and toxic chemical spills	Visual inspections	At construction sites and vehicle and machinery refuelling & maintenance areas	Once a month	C-HSE Officer, SC
Solid Waste & Effluent Disposal Insufficient procedures for waste collection, storage, transportation, and disposal	To check the availability of the waste management system and its implementation	Inspection of solid and liquid effluent generation, collection, segregation, storage, recycling, and disposal will be undertaken at all work sites in the project area	Visual inspections Segregated disposal records	At work sites in the project area	Once daily	C-HSE Officer, SC

* Monitoring Locations to be finalized jointly between PIU Safeguards staff and the Supervision Consultant (SC).
Note: The proposed subproject is not expected to cause any significant increase in ambient air pollution due to very less excavation activities, minimal construction material transportation and storage, limited use of heavy machinery. Therefore, monitoring of Ambient air quality is not recommended.

Table 8: Operation Phase's Environmental Monitoring Plan

Parameter to be measured	Objective of Monitoring	Parameters to be Monitored	Measurements	Location	Frequency	Responsibility
Groundwater Quality	To establish the groundwater quality in the project area	Groundwater quality in the project area	Water samples for comparison against NEQS parameters	At each of the 21 DWS sites in the sub-project	Bi-Annual	PHED, Khyber Division

6.2 Relocation of Employees

No relocation of existing employees required due to the rehabilitation works at the DWS schemes.

6.3 Grievance Redress Mechanism (GRM)

The Grievance Redress Mechanism (GRM) is an institutional arrangement which provides the project's stakeholders an opportunity and a structured mechanism to submit their concerns. The grievance redress mechanism will focus on the following steps/points during the implementation process:

- Record grievances, both written and oral, categorizing and prioritizing them, and providing solutions within an agreed-upon timeframe;
- Reporting to the aggrieved parties about the resolutions regarding their grievances and the decision;
- Dissemination of various reporting channels such as complaint boxes, complaint register, PIU phone numbers, online complaint registration, and proformas for complaints.
- All information about grievance procedures, grievance forms, and responses will be available in languages readily understandable to the locals.
- During GRM orientation, inform labor and associated staff about alternative reporting channels, including the GRM register, telephone numbers, and online portals, in addition to the GRM boxes.
- All complaints received will be treated with confidentiality.

A key emphasis will be to quickly respond to all highlighted and reported concerns or grievances, as per the KPRIISP GRM Manual.

Grievance Registration and Resolution Process

Submission: Complainants can lodge grievances through:

- **Focal Person:** Environment & Social Officer, PIU PHED, KP-RIISP
- **Phone:** +92 91 9217303
- **Email:** piuphedgrm@gmail.com
- **Website:** https://www.cwd.gkp.pk/projects/KP-RIISP
- **In person/letter:** Office of the Project Director, KP-RIISP, Plot No. 40, Sector B-II, Phase-V, Hayatabad, Peshawar.
- **Complaint Box/Registers** at site offices

Recording and Categorization: All grievances (oral or written) will be registered, categorized (urgent/regular), and logged in a centralized GRM database.

Investigation and Resolution:

The E&S officer will coordinate with PHED PIU staff or field Officers to investigate the issue. The resolution will be shared with the complainant within the agreed timeframe.

Follow-up and Feedback:

The complainant will be informed in writing (or preferred method) of the decision/resolution and any follow-up actions.

Appeal and Escalation Mechanism:

If not satisfied, complainants may escalate the issue to:

- **Project Coordination & Management Unit (PCMU), P&D Department**
  - **Focal Person:** Senior Social Development Specialist
  - **Phone:** 091-9213022
  - **Email:** ssds@kp-riisp.gov.pk
  - **Address:** Civil Secretariat, Peshawar, KP

Grievance Redress Committee (GRC)

To support timely grievance handling, a Grievance Redress Committee (GRC) has been formed at the PIU level. The GRC will meet on a regular basis (or as needed) to address escalated or complex grievances.

Composition of GRC (PIU PHED):

Designation/Organization	Position in PIU GRC
PD PIU PHED	Head/convener of GRC
E&S officer PIU PHED	Secretary of GRC
Procurement Specialist PIU PHED	Member
Tehsil/District Focal Person	Member
Contractor	Member
Community Representative(s)	Member
Environment/Social/Gender Specialist, Supervision Consultant, PIU PHED	Observer
Co-opted/Invited member(s) E.g. complainant, lawyer, relevant govt. Official, etc.	Member/Observer

Composition of the GBV GRC (PIU PHED):

Composition	Status
Project Director, PIU PHED, KP-RIISP	Chairman
Procurement Specialist, PIU PHED, KP -RIISP	Secretary / Member
E&S Officer, PIU PHED, KP-RIISP	Member
Gender Specialist, Supervision Consultant, PIU PHED	Observer
Social Specialist, Supervision Consultant, PIU PHED	Observer
Any Co-opt member	Member/observer

Working Arrangements:

GRC meeting will be held at the PIU or any other location agreed by the Committee. If needed, GRC members may undertake field visits to verify and review the dispute issues.

If the affected person is not satisfied with the decision of GRC at PMU, then it can be referred to the Project Steering Committee for resolution. If the complainant does not accept the resolution, or chooses to accept it, this will be confirmed in writing. The complainant may also seek redress through courts or other mechanisms available in case of non-acceptance.

GRM Awareness and Capacity Building

- Awareness sessions will be conducted for laborers, contractors, local communities, and other stakeholders, including specific awareness on GBV & SEA/SH risks, survivor-centered reporting mechanisms, and confidential redressal procedures.
- Orientation on GRM and GBV-specific grievance reporting channels, procedures, confidentiality protocols, and available support will be integrated into community consultations and labor inductions.
- GBV-specific Grievance Redress Committees (GRCs) will be established/engaged as applicable, ensuring safe, confidential, and survivor-centered handling of complaints.
- GRM and GBV reporting information, including helpline numbers and contact details, will be displayed through posters and brochures at all construction and project sites.

6.4 Capacity Building and Training

To raise the level of professional and managerial staff, there is a need to upgrade their knowledge in the related areas. The SC will play a key role in this respect and supervise the arrangements for training.

The contractor's environmental awareness and appropriate knowledge of environmental protection is critical to the successful implementation of the ESMP, as without appropriate environmental awareness, knowledge, and skills required for the implementation of the mitigation measures, it would be difficult for the contractor's workforce to implement effective environmental protection measures. A suitable training program is proposed to train the Contractor's staff who will be involved in the Construction Phase and the professional staff from the client involved at the operational stage of the project. The details of this training program are presented in Table 8 below**.**

Table 9: Personnel Training Program

Provided by	Contents	Trainees/Events	Duration
Consultants/ organizations Specializing in environmental management and monitoring	Short training session, on: Environmental laws and regulations, daily monitoring and supervision	Two training sessions, one For PIU staff and one for Contractor project staff	2 Days
Consultants/ organizations specializing in Occupational health and Safety	Short lecture relating to Occupational Safety and Health	One seminar for contractor's staff	1 Day
Consultants/ organizations specializing in Grievances Redressal Mechanism	Training session on What is GRM, and how It's working, and who to be approached for redressal of complaint, and awareness session on GBV& SEA/SH and its associated elements	One session for the contractor's staff One session for the Surrounding community.	1 Day

6.5 Institutional Arrangements and Roles

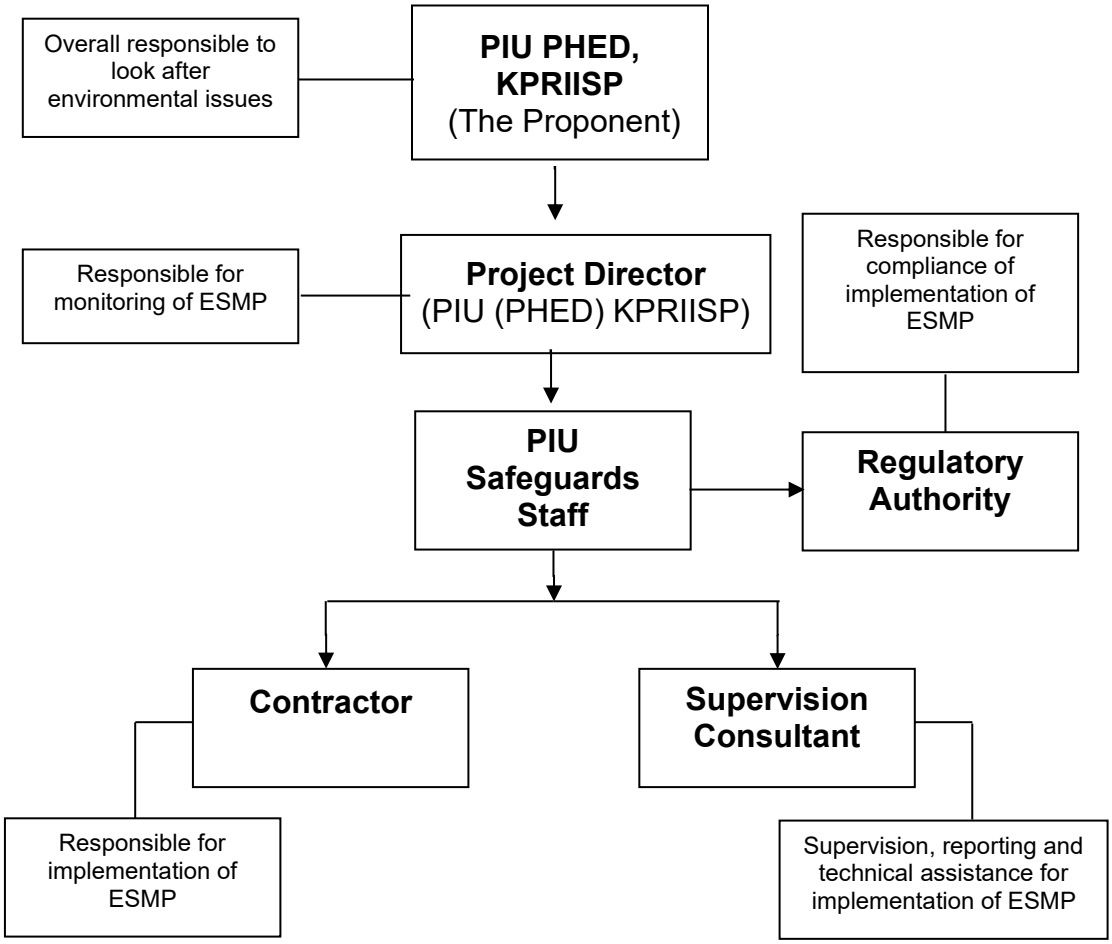
The main purpose of the ESMP is to provide a strategy for environmental protection. According to ESMP, all the activities associated with the project will be controlled and monitored during the design, construction, and operation phases. EMP will propose a plan of action that will indicate responsibilities and required measures to prevent or minimize the potential environmental impacts.

The following functionaries will be involved in the implementation of ESMP:

- Project Implementation Unit (PIU);
- Supervision Consultant's Environmental Engineer;
- Contractor's Site Environmental Engineer; and
- EPA, KP (Regulatory Authority)

The organizational set-up for the implementation of ESMP is shown in **Figure 1** below**.**

Figure 1: Organizational Setup for Implementation of ESMP



The PIU PHED will be overall responsible for the implementation of this ESMP and the environmental management and supervisory affairs during the construction phase of the proposed project. For effective environmental management, the PIU will assign the necessary responsibilities through the Project Director to an Environmental Expert and a Social Expert in implementing the mitigation measures proposed in the ESMP. The PCMU will monitor the overall implementation of the respective ESMP to make sure all the recommended protective and safety measures are implemented in its later letter and in spirit.

The ESMP will be part of the Bidding documents. On mobilization of the contractor for the subproject implementation, the contractor will prepare and submit the **Contractor Environmental and Social Management Plan (C-ESMP)** to the PIU. The Contractor will be responsible for the implementation of ESMP under the Supervision Consultant. The Contractor shall be bound to follow the provisions of the Contract documents, especially regarding environmental protection, and apply good construction techniques and methodology without damaging the environment. The

Contractor must safeguard, mitigate adverse impacts, and rehabilitate the environment should be addressed through environmental provisions in the Contract document and through adequate implementation at the site. The Regulatory Authority will be responsible for the compliance with the implementation of ESMP.

6.5.1 Project Implementation Unit (PIU)

Design and Construction of the project is the core responsibility of PIU, PHED. The major role and responsibilities related to environmental and social tasks are as follows:

- To ensure that the Project design and specifications are adequately reflected in the ESMP.
- To ensure the Project's compliance with the environmental regulations and donor requirements.
- Setting up systems for environmental management.
- Ensuring that the Contractor(s) develop their own, and carry out, Environmental Management Plan that are consistent with the ESMP;

6.5.2 Responsibilities of the Environmental Specialist of the Supervision Consultant

The Environmental Specialist (ES) of the Supervision Consultant (SC) will oversee the performance of the Contractor through periodic monitoring to make sure that the Contractor is carrying out the work following ESMP.

The ES of SC will provide guidance to the Contractor's Environmental Engineer for implementing each of the activities as given in the ESMP. The ES of SC will be responsible for record keeping, providing instruction through the Resident Engineer (RE) for corrective actions, and ensuring compliance with various statutory and legislative requirements. The EE will maintain close coordination with the Contractor and PIU for the successful implementation of environmental safeguard measures. However, the overall responsibilities of the ES of SC are as follows:

- Directly reporting to the RE;
- Discussing various environmental issues and environmental mitigation, enhancement, and monitoring actions with all concerned directly or indirectly;
- Inspect, supervise, and monitor all the construction and allied activities related to the EMP for the project
- Assist the RE to ensure the environmentally sound engineering practices;
- Assisting the contractor and PIU in all matters related to public contacts, including public consultation on environmental and community health & safety issues;
- Assisting PIU Safeguards staff to carry out environmental monitoring;
- Organizing training for the HSE staff of Contractor and field staff; and
- Preparing and submitting monthly and quarterly environmental progress/ compliance reports to the PIU.

6.5.3 Responsibilities of the Health, Safety and Environment (HSE) officer of the Construction Contractor

The Site HSE officer of the Construction Contractor will carry out the implementation of mitigation measures at the construction site. The Construction Contractor will be bound through the Contract documents to appoint the HSE officer with a relevant educational background and experience. Responsibilities of the HSE officer of the Contractor are as follows:

- Preparing sub plans, including monitoring plan, traffic control/diversion plan, site rehabilitation plans, etc., and will submit all the plans to the ES of SC.
- Implementation of ESMP and taking effective measures against the corrective actions plan;
- Preparing the compliance reports as per the schedule and will submit them to the SC;
- Providing proper Personal Protective Equipment (PPEs) to the workers and training them for their proper use; and
- Providing environmental and health & safety training to the workers /labor.

6.6 Labor Camp Management

Considering the sub-project activities being spread across 21 DWS schemes, a small worker's camp having basic facilities/arrangements of rest area, washroom, drinking water facility shall be provided at each of these 21 schemes. It is anticipated that around 5-8 laborers will be present at each scheme during the construction phase of this subproject.

6.7 Occupational Health and Safety

Occupational Health and Safety (H&S) related impacts will arise during construction stage activities, including clearing of earth, levelling, compaction, pavement finishing, and testing & commissioning. The falls during inspection or maintenance of pile rigs, steel fixing bridges, framework erection, and other related activities may also occur. Eye injury can be caused by stone or metal particles. The hazards of being hit by falling objects, major hand-arm and whole-body vibration hazards, skin and respiratory tract irritation from exposure to cement dust, overexertion, awkward postures, etc., will be another impact. Welding hazards include electric shock, fumes and gases, fire and explosions, falls from height, eye and head injuries, etc. The contractor will take all protective measures and provide the Personal Protective Equipment to the laborers during the construction to minimize the OSH risks and ensure the safety of the laborers at the site. The contractor will prepare a Site Specific OH&S plan; the main components of the plan are provided in Annexure-9, and submitted to PIU. Strict monitoring by the PIU and the Supervision Consultant team will be conducted during the construction stage to ensure compliance with the ESMP mitigation and safety measures.

6.8 GBV/SEA/SH Risk Mitigation:

To mitigate risks of Gender-Based Violence (GBV), Sexual Exploitation and Abuse (SEA), and Sexual Harassment (SH), the contractor will develop a site-specific Code of Conduct (CoC) and Grievance Redress Mechanism (GRM) in line with the approved KPRIISP GRM Manual (May 2025). These documents will be submitted to the PIU for review and approval within 30 days of contract signing and before the commencement of civil works. The CoC will be signed by all workers, including subcontractors, and refresher GBV/SEA/SH awareness trainings will be conducted regularly. KPRIISP Code of Conduct (GBV and SEA/SH Prevention) is attached as Annex-10.

The GRM will include confidential reporting channels and survivor-centered protocols for handling GBV-related complaints. The PIU will monitor compliance, maintain oversight of CoC implementation, and facilitate referral of survivors to appropriate support services.

6.9 Budget for ESMP Implementation

Environmental and Social Monitoring and management is performed during the execution of rehabilitation/solarization activities to ensure the effectiveness of the proposed mitigation measures. Certain environmental parameters are selected, and quantitative & qualitative analyses are carried out. The results of the analysis are compared with the guidelines, standards, and pre-project conditions to determine whether the EMP and its implementation are effective in mitigating impacts. Tables 10 below provide the details of the items, parameters that will be required for the implementation of the ESMP and the budget allocated for each of these items is also mentioned in detail.

Table 10. Budget for ESMP Implementation

Khyber Pakhtunkhwa Rural Investment and Institutional Support Project (KPRIISP)					
DISTRICT Khyber (Water Supply REHAB)					
1. E&S COMPLIANCE					
Sr. No.	***Description***	***Unit***	***Quantity***	***Unit Rate (Rs)***	***Amount (Rs)***
1	Provision of a fixed scaffolding platform for "Work at Height", including harness belt etc. complete in all respects as per the OSHA guidelines or the direction of The Engineer	Nos	5	100,000	500,000
2	Provision of green cloth, 4 colour waste bins (240 Liters), warning tape, necessary plastic and tarpulin sheet for covering of construction raw material on site and during transportation to the site	Each Site	36	22,000	792,000
3	Handling of solid waste (storage, collection, transportation, utilization, and final disposal of solid wastes)	Each Site	36	5,000	180,000
4	DCP Fire extinguishers (6 kg) in case of fire (The material of the cylinder is steel. The extinguishing agent is mono ammonium phosphate and ammonium sulfate powder and the discharge time of the agent is 13 seconds). Including the refilling of used chemical and replacement of expired chemical.	Each Site	36	25,000	900,000
5	Fire alarm (Signal Transmission: Wired Alarm, Working Principle: Manual Alarm Button)	Each Site	10	5,000	50,000
6	Ear plugs (corded Reusable silicon Earplugs)	Each	1000	200	200,000
7	Safety Helmets (PE shell with vents Lining; material: Plastic Chin strap included; Adjust head size by ratchet knob)	Each	360	1,000	360,000
8	Safety shoes (Renowned brand)	Each	300	4,000	1,200,000

9	Protective goggles (Anti-fog, Anti scratch, Poly-carbonate Scratch and impact resistant, side protection sheet)	Each	360	500	180,000
10	Gloves (made up of nylon, polyurethane with ironclad) and safety Vest	Each	360	600	216,000
11	Dust Mask	Each	2000	20	40,000
12	First Aid Kit (pain killers, eyewash solution, antibiotic ointment, thermometer, plasters, sterile gauze dressings, sterile eye dressings, triangular bandages, crepe rolled bandages, safety pins, disposable sterile gloves and tweezers). Including the refilling of the contents and replacement of expired content.	Each site	36	10,000	360,000
13	Ground water Quality Testing (To be performed twice: Once before the start of construction, second during the construction period)	Each site	42	16,640	698,880
14	Noise level monitoring (Meter)	Each	10	6,000	60,000
15	Removal of Existing Trees upto any Girth, including removal of stumps & backfilling with sand & Plantation of (10 No.s) New Trees of the Type removed at each location and as per environmental compliance requirements	Job	5	10,000	50,000
16	Safety signboards/warning signs for each construction site including signs for; Grievance Rederess Mechanism (GRM) details, Emergency contact numbers, PPEs requirements, First Aid / Fire Extinguisher placement, emergency exit, Procedure of use of Fire Extinguisher and other construction related safety/warning signs)	Each	100	2,500	250,000
Total Amount					***6,036,880***

6.10 Reporting Requirements

6.10.1 Monitoring and Reporting Responsibilities

An ESMP can only be effective if it is regularly monitored and the results are reported to the appropriate authority, ensuring that the proposed mitigation measures are properly implemented on the ground. An environmental monitoring checklist is placed at Annexure-11. Monitoring and reporting of outcomes are shared responsibilities among all project partners. The roles and responsibilities for monitoring and reporting are distributed among the partners as follows:

- **Implementing Agency/Contractor**: Responsible for daily/weekly environmental and social monitoring and internal reporting.
- **Supervisory Consultants**: Responsible for reviewing contractor reports and submitting periodic consolidated reports to the project management unit.
- **Environmental and Social Specialists**: Oversee proper ESMP implementation and conduct spot checks.

6.10.2. Types of Reports Required

The table below outlines the types of reports to be prepared, their required frequency, their intended purpose, and the parties responsible for their preparation and submission.

Table 15: Types, frequency and purpose of reports

Serial No	Report Type	Frequency	Purpose	Responsible Party
1	**Daily Site Report**	Daily	To monitor compliance with ESMP mitigation measures on-site	Contractor
2	**Weekly Monitoring Report**	Weekly	Summarizes environmental and social performance, any incidents or complaints	Contractor
3	**Monthly Progress Report**	Monthly	Overview of ESMP implementation, mitigation actions, non-compliance, and grievances	Contractor
4	**Quarterly Environmental and Social Monitoring Report (ESMR)**	Quarterly	Comprehensive review of ESMP performance indicators and compliance	Supervising Consultant
5	**Incident/Accident Report**	As needed	Immediate reporting of major incidents, including GBV & SEA/SH affecting the environment or community	Contractor and Supervising Consultant
6	**Grievance Redress Reports**	Monthly	Track grievances received, status of resolution, and time taken	GRM Focal Point

6.10.3. Stakeholder Reporting

An effective stakeholder reporting process ensures transparent communication, fosters accountability, and keeps all relevant parties informed about the project's progress, challenges, and compliance with environmental and social safeguards. In accordance with the approved KP RIISP SEP (March 2023), reporting will be conducted as follows:

Key Stakeholders for Disclosure:

- Project Management: PCMU (P&D Department) and PIUs (Line Departments).
- Regulatory/Oversight: World Bank and EPA KP.
- Local Authorities: Local Government Department (LG&RDD), District Administrations, and Village/Neighborhood Councils (VC/NCs).
- Communities: Project Affected Parties (PAPs), Vulnerable Groups, and Residents.
- Civil Society: NGOs, CSOs, and Academia.

Reporting Mechanisms & Frequency:

- Monthly: Summaries of public grievances, inquiries, and incidents will be collated and reported to senior project management.
- Bi-Annual: Comprehensive progress reports on SEP implementation and environmental/social performance will be shared with the PCMU and the World Bank.
- Six-Monthly (Feedback Loop): Information on public engagement activities and project updates will be conveyed to community stakeholders through infographics, the project website, and digital messaging (e.g., WhatsApp).
- Public Consultation Records: Detailed records of all consultations (FGDs, consultations) must be maintained, transcribed, and included in the periodic reports.

6.10.4. Emergency and Contingency Reporting

In addition to regular ESMP monitoring and reporting, additional reports must be prepared by the contractor's Environmental Engineer and submitted to PIU/PCMU in the event of emergencies. An Incident Report Form is attached at Annexure-12. These may include, but are not limited to, the following:

- Immediate notification of:
    - Hazardous material spills
    - Significant ecological damage
    - Social unrest
- Submit a detailed incident report within 24–48 hours

Annex 1. Land Coordinates of the Rehabilitation Schemes

Rehabilitation & Solarization of Existing Drinking Water Supply Schemes in District Khyber (Phase I)

S. No	Tehsils	DWS Rehabilitation Schemes	Location Coordinates
1.	Bara	• DWS Hissara Shalobar	33.928699, 71.417222
		• DWS Ghazi Tubewell Nala MDK	33.917473, 71.46415
		• DWS Hakim Khan Killi	33.899656 71.446711
		• DWS Bara Tehsil	33.917473, 71.46415
		• DWS Malik Doran Gul Fort Slop MDK	33.903041, 71.344107
		• DWS Sam Baba Zone-B	33.938099, 71.372276
		• DWS Sam Baba Zone A (Spin Dand)	33.932468, 71.381724
		• DWS Haji Abdul Qayum Toot Dand BQK	33.940787, 71.35788
		• DWS Nowgazi Baba Remaining Area	33.929693, 71.439073
		• DWS Janis/Tawas Khan Killi BQK	33.93998, 71.36746
		• DWS Ghulam Sakhi Arjali Nadi	33.915397, 71.410956
		• DWS Fazal Malik Killi Shalobar	33.936007, 71.441686
		• DWS Malik Jan Killi BQK Bara (Faresh Kallay)	33.92156, 71.358635

S. No	Tehsils	DWS Rehabilitation Schemes	Location Coordinates
2.	Jamrud	• DWS Ghundi Sher Khan Khel	34.056263, 71.392029
		• DWS Malak Sadullah Khan	34.006808, 71.388019
		• DWS TD Bazar Jamrud Wali Baba	33.998905, 71.365928
		• DWS Jamal Khel	33.99555, 71.56666
3.	Landi Kotal	• DWS H. Hayat Niki Khel	34.068081, 71.196927
		• DWS Wali Khel Gul Wali	34.072718, 71.215728
4.	Mula Gori	• DWS Kam Shalman	33.932971, 71.381512
		• DWS Lowera Maina	34.158407, 71.344880

Annex 2. Environmental and Social Screening Form

For the 21 sites of the sub-project, separate E&S screening checklists have been filled for each site, for reference, one checklist has been attached in the ESMP, the remaining checklists have been shared separately to keep limited number of pages of the ESMP.

DWSS Wali khel Gul Wali, Khyber	
ID of subproject	DWSS Wali khel Gul Wali
Proposing agency	PHE Department KP
Subproject location (with GPS coordinates)	34.072718, 71.215728
Subproject description	An existing water supply scheme with multiple rehabilitation works: • Installation of new PV system • Construction of Compound wall for PV system and pumping chamber • Installation of pumping machinery with all required accessories **VLD details:** Land owner: Abdul Tawab Land Area: 15.42 Marla (4200 sq.ft) Owner Contact: 0301-0901271 VLD legal agreement has been signed with the land owner and witnesses. The VLD procedure will be completed once verified by the Tehsildar office.
Estimated subproject cost	Rs. 12.240 million
Proposed date of commencement of sub-project	22nd June, 2026
Review status of technical details & specifications	In process
Date of site visit/s to fill Checklist	24-03-2025

Screening Questions		**Yes**	**No**	**Remarks**
A	**Physical Environment**			
1	Will the proposed subproject pose a risk of clearance of the vegetation (due to construction activities under subprojects, or related activities such as labor camp and storage site construction) that may result in an increased suspended solids washing into nearby water bodies?		No	There is no need of clearance of vegetation for the required rehabilitation works at the site and will not result in an increase in suspended solids washing into nearby water bodies.
2	Will the proposed subproject pose a risk of contaminating drinking water sources due to construction activities?		No	There is very less chance of contamination of drinking water sources due to the required construction works.

				No open drinking water source in close vicinity of the rehabilitation site.
3	Will the proposed subproject deplete groundwater due to water used during construction activities (e.g. For mixing, cooling, dust suppression etc.)?		No	The proposed subproject is not expected to significantly deplete groundwater resources, as the rehabilitation works will require only limited quantities of water for activities such as mixing, curing, and dust suppression.
4	Is the proposed subproject water source sustainable over the long term, considering current and future water demand, seasonal fluctuations, and water scarcity issues?	Yes		Water source is adequate and sustainable as confirmed by project team during site assessment and survey
5	Will the proposed subproject result in an increase in ambient air pollution, including chemical and particulate matter due to construction and operation of related machinery?		No	The proposed subproject is not expected to cause any significant increase in ambient air pollution due to limited use of heavy machinery.
6	Will the proposed subproject result in an increase in ambient noise levels and vibrations due to the operation of construction or other machinery/vehicles?		No	The proposed subproject activities will not require use of heavy machinery or repeated movement of vehicles hence very less chance of increase in noise pollution due to these sources.
7	Will these ambient noise levels be beyond the specifications in the applicable NEQS?		No	Noise levels will not be beyond the specifications in the applicable NEQS due to very less use of heavy machinery or repeated movement of vehicles.
8	Will the proposed subproject interventions be implemented in an area with high landslide risk?		No	Although the landscape of the area is generally hilly but the subproject site is predominantly plain, there is no history of landslides at the subproject site and the risk of landslides is considered negligible.
9	Will the proposed subproject interventions generate hazardous and/or non-hazardous waste?	Yes		There is less chance of generating hazardous waste during the required works, while there will be significant quantity of non-hazardous waste generated. Waste Management plan will need to be implemented to ensure waste segregation and keep record of the generation, storage and disposal of waste.
10	Will the proposed subproject interventions contribute to increased soil erosion,		No	Site conditions are stable and minor rehabilitation works will not result in soil erosion and will not impact

	particularly impacting groundwater quality and downstream water supplies?			groundwater quality and downstream water supplies.
11	Will the proposed subproject interventions potentially increase health risks for project workers and communities (e.g. COVID-19)?		No	The proposed subproject rehabilitation works will not potentially increase health risks for project workers and communities but standard health and safety protocols will be followed which will minimize any potential health risks to workers and communities.
12	Will the proposed subproject (drinking water supply /sewerage /drainage) interventions impact or interfere with existing water infrastructure in the region? (e.g. Irrigation canals, wells etc.)		No	The proposed subproject rehabilitation works will not impact or interfere with existing water infrastructure in the region as there is no water body (canal, river etc.) in close proximity to the sub-project site.
13	Is the proposed subproject being implemented in an area with a high risk of vector-borne diseases (e.g. Malaria and Dengue etc.)?		No	Vector-borne diseases in people and livestock were common in Khyber region in the past due to the limited use of vector control measures, however the implementation of disease control measures has decreased the risk of vector-borne diseases due to improved control measures such as insecticide spraying, the sub-project intervention will further decrease the risk due to improved water supply facility for the local community as the need for the water storage in open containers/buckets would decrease.
14	Is the proposed subproject being implemented in an area with a high risk of natural hazard? (e.g. floods, earthquakes, landslides etc.)		No	The proposed subproject being implemented is not in an area with a high risk of natural hazard (e.g. floods, earthquakes, landslides etc.). Although the landscape of the region is generally hilly but the subproject site is predominantly plain, there is no history of landslides at the subproject site and the risk of landslides is considered negligible.

B	**Ecological Environment**			

1	Will the proposed subproject interventions potentially pose risks to any endangered species in the area under consideration?		No	No presence of endangered species found at the proposed subproject site under consideration, therefore, no risk to any endangered species
2	Will the proposed subproject interventions potentially cause any adverse impacts to habitats ecosystems and/or ecosystem services?		No	The proposed rehabilitation works will be confined to a designated site and will not cause any adverse impacts to habitats ecosystems and/or ecosystem services.
3	Will the proposed subproject be located in areas that would promote the conversion of natural habitats?		No	No conversion of natural habitats expected at the subproject site due to the required rehabilitation works
4	Will any proposed subproject be located in or near sensitive environmental areas including parks and protected areas?		No	No parks or protected areas in or near the subproject site.
5	Are the proposed subproject likely to impact the paths of known migratory routes of wildlife?		No	The subproject site is not located in the path of wildlife migratory routes.
6	Will the proposed subproject involve the introduction of any invasive species? (Invasive species are non-native (or alien) to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health.)		No	The proposed subproject rehabilitation works will not involve the introduction of any invasive species, so no such risk involved.

C	**Social Environment**			
1	Will the proposed subproject involve land acquisition or involuntary resettlement? If yes, filling up of following is mandatory: *1. Involuntary resettlement screening checklist for civil works* *2. VLD/Due diligence screening checklist (for all project-related civil works requiring land acquisition in areas WITH existing land records.)* *3. Qaumi Commission screening checklist (for all project-related civil works requiring land acquisition in areas WITHOUT existing land records.)*	Yes		The proposed subproject involves land acquisition for new PV system. The land owner has been identified and is willing to donate land, hence VLD/Due diligence screening checklist has been filled and attached. Land owner details have been compiled and forwarded to the PIU for further action and execution of VLD's process (legal documentation, signed by the concerned owner and local government representatives). Land owners' details have been mentioned in the sub-project description. *Involuntary resettlement screening checklist, VLD/Due diligence screening checklist and Qaumi Commission screening checklist are not required.*

2	If there is any land requirement, has it been verified that the land being acquired is free from any dispute on ownership or any other encumbrances?	Yes		The land is free from ownership disputes and encumbrances, as confirmed by community elders, political and religious representatives. This will further be verified during the VLD process by the Tehsildar and local government VC/NC representatives
3	Has it been ensured that the land is not being acquired through force or coercion?	Yes		The landowner has expressed his willingness to donate land, it will further be ensured that the land is not being acquired through force or coercion by the Tehsildar office during the VLD process, signed by the landowner, community elders/witnesses, VC/NC representatives.
4	Are there any forced labor or child labor risks associated with contractors or other third parties involved in implementing the proposed subproject?		No	Considering the inflation rate and the economic conditions of the region, there is a possibility of child labor. However, in accordance with national laws and the KP Child Protection and Welfare Act, 2010, no child or forced labor will be permitted. Only worker above the age of 18 years will be allowed to work at site.
5	Is labor influx expected during the implementation of the proposed subproject? Please estimate the strength of the anticipated outside labor force.		No	During the implementation of the proposed subproject, skilled labor is available in local community and as per the project policy, local labor will be preferred, there would be less possibility of hiring of outside labor force.
6	Will local labor be used for the proposed subproject activities?	Yes		As per the project policy and World Bank guidelines, both skilled and unskilled labors from local community will be preferred in hiring.
7	Will there be any temporary or permanent physical or economic displacement as a result of the proposed subproject activities?		No	There is no chance of temporary or permanent physical and economical displacement resulting from the required rehabilitation works.
8	Will the proposed subproject interventions likely to have impacts on important religious/cultural heritage sites?		No	No heritage/religious sites nearby the proposed subproject therefore, the rehabilitation works would have no impacts on heritage/religious sites.

9	Have there been any past security-related issues at the proposed subproject site?	Yes		The security situation in district Khyber was historically peaceful until the late 2000s when the merged district (tribal areas) became a significant conflict zone due to the spillover of militancy from neighboring areas and Afghanistan. However, in the past few months, specifically in the subproject area there are no direct security risks or conflicts reported.
10	Has stakeholder engagement taken place in the proposed subproject area?	Yes		During the E&S screening, the E&S team has met with the stakeholders particularly with the community elders, political leaders and religious representatives and PHED staff. The stakeholders were briefed regarding the project overview and details and objectives of the sub-project and the beneficiaries. The stakeholders showed positive response regarding the project objective and ensured their cooperation during the construction and operation phases.
11	Have there been any potential security risks and conflicts related to the proposed subproject area under consideration?		No	The proposed subproject site is safe. There are no direct security risks or conflicts that have been reported at or near the site in the past few months and rehabilitation activities can be carried out without major concerns.
12	Will there be enough measures against the potential security risks, taken to ensure project staff and beneficiary safety?	Yes		The safety of project staff and beneficiaries will be ensured through the implementation of a standard security management plan (SMP). The security situation will be closely monitored, and necessary precautionary measures will be taken throughout the project cycle.
13	Will the subproject conduct community awareness-raising activities related to the proposed subproject? (if any) e.g. links between human health and access to appropriate water supply and sanitation facilities.	Yes		During the E&S screening, community people/elders, vulnerable groups and political and religious representatives were sensitized on key aspects of the subproject. Furthermore, awareness-raising activities are planned to be conducted both prior to and throughout the construction phase to

				enhance community awareness, particularly regarding the links between human health and access to safe water supply and sanitation facilities.
14	Will the proposed subproject consider ensuring equitable access to water supply and sanitation facilities for all beneficiaries, especially in areas with higher water scarcity or vulnerable populations?	Yes		The subproject will ensure fair and equitable access to water supply for all beneficiaries especially to vulnerable population. It will adopt a participatory approach and engage community elders and local government representatives to help ensure that water is distributed as fairly as possible and that the needs of the most vulnerable are not overlooked.
15	Will the proposed subproject address gender-based violence risks in water collection?	Yes		The sub-project does not involve any community/centralized water collection system. The proposed subproject attempts to address GBV risks in its implementation and subsequent usage by ensuring transmission of safe and adequate water to each household in the area.
16	Will the proposed subproject address the social impacts of morbidity and mortality, particularly among vulnerable populations?	Yes		The subproject will contribute to reducing the social impacts of morbidity, particularly among vulnerable populations, by improving access to safe water supply facilities. This will help lower the risk of waterborne diseases and related health burdens, which often affect children, women, and marginalized households the most. While the project does not directly address mortality, by reducing illness and improving hygiene conditions, it indirectly supports better health outcomes and lowers the risks that can lead to severe health consequences.
17	Will the proposed subproject interventions empower women to benefit?	Yes		This subproject will provide a basic and much needed service to women and reduce their burden of water collection. It will not only save their time but will also save them from the physical distress and harsh

				conditions of water collection from great distances.
18	Were vulnerable groups contacted or remain involved during stakeholder consultations? (e.g. women, minorities, economically disadvantaged individuals, etc.)	Yes		Vulnerable groups especially women, children and elderly groups were randomly identified and consulted/engaged as key stakeholders. Discussions regarding the issues related to water facilities in their areas and the recommendations to overcome those issues.

RISK CLASSIFICATION			
D	**Steps**	**Recommendations/Findings**	
1	Risk category identification	☐Low ✓Moderate ☐Substantial ☐High	
2	Recommendation on type of E&S instruments required	☐E&S Checklist with Mitigation Measures ✓ESMP ☐Others	
3	Summary of screening findings	*Moderate risk to Environment and Social aspects identified during the screening and therefore E&S instrument recommended is ESMP*	
4	Name of person conducting screening	 **Naveed Iqbal** Senior Social Development Specialist Dated: - 24-03-2025	
5	Name of the person endorsing the E&S screening findings	 **Ubaid Ullah** E&S Officer – PIU PHED	
6	Concept paper mitigation activity if any	Mitigation measures proposed	
7	Recommendations to the Design Engineer	Not Required	

Annexures

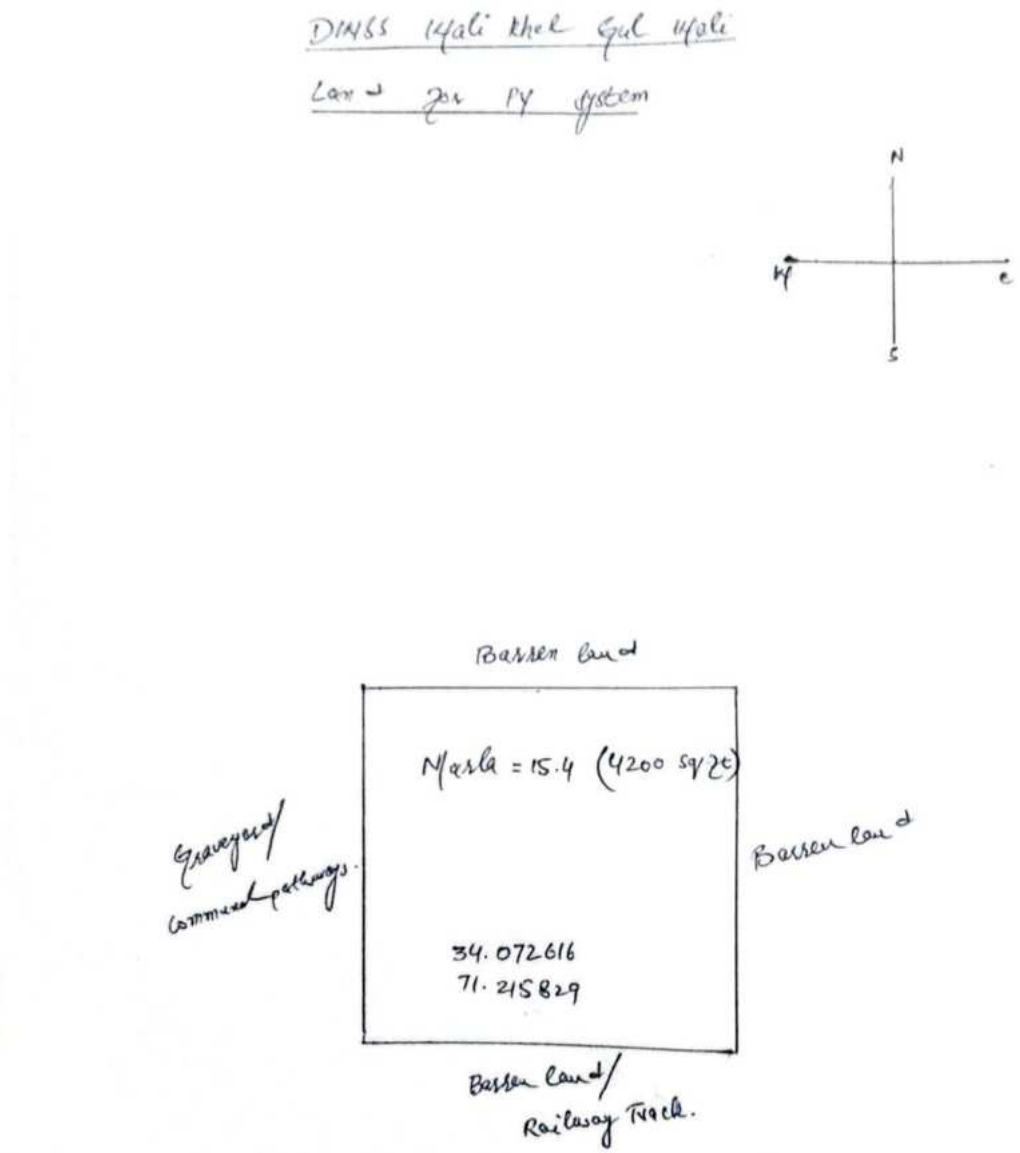
Sub-Project Title: DWSS Wali khel Gul Wali
Land owner: Abdul Tawab

VLD/DUE DILIGENCE SCREENING CHECKLIST

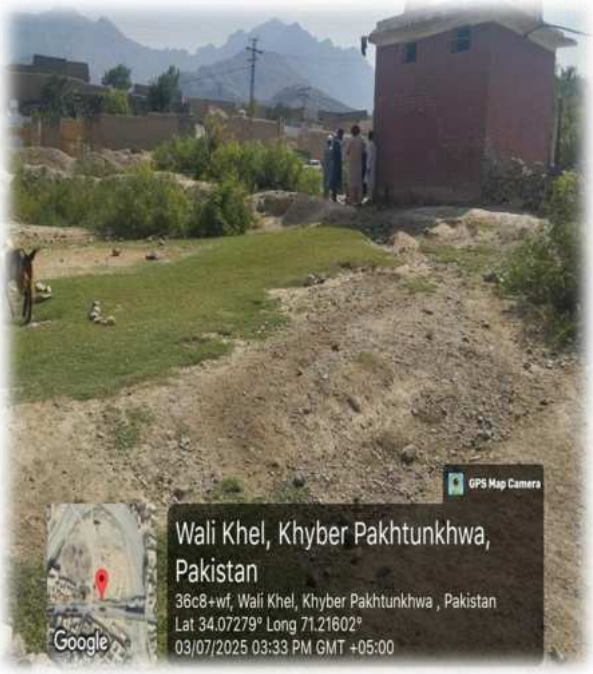
Screening for Due Diligence	Yes	No	Remarks
Is the land in question free from any dispute on ownership or any other encumbrances?	Yes		The land is free from ownership disputes and encumbrances, as confirmed by community elders, political and religious representatives. This will further be verified during the VLD process by the Tehsildar and local government VC/NC representatives.
Has the land been jointly identified by the Revenue Department, beneficiary community and project representative?	Yes		The land has been collaboratively identified by the beneficiary community (community elders), PHED representative. This will further be verified during the VLD process by the Tehsildar and local government VC/NC representatives.
Has the Project team ensured that the land is appropriate for sub- project purposes and that the sub-project will not result in any adverse social or environmental impacts by using this land?	Yes		The project team and PHED representatives have assessed the site and confirmed its suitability for the sub-project, with no expected negative social or environmental impacts from its use.
Have the Titleholders or landowners donating land been made to understand that they will have equal access to the infrastructure built on the donated land like any other community member and that they cannot claim for any priority treatment?	Yes		Titleholder/ land owner has been fully informed and briefed during the VLD procedure that they will have equal access to the sub-project facility, with no special treatment or claims.
Is the land to be donated no more than 10% of the total land holding of the individual?	Yes		The donated land does not exceed 10% of the donors' total landholding. This will further be verified during the VLD process by the Tehsildar and local government VC/NC representatives.
In case of communal land, has consent of 90% of land-owners through a consultative process been acquired?			N/A (Communal land is not involved in the sub-project)
Has it been ensured that the land titleholder/owner does not belong to vulnerable sections of society, unless he/she is a direct beneficiary of the subproject (i.e., donated parcel of land would result in net gains in that person's livelihood)? Vulnerable sections are:	Yes		It has been confirmed by the community elders, political representatives, religious leaders, VC Chairman/Secretary Local Government, project team and PHED staff that the landowner is not from a vulnerable group.

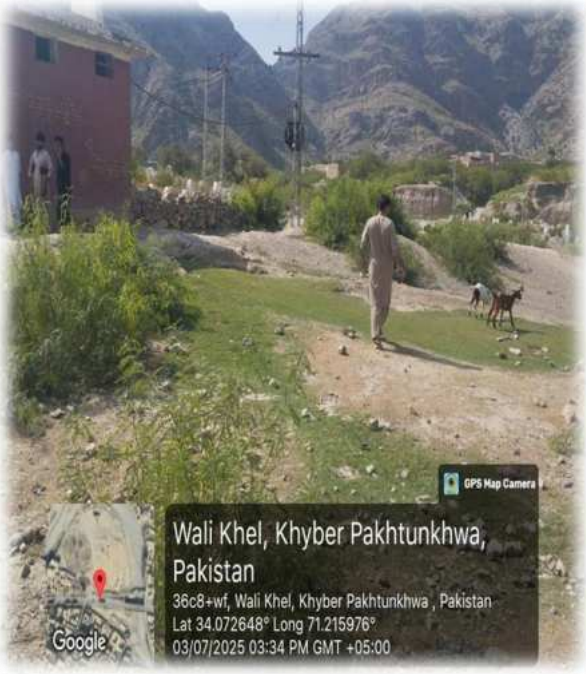
• households below the poverty line (with a valid government issued proof); • Women headed households who may lose their shelter of livelihood due to land donation; • Handicapped persons who may lose their shelter or livelihood due to land donation,			
Has free and informed consent through meaningful consultations in good faith with all potential land donors been ensured?	Yes		Consent has been obtained through genuine, informed, and good-faith consultations with the land donor by the project team in the presence of community elders, political representatives. This will further be verified during the VLD process by the Tehsildar and local government VC/NC representatives.
Have separate discussions been held with vulnerable donors such as women, elderly and orphans to facilitate meaningful participation and ensure there is no coercion by other land donors?			N/A. No vulnerable donor involved.
Has it been verified that land is free from any encumbrances?	Yes		The land is free from any encumbrances, as confirmed by community elders, political and religious representatives. This will further be verified during the VLD process by the Tehsildar and local government VC/NC representatives.
Has it been verified that land donation will not displace tenants or labor, if any, from the land?	Yes		It has been ensured that no tenants or laborers are currently residing or working at the donated land. This will further be verified during the VLD process by the Tehsildar and local government VC/NC representatives.
Has it been verified that land donated is not land used traditionally or customarily for any religious or cultural practice?	Yes		The assessment confirms the land is not traditionally or customarily used for religious or cultural practices, preventing any potential community conflict.

Sub-project Map

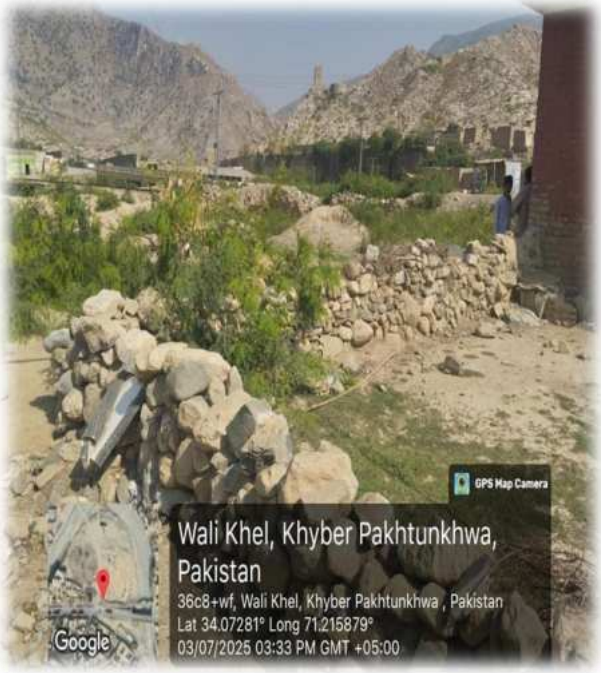


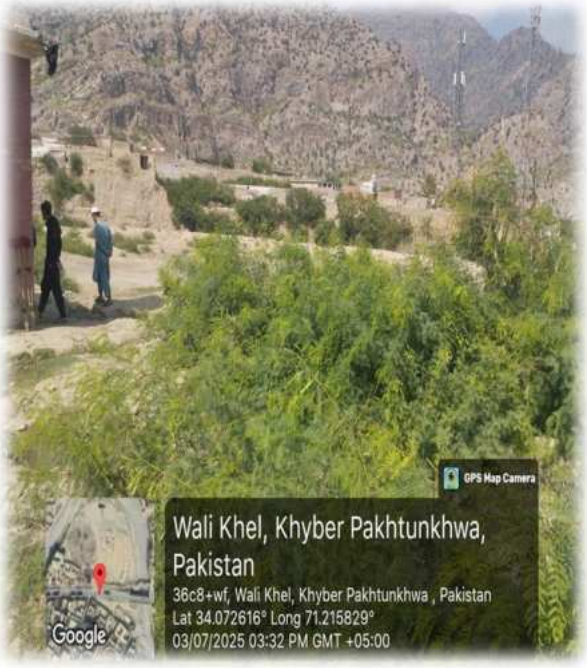
VLD Site Pictures:





Picture 1 & 2: DWSS Wali khel Gul Wali, Khyber: Site assessment and proposed land for new PV system





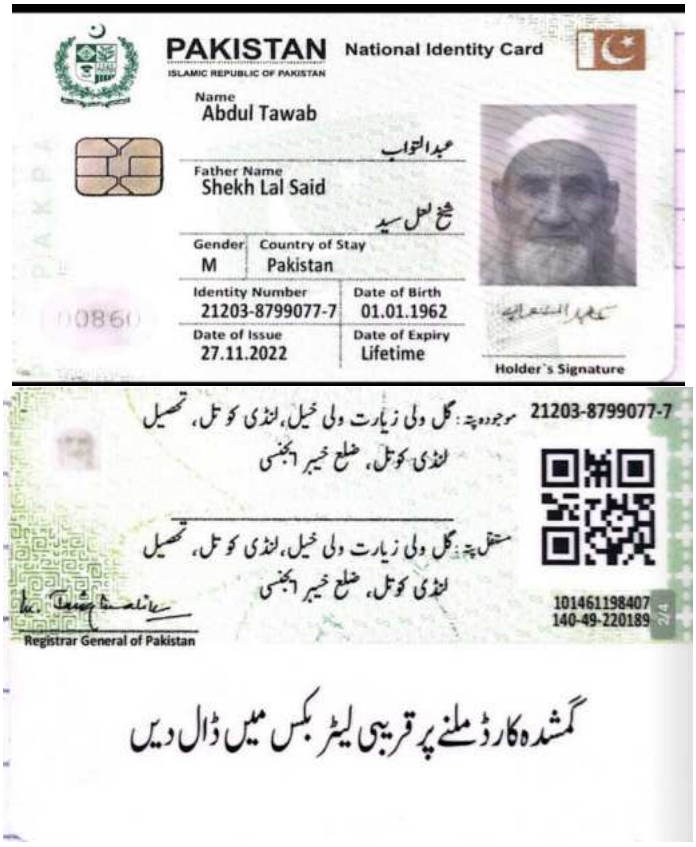
Picture 3 & 4: DWSS Wali khel Gul Wali, Khyber: Site assessment and proposed land for new PV system

VLD Agreement:

Filled VLD document (stamp paper) along with all the details of the sub-project site, signatures of Land owners, witnesses, union council officials has been submitted to the concerned PHED office for attestation by the concerned PHED official and signature of the concerned Tehsildar.

VLD Procedure & Owner Identification (Pictures):

Picture 5: DWSS Wali khel Gul Wali, Khyber: Community consultation and VLD document signing being performed



Picture 6 & 7: DWSS Wali khel Gul Wali, Khyber: Owner identification document for VLD procedure

Annex 3. Maps and Architectural Drawings

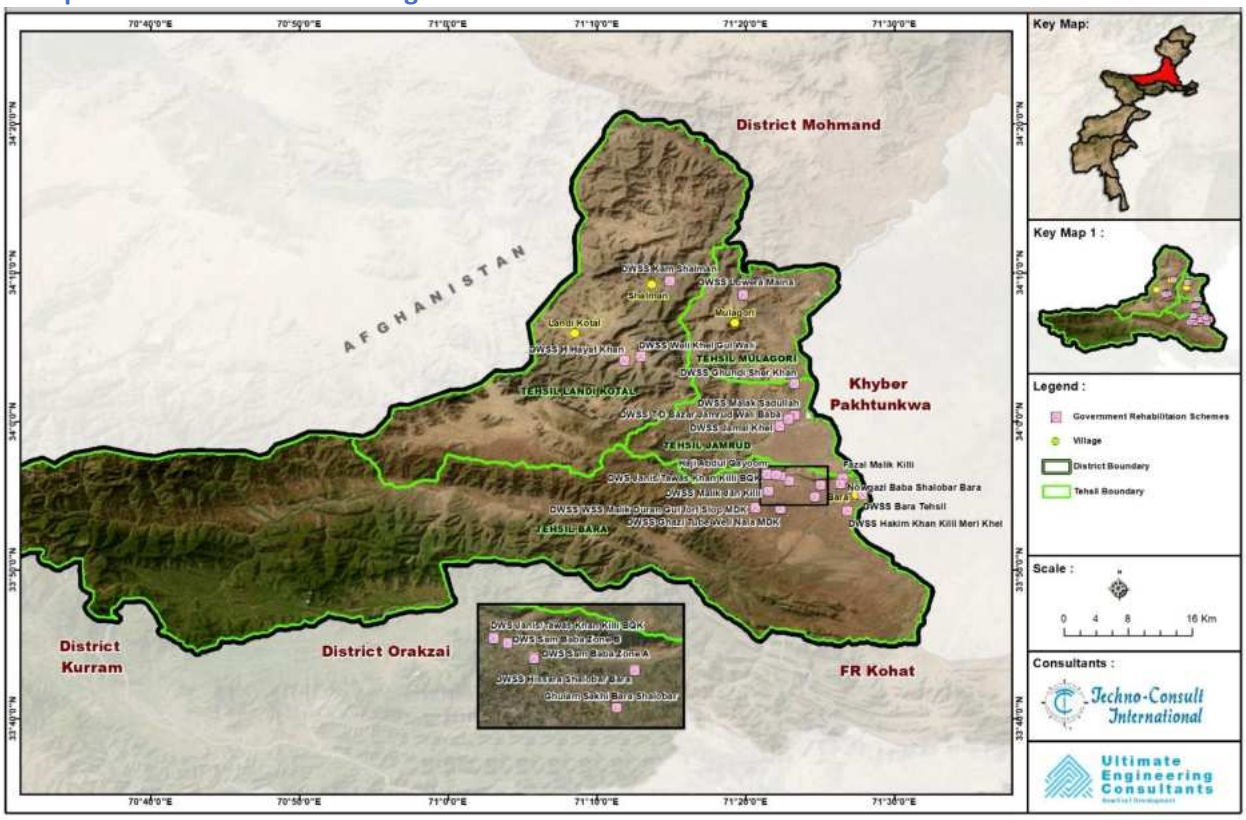


Figure 1: Location of Selected Schemes for Rehabilitation, District Khyber

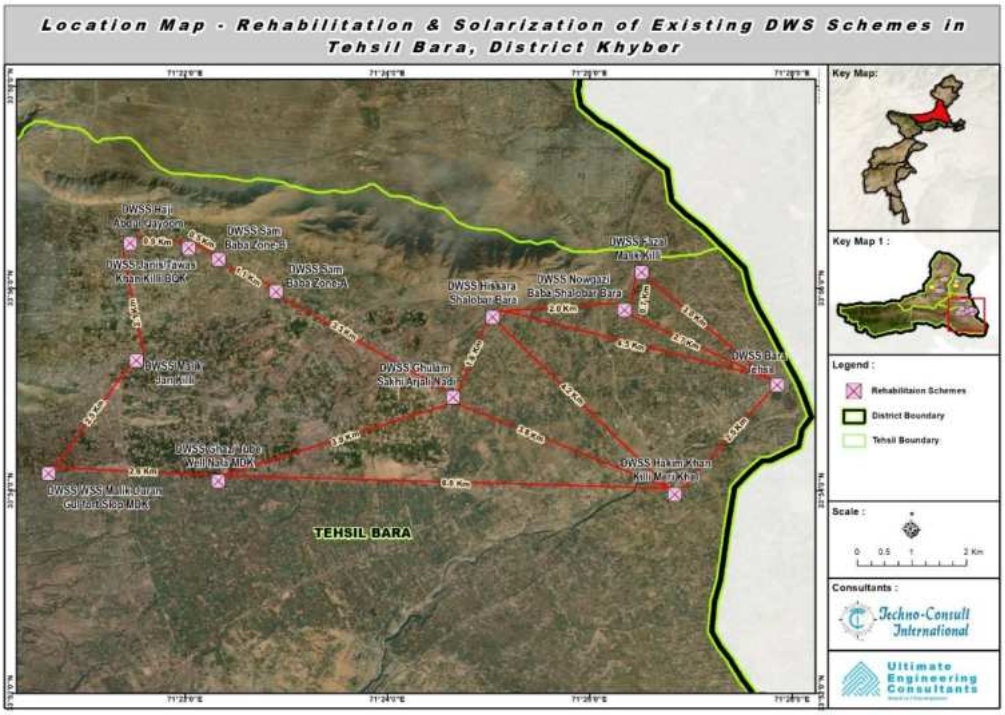


Figure 2: Location of Selected Schemes (13) for Rehabilitation in Tehsil Bara, District Khyber

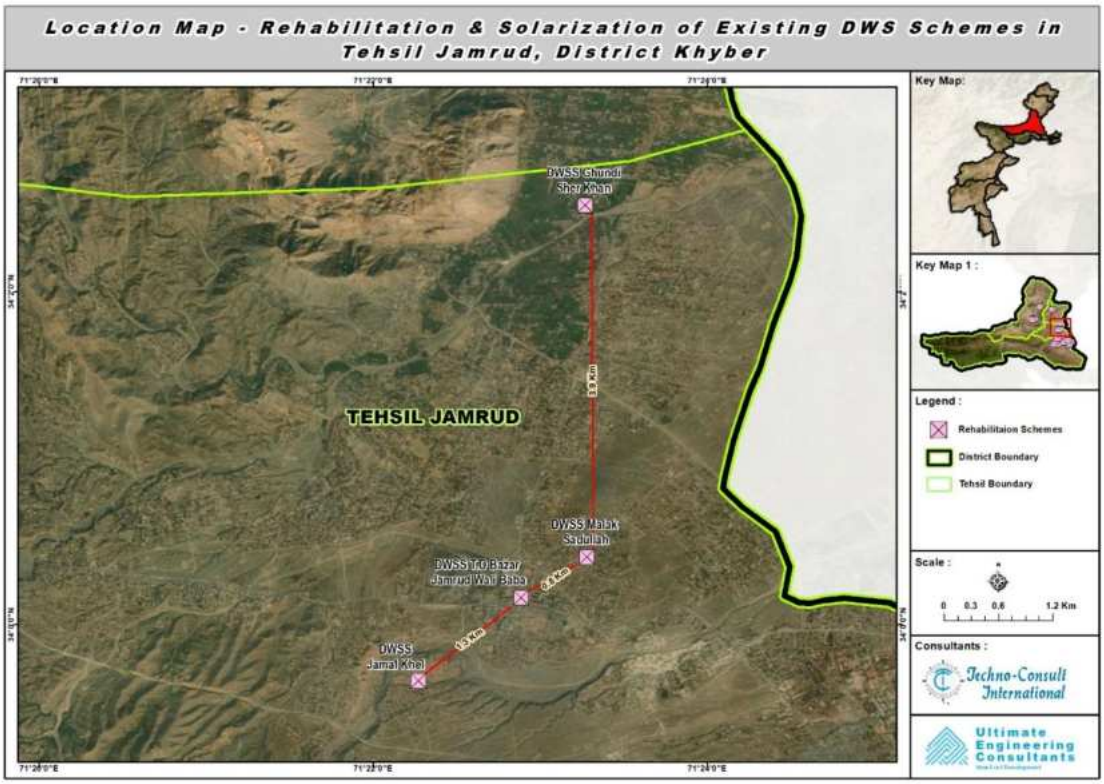


Figure 3: Location of Selected Schemes (4) for Rehabilitation in Tehsil Jamrud, District Khyber

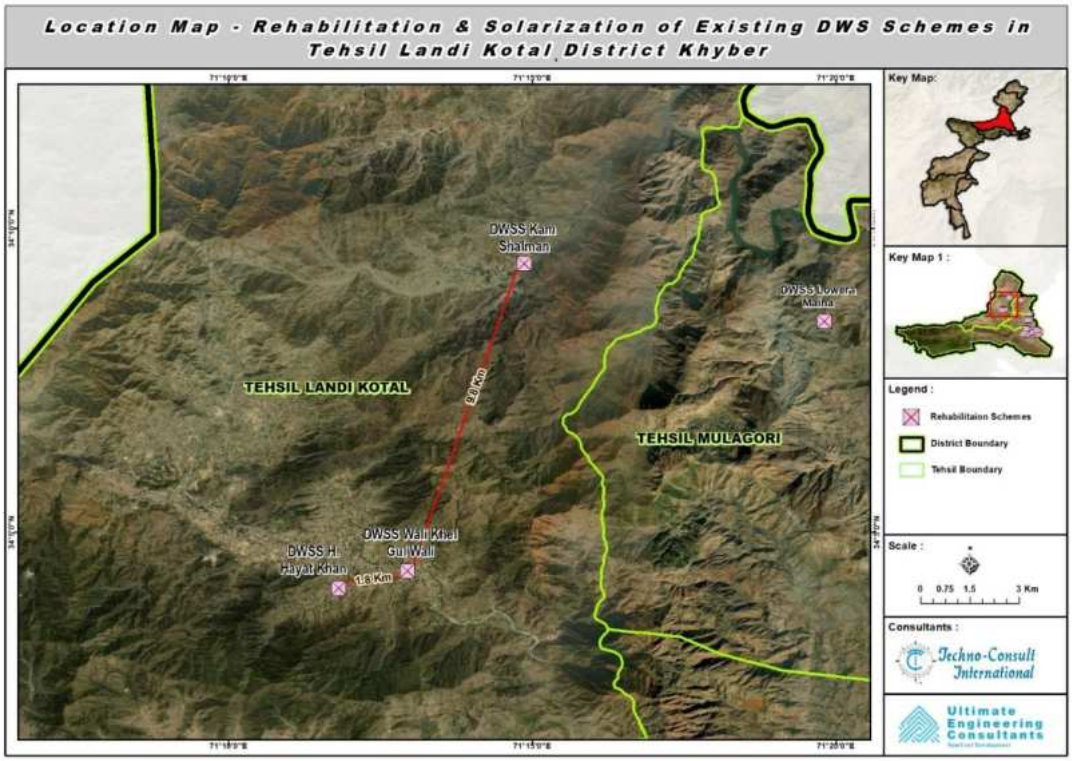


Figure 4: Location of Selected Schemes (3) for Rehabilitation in Tehsil Landi Kotal, District Khyber

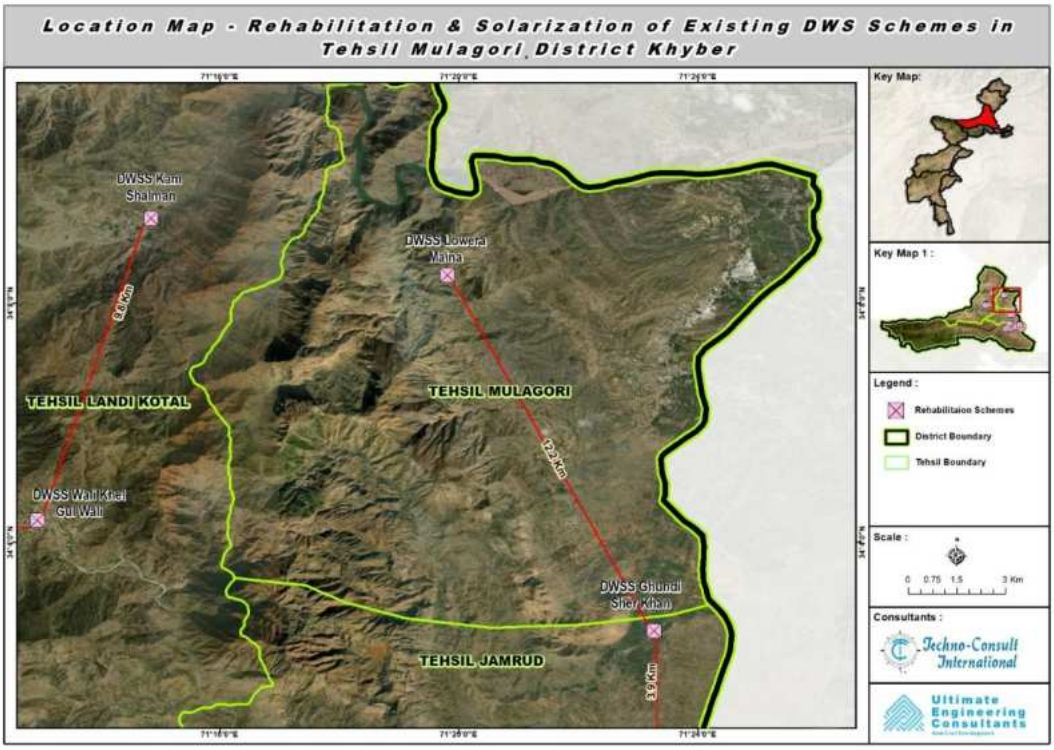


Figure 5: Location of Selected Scheme (1) for Rehabilitation in Tehsil Mula Gori, District Khyber

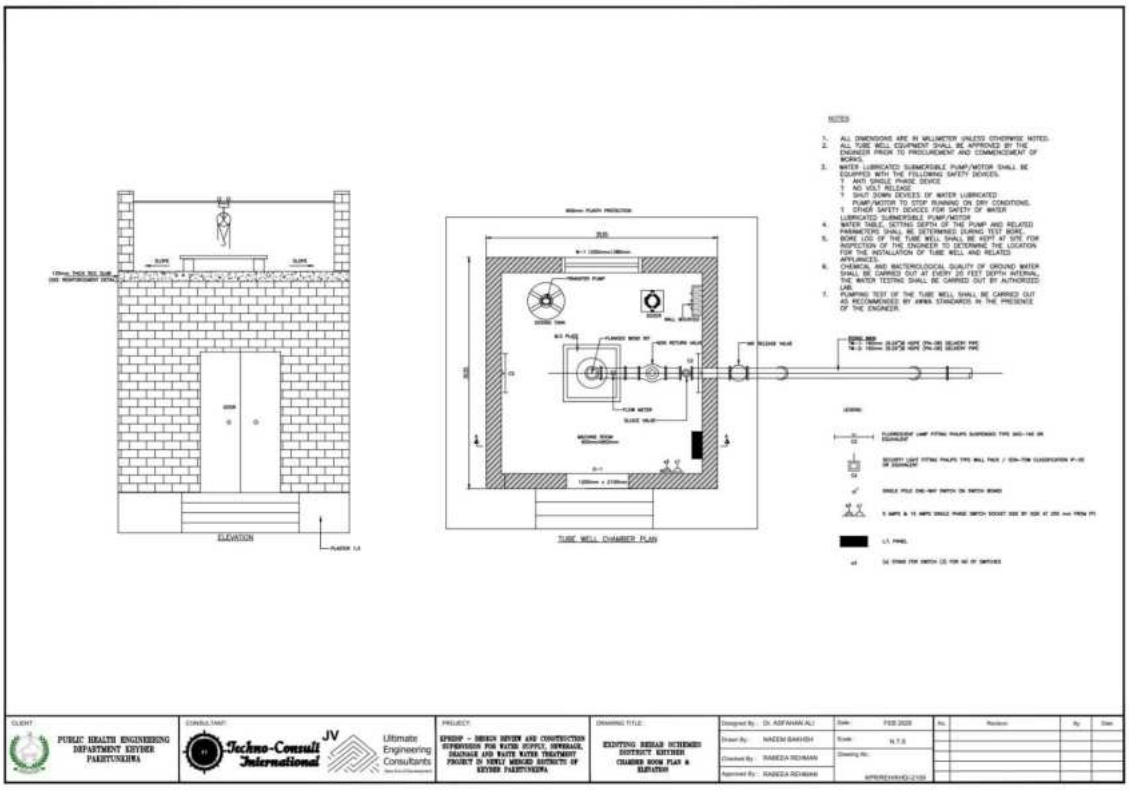


Figure 6: Pump room drawing, District Khyber

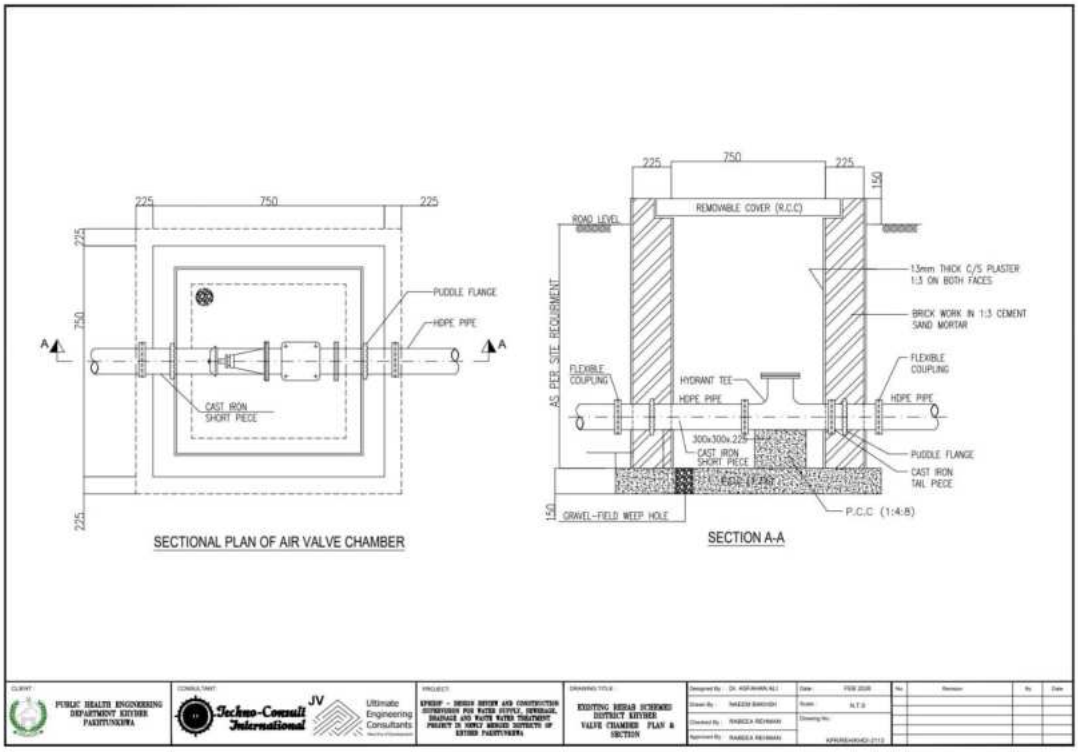


Figure 7: Valve chamber drawing, District Khyber

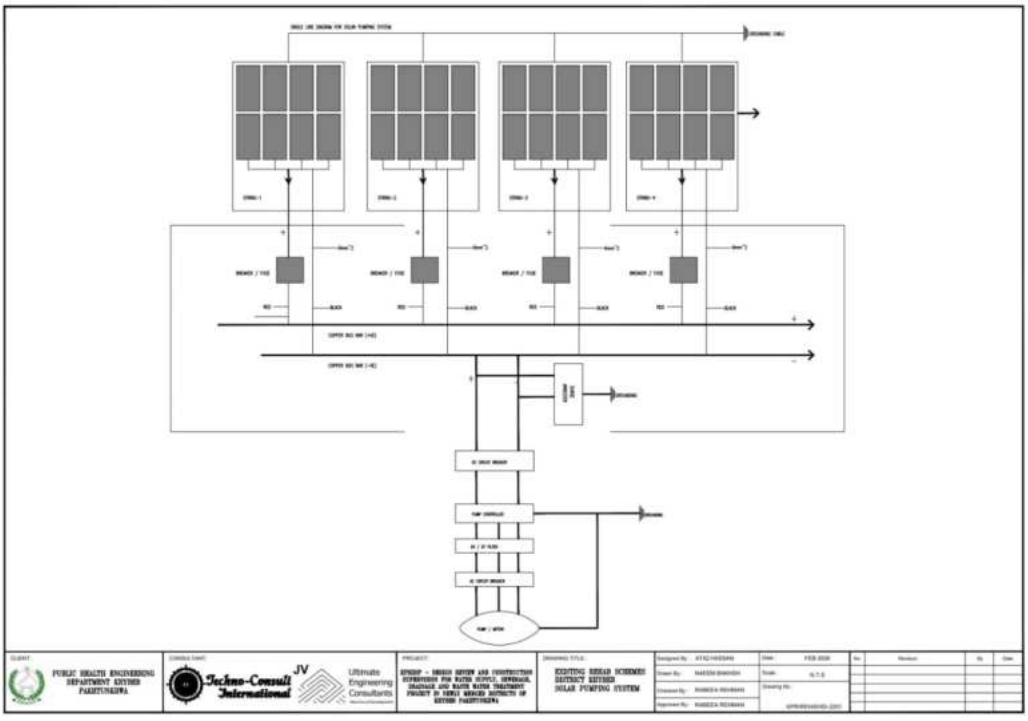


Figure 8: New PV System drawing, District Khyber

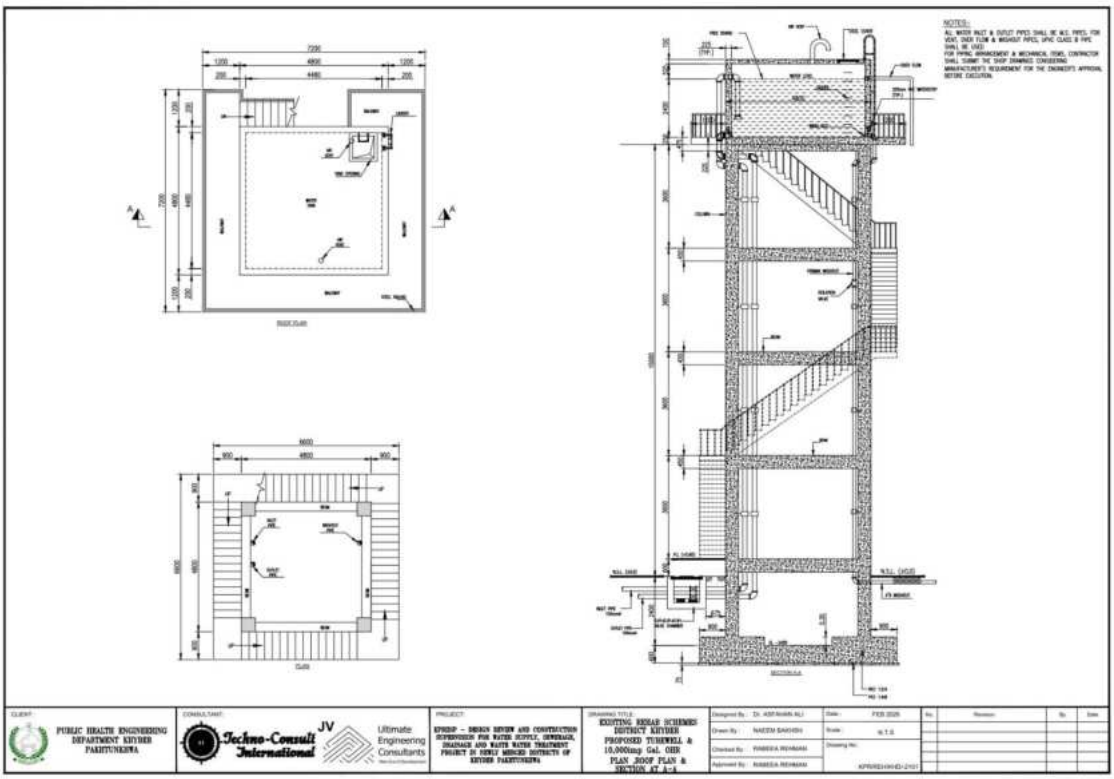


Figure 9: Overhead Reservoir (OHR) drawing, District Khyber

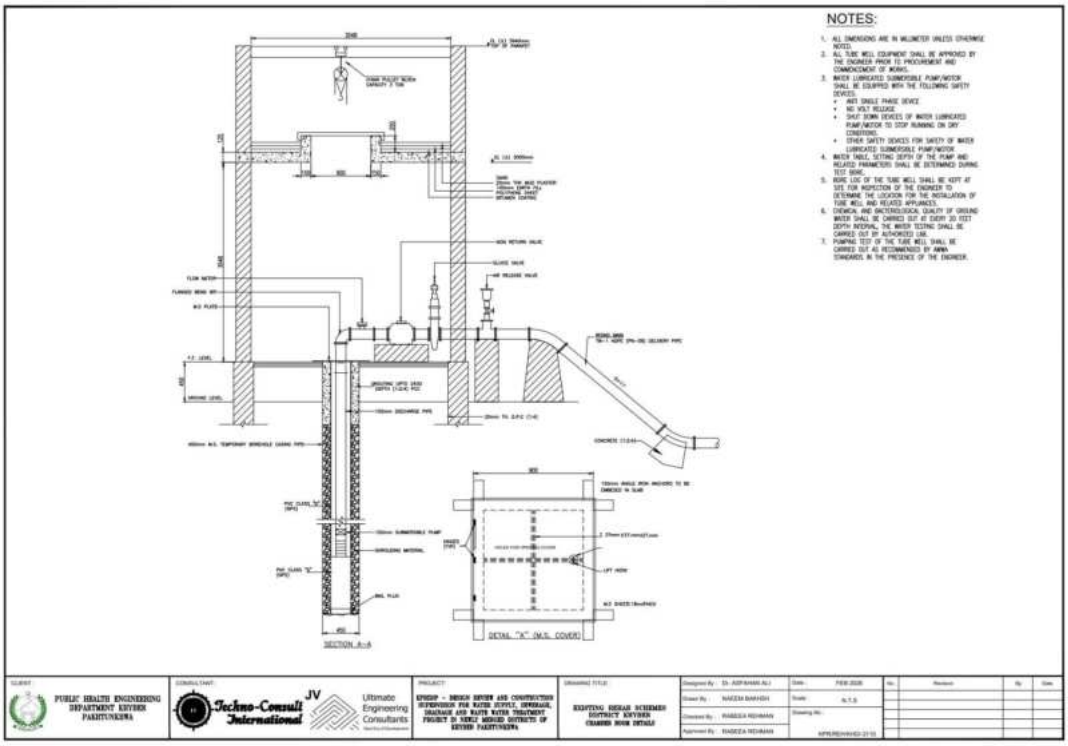


Figure 10: Chamber room and borehole section drawing, District Khyber

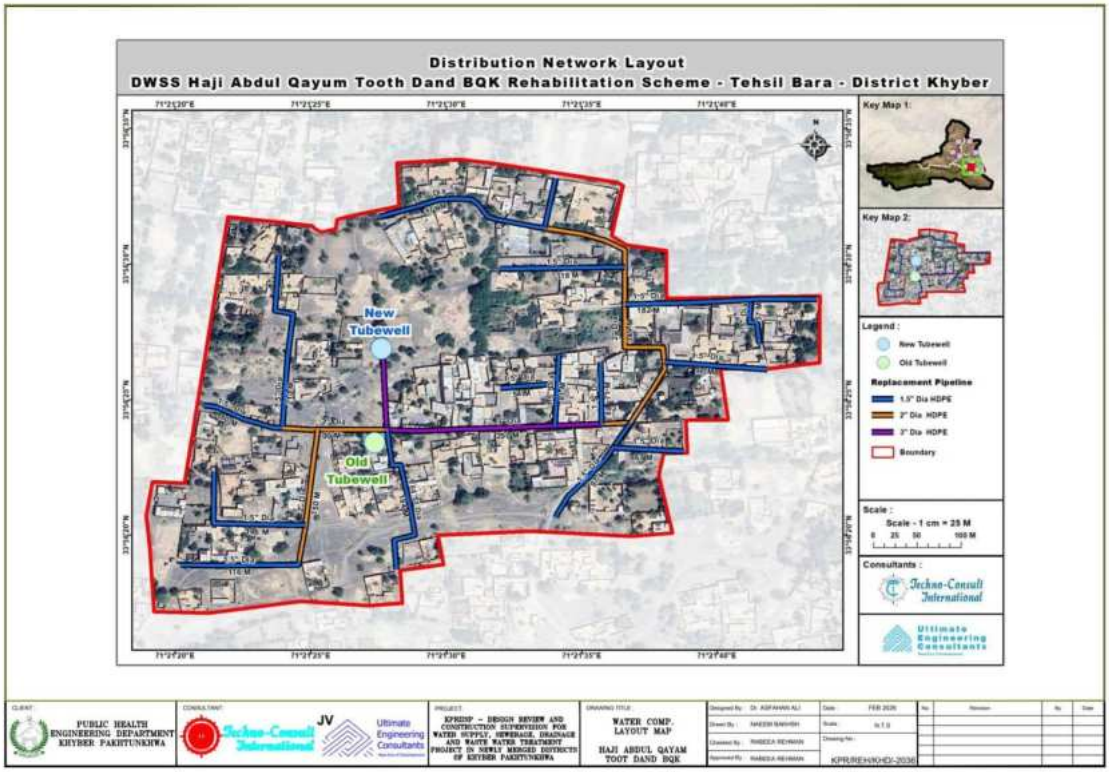


Figure 11: DWS Haji Abdul Qayum Toot Dand BQK, District Khyber: Distribution Network Layout

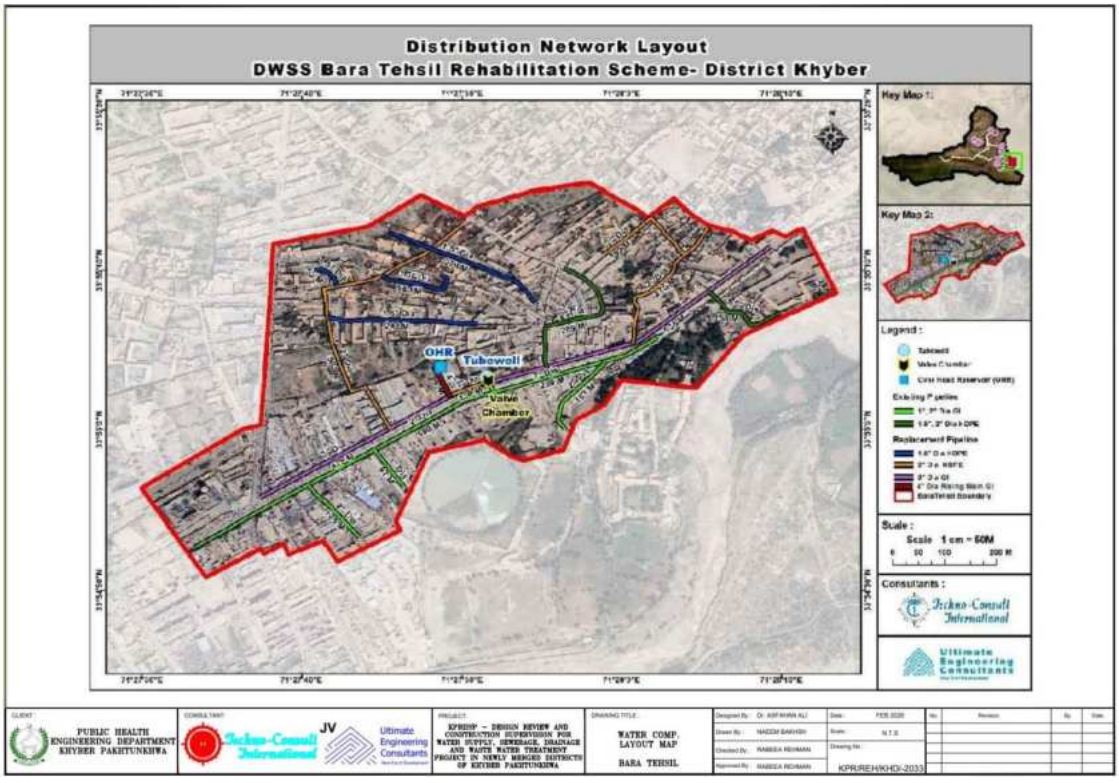


Figure 12: DWS Bara Tehsil, District Khyber: Distribution Network Layout

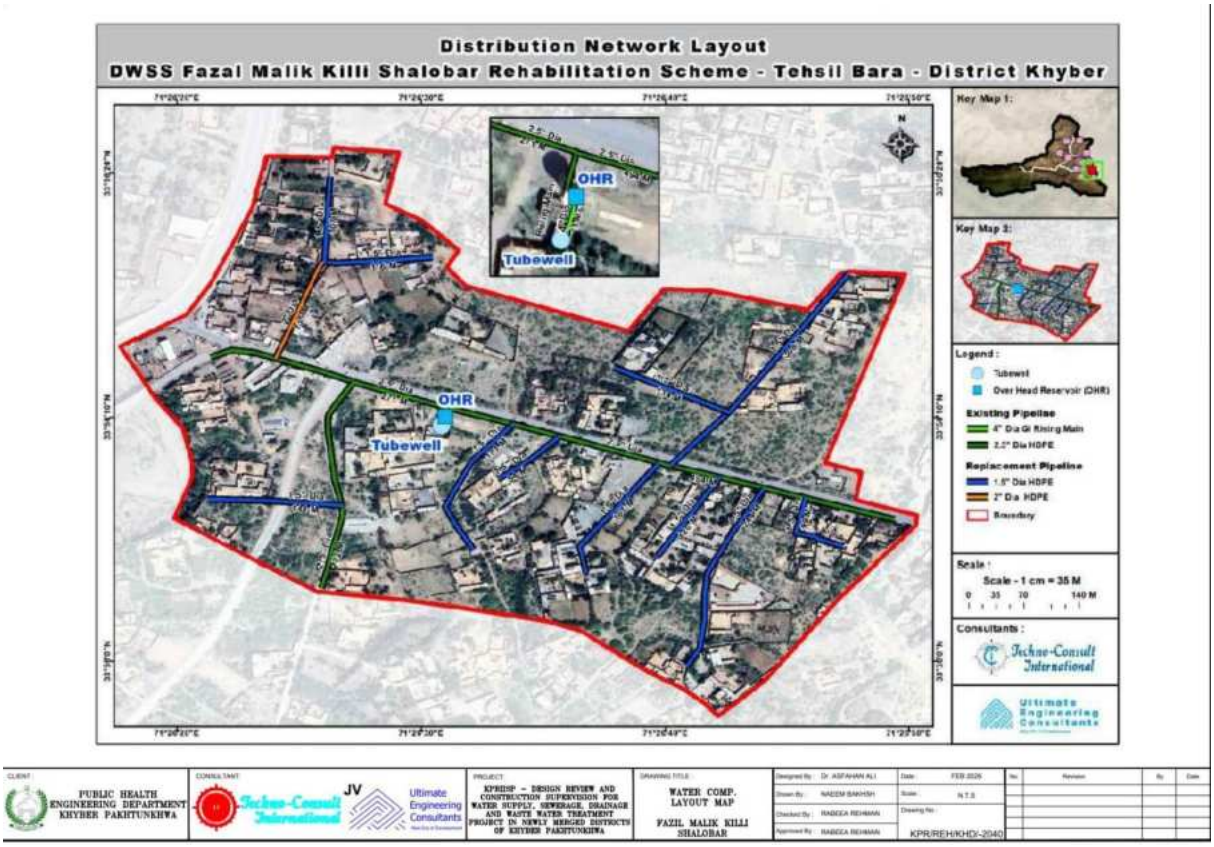


Figure 13: DWS Fazal Malik Killi Shalobar, District Khyber: Distribution Network Layout

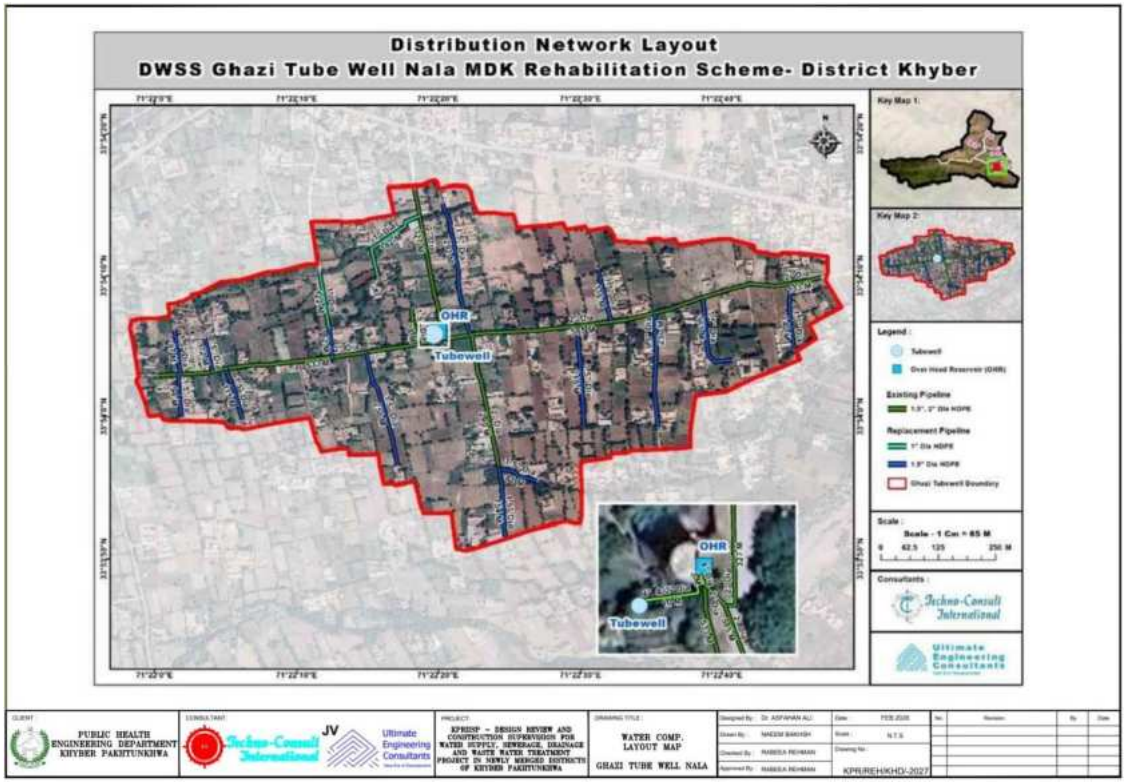


Figure 14: DWS Ghazi Tubewell Nala MDK, District Khyber: Distribution Network Layout

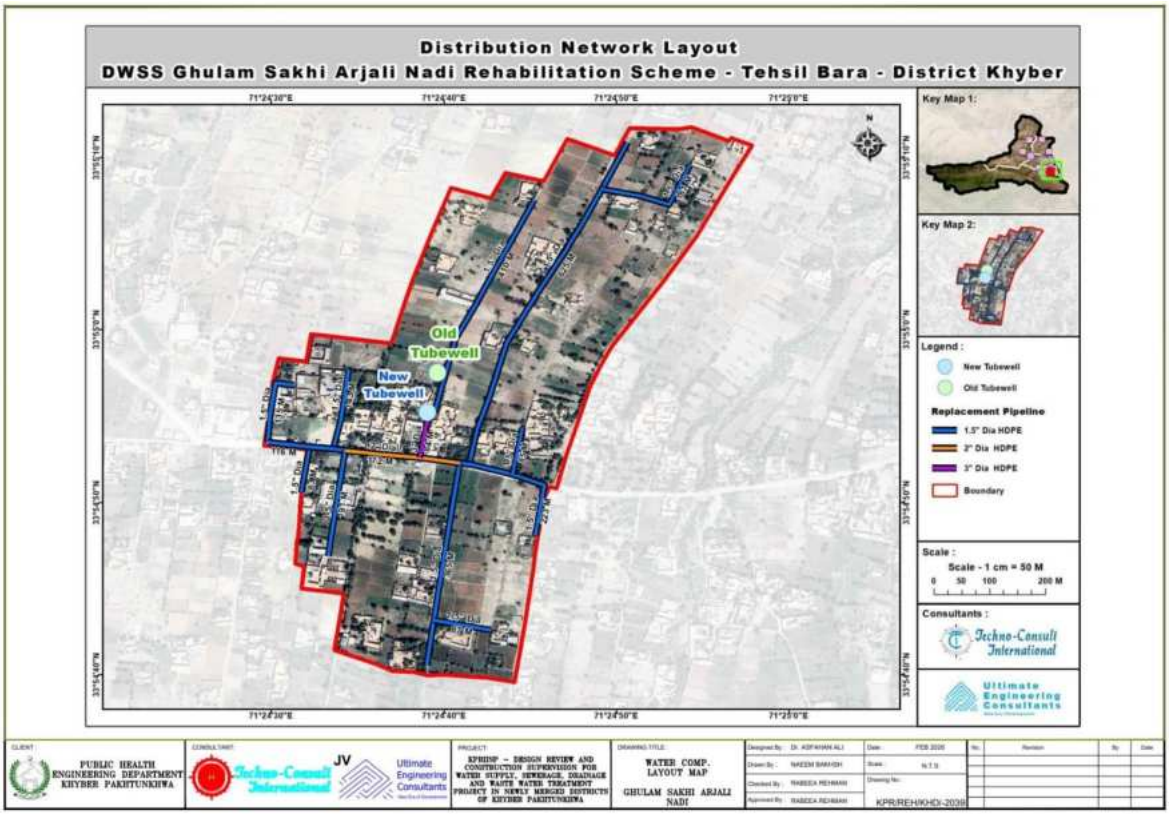


Figure 15: DWS Ghulam Sakhi Arjali Nadi, District Khyber: Distribution Network Layout

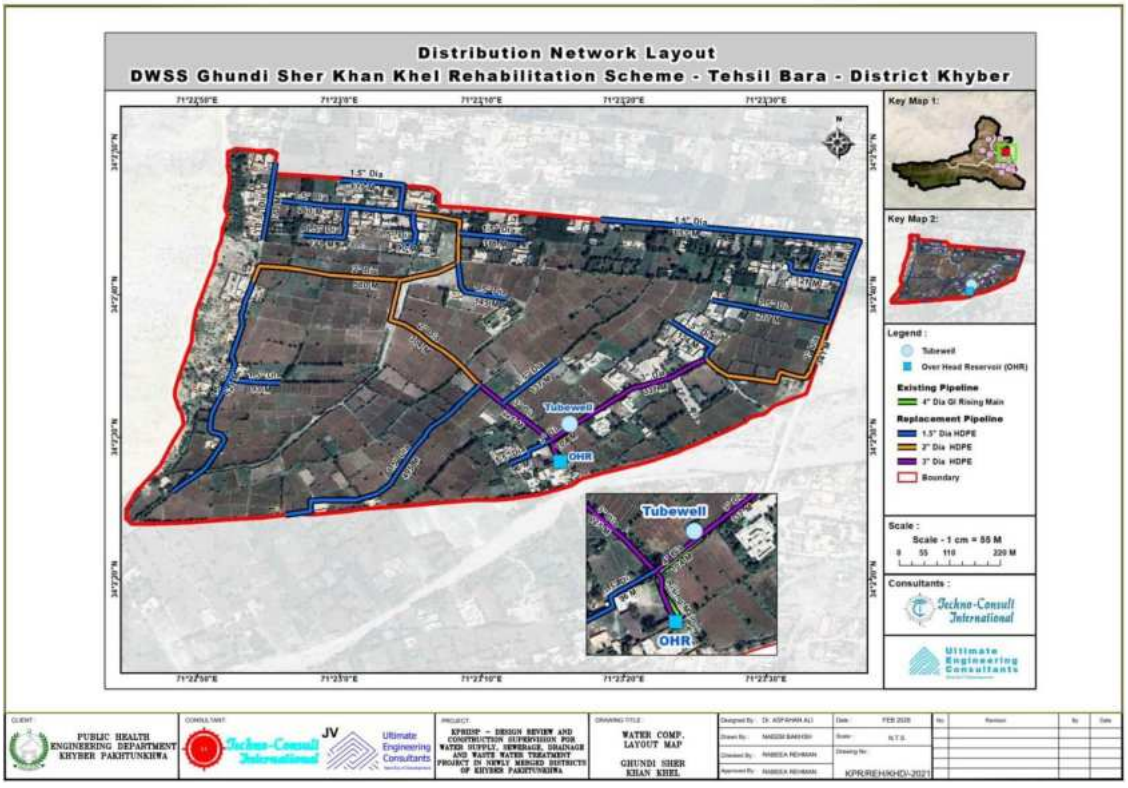


Figure 16: DWS Ghundi Sher Khan Khel, District Khyber: Distribution Network Layout

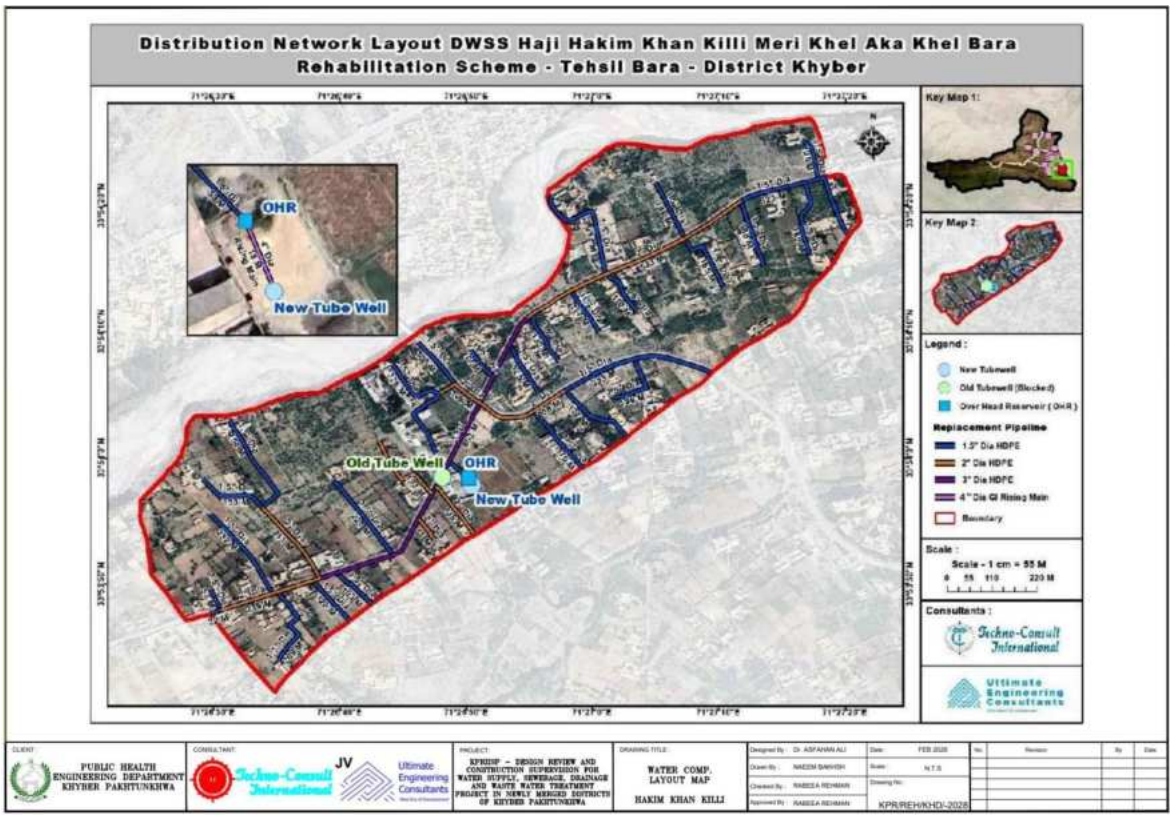


Figure 17: DWS Hakim Khan Killi, District Khyber: Distribution Network Layout

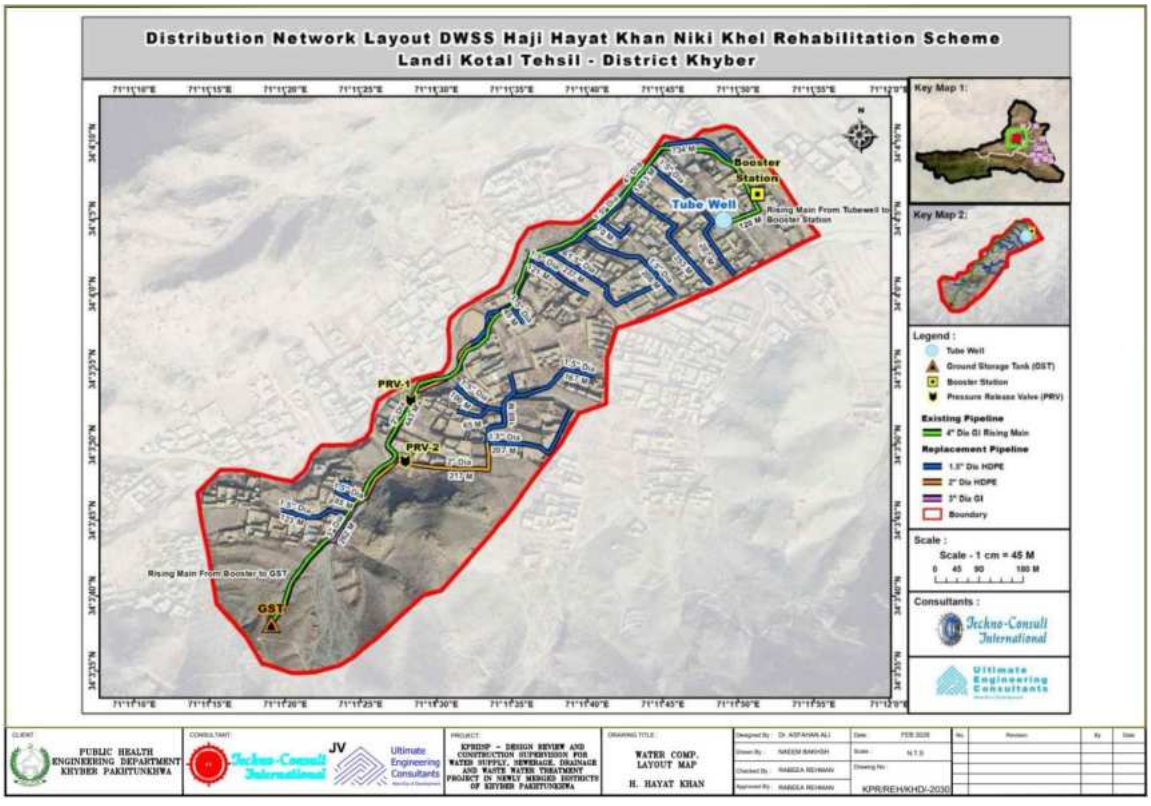


Figure 18: DWS H. Hayat Niki Khel, District Khyber: Distribution Network Layout

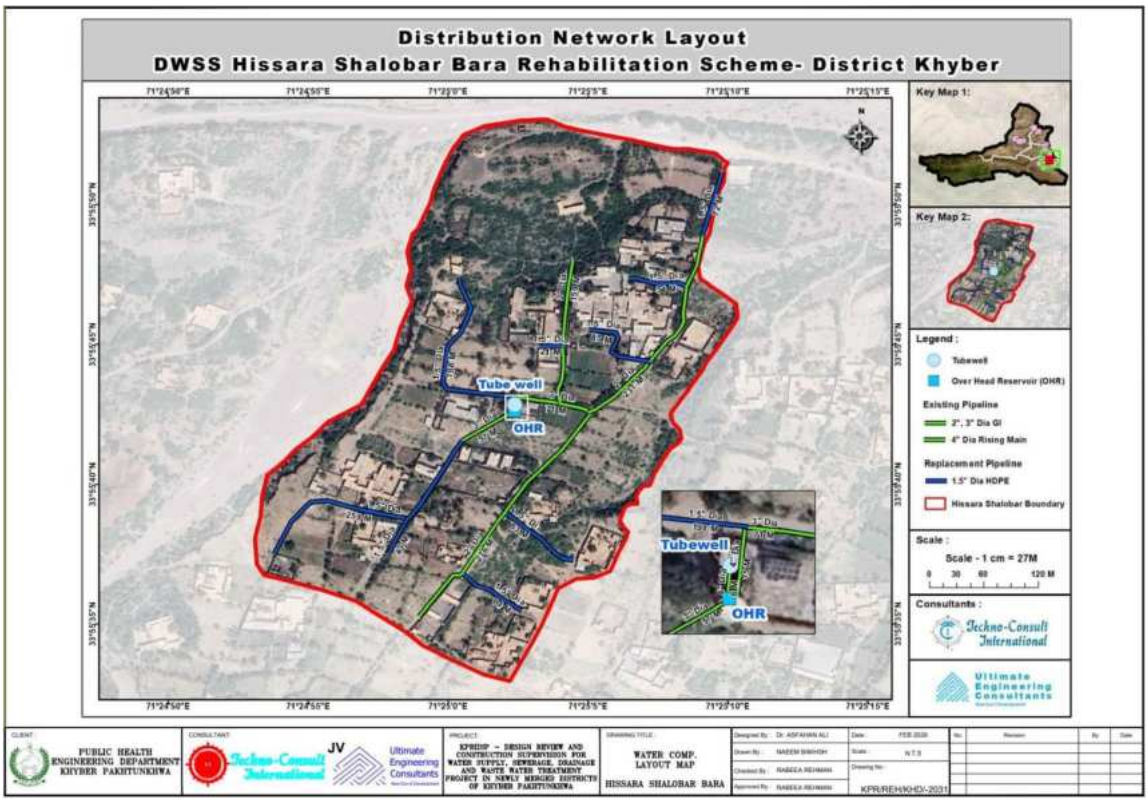


Figure 19: DWS Hissara Shalobar, District Khyber: Distribution Network Layout

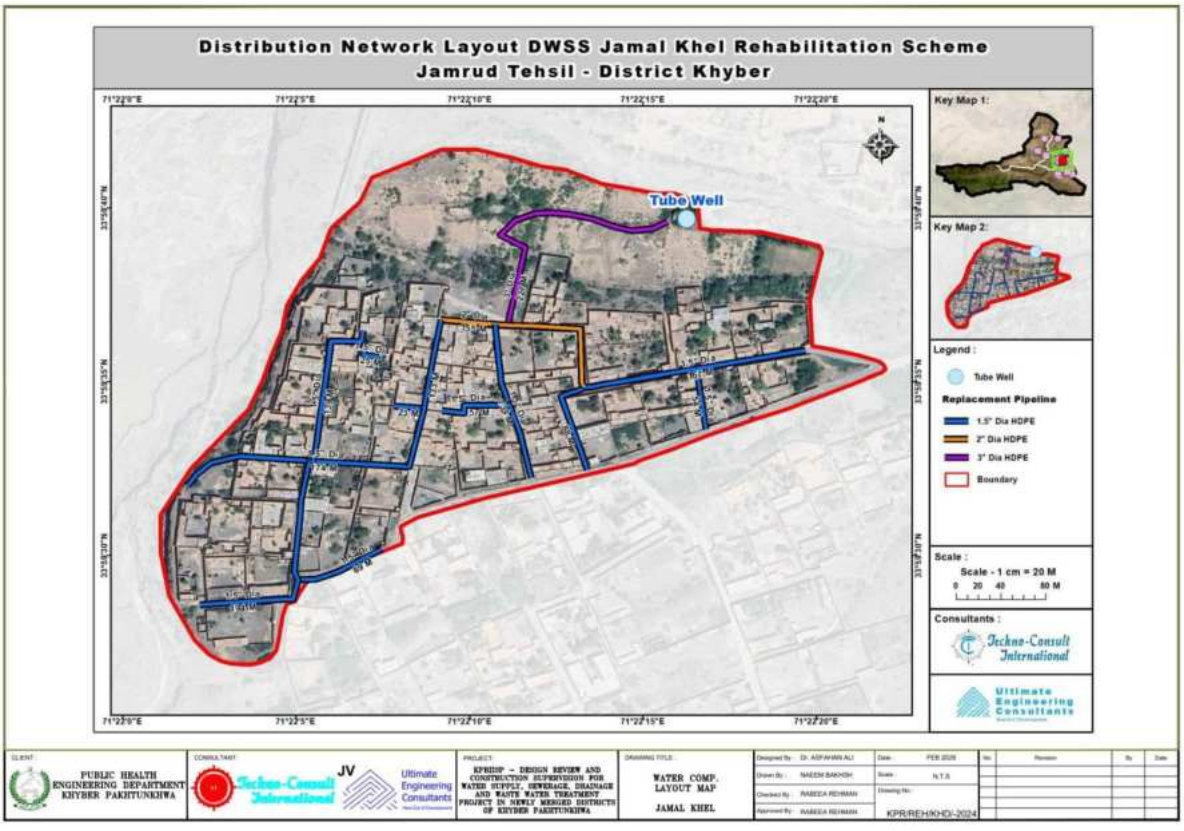


Figure 20: DWS Jamal Khel, District Khyber: Distribution Network Layout

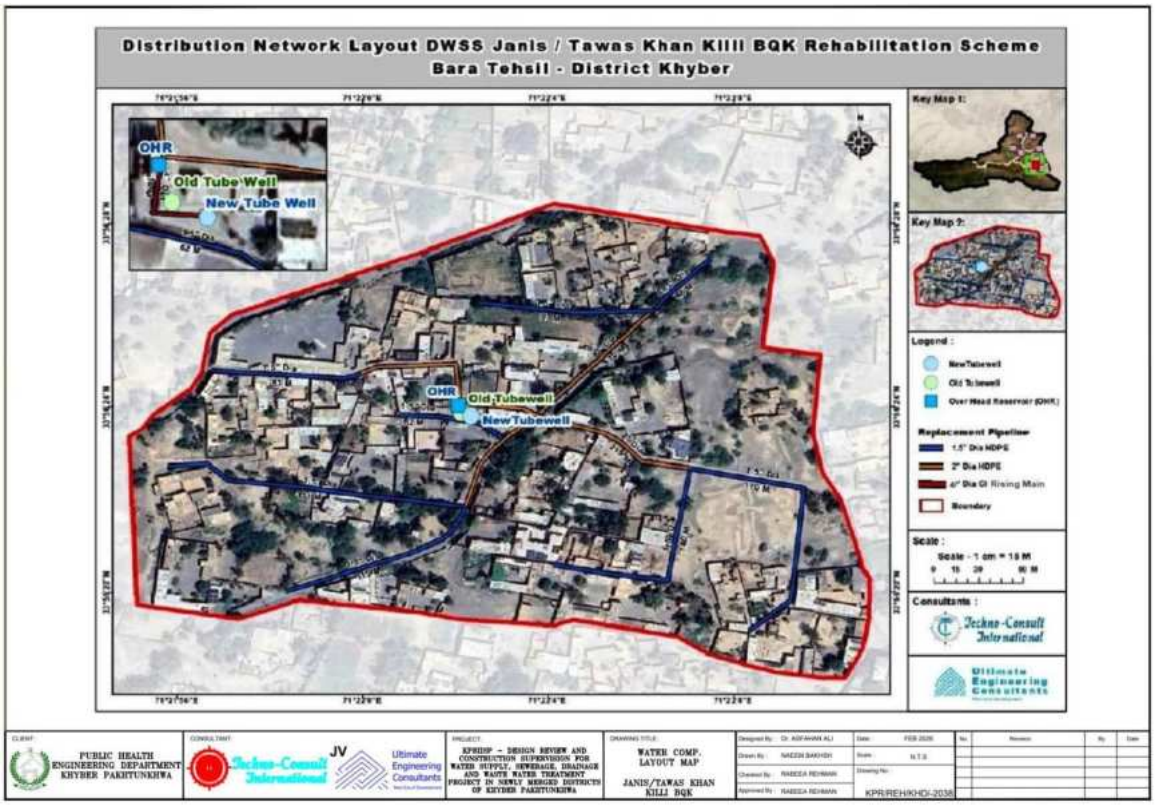


Figure 21: DWS Janis/Tawas Khan, District Khyber: Distribution Network Layout

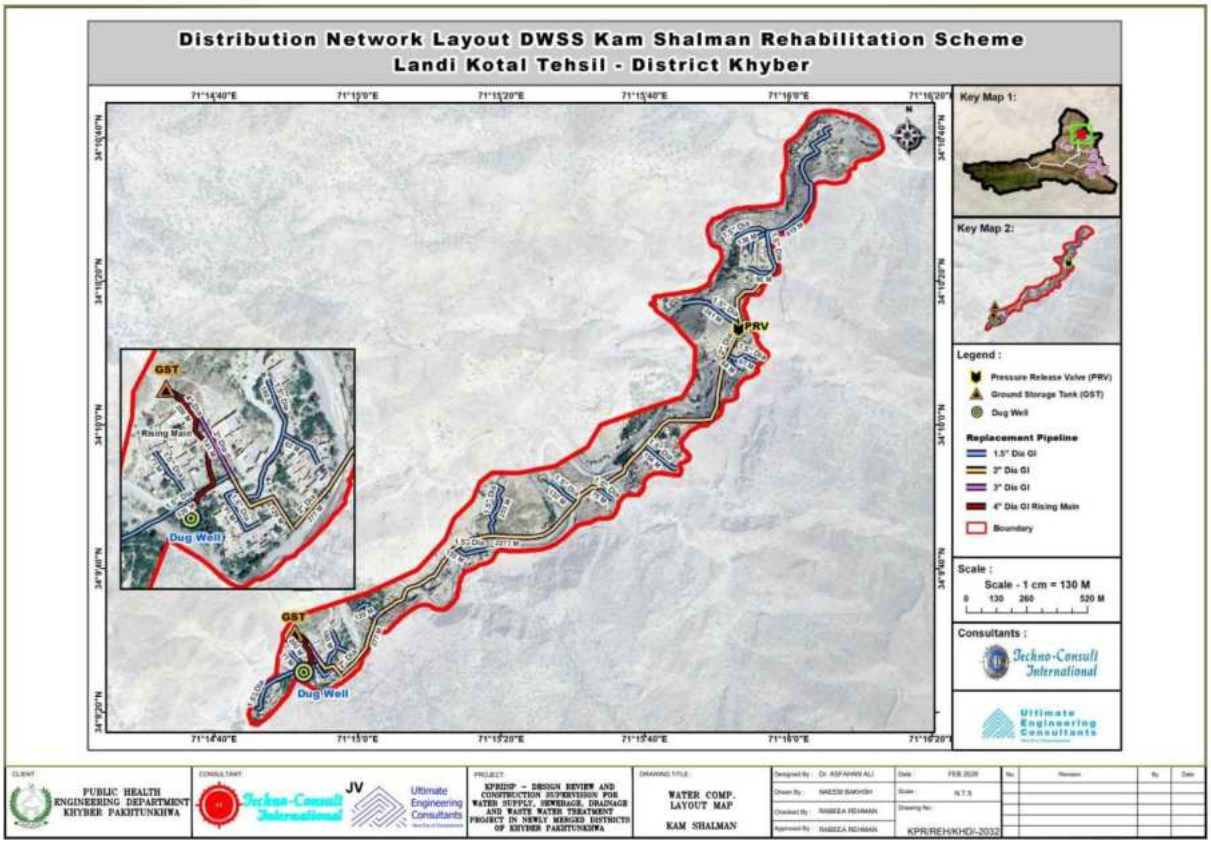


Figure 22: DWS Kam Shalman, District Khyber: Distribution Network Layout

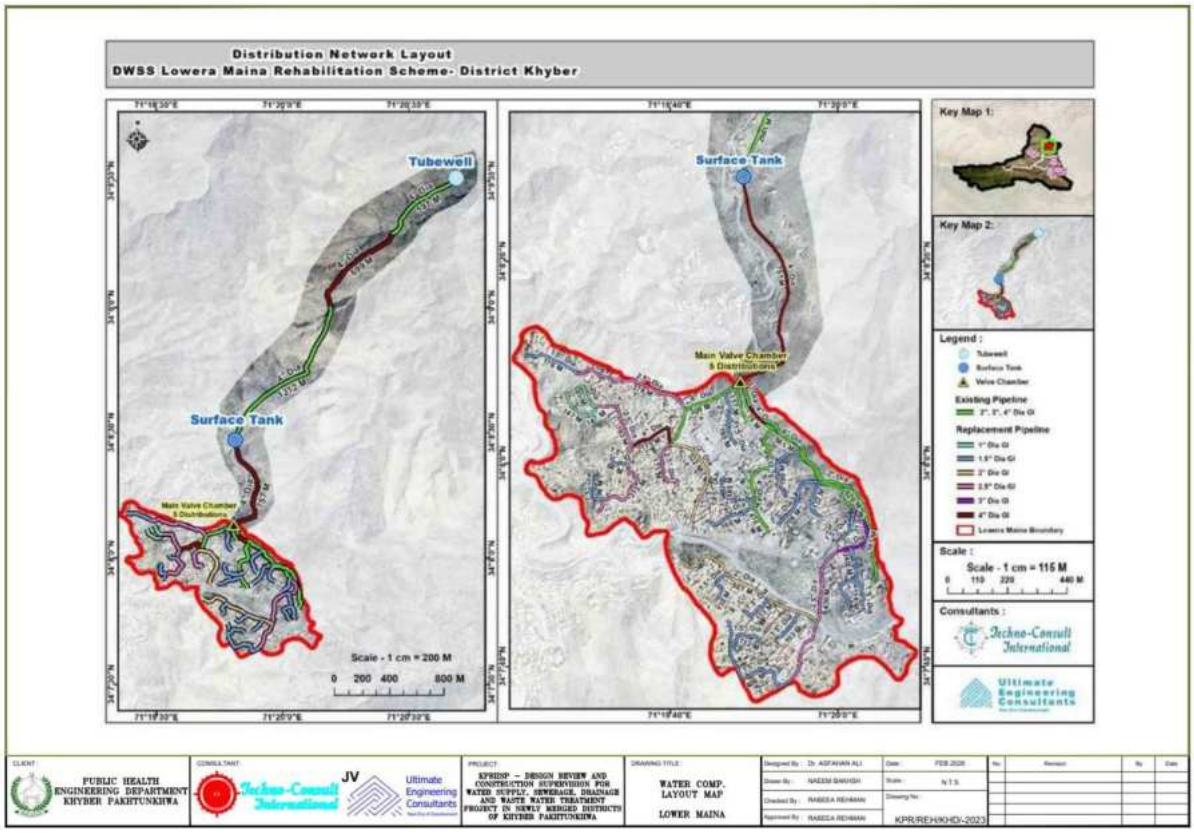


Figure 23: DWS Lowera Maina, District Khyber: Distribution Network Layout

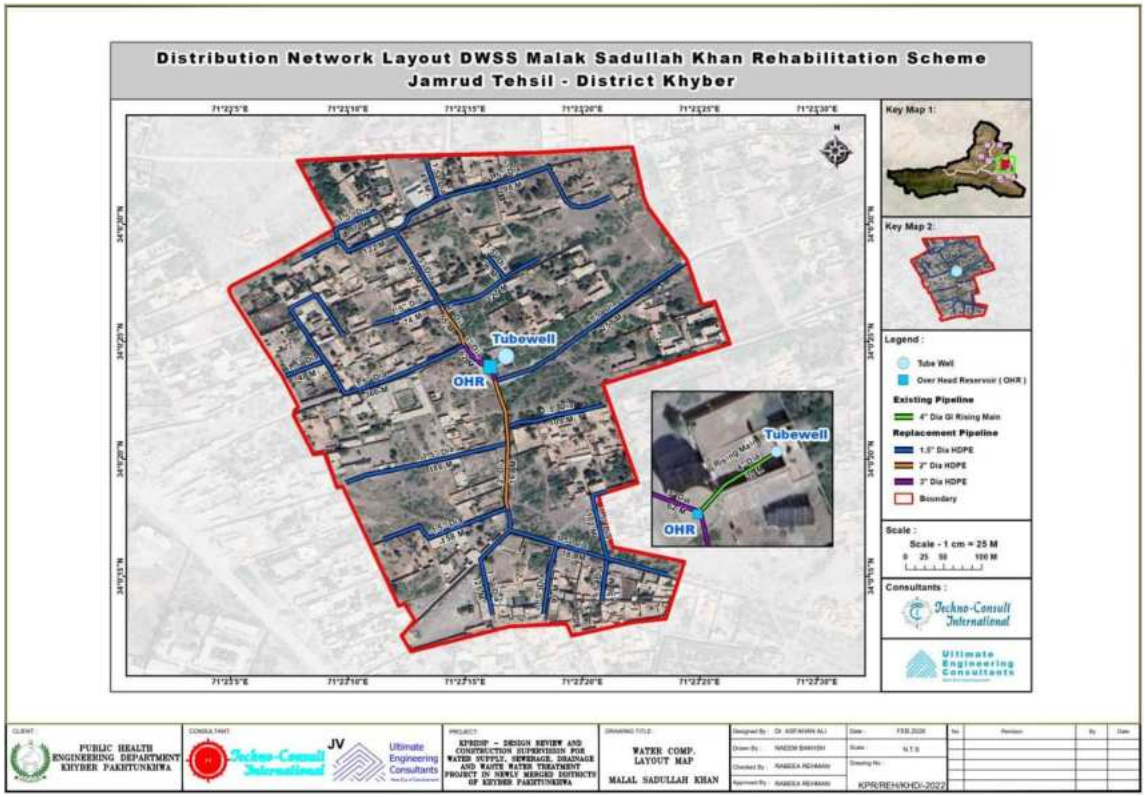


Figure 24: DWS Malak Saadullah, District Khyber: Distribution Network Layout

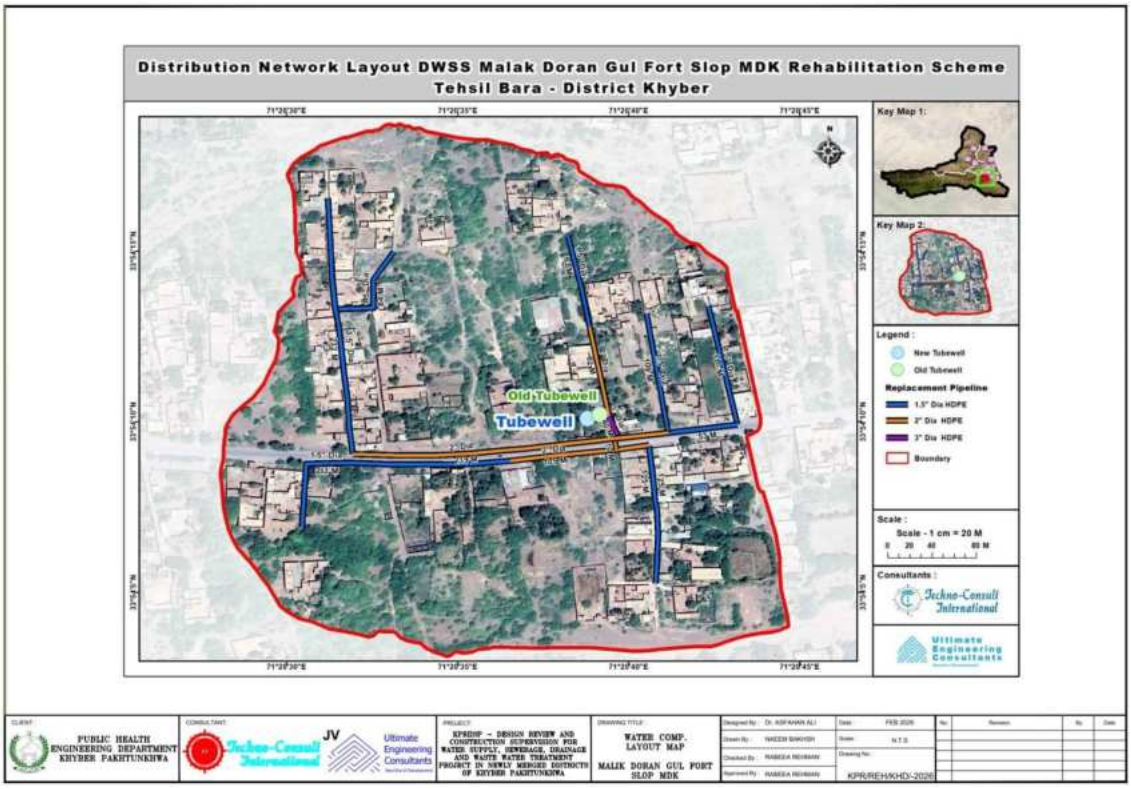


Figure 25: DWS Malik Doran Gul Fort, District Khyber: Distribution Network Layout

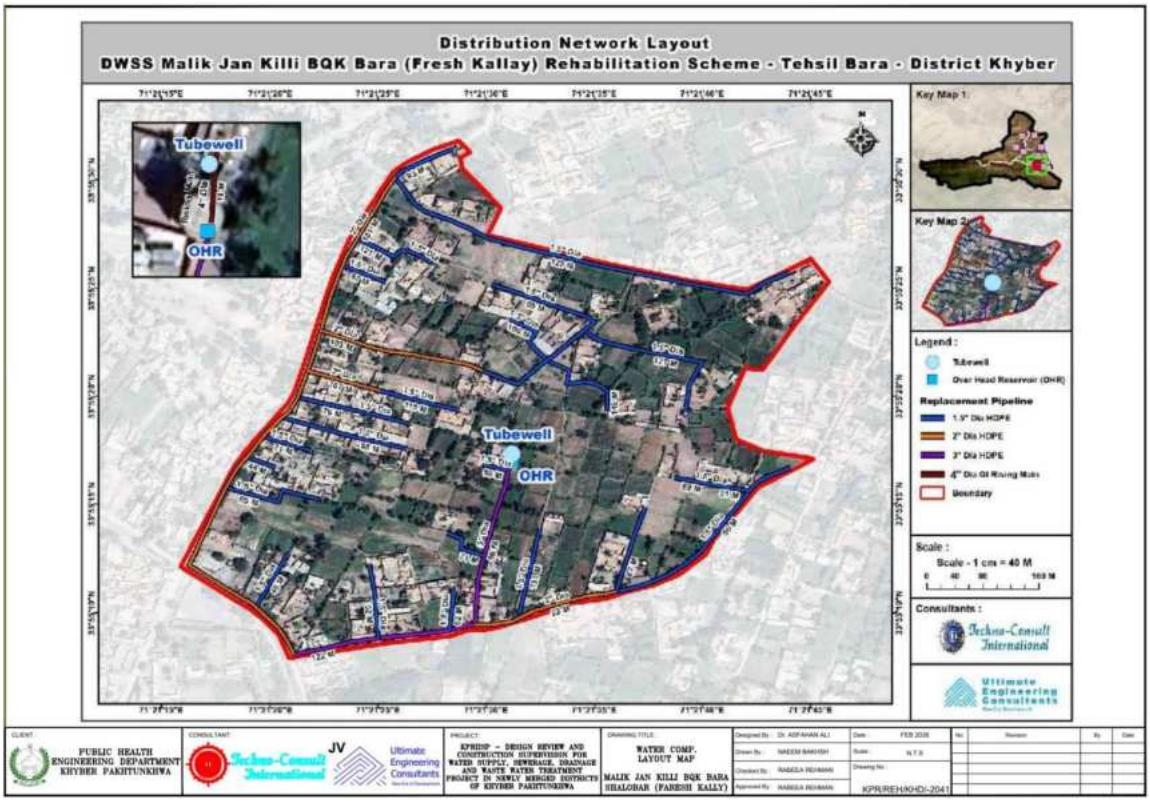


Figure 26: DWS Malik Jan Killi, District Khyber: Distribution Network Layout

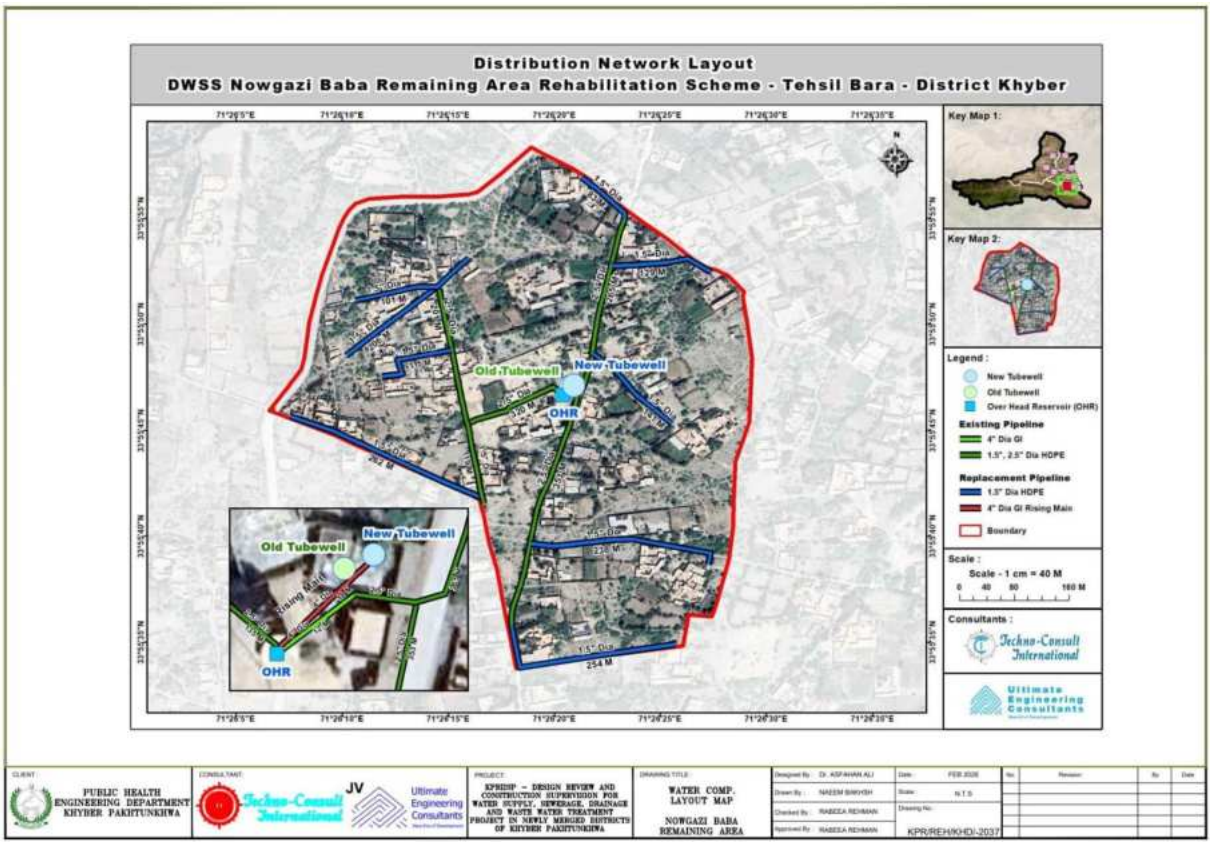


Figure 27: DWS Nowgazi Baba Remaining Area, District Khyber: Distribution Network Layout

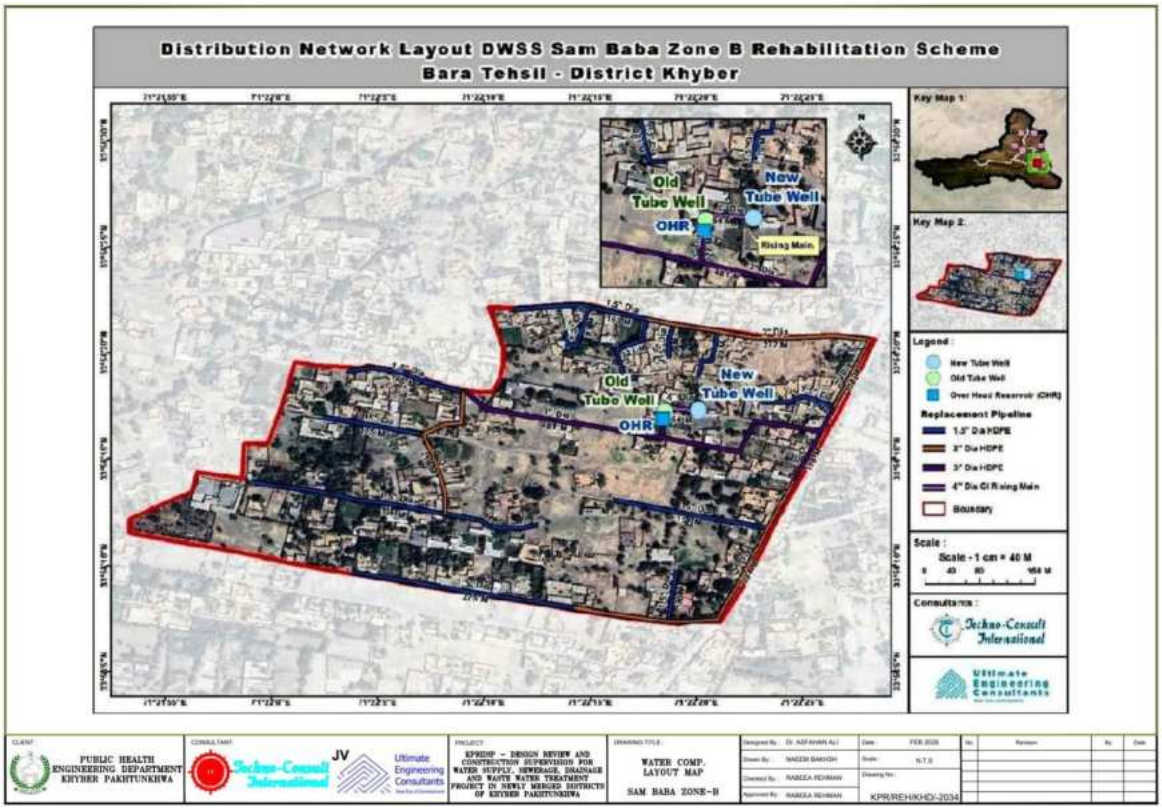


Figure 28: DWS Sam Baba Zone-B, District Khyber: Distribution Network Layout

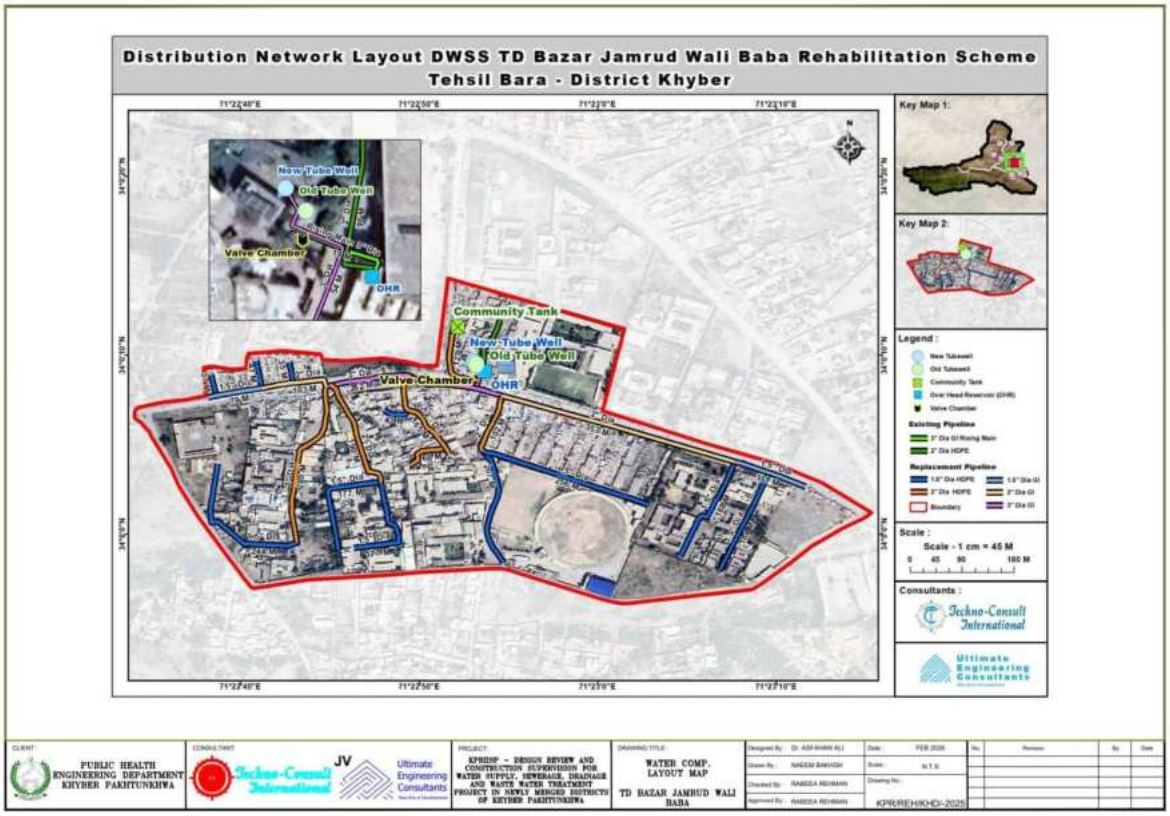


Figure 29: DWS TD Bazar Jamrud Wali Baba, District Khyber: Distribution Network Layout

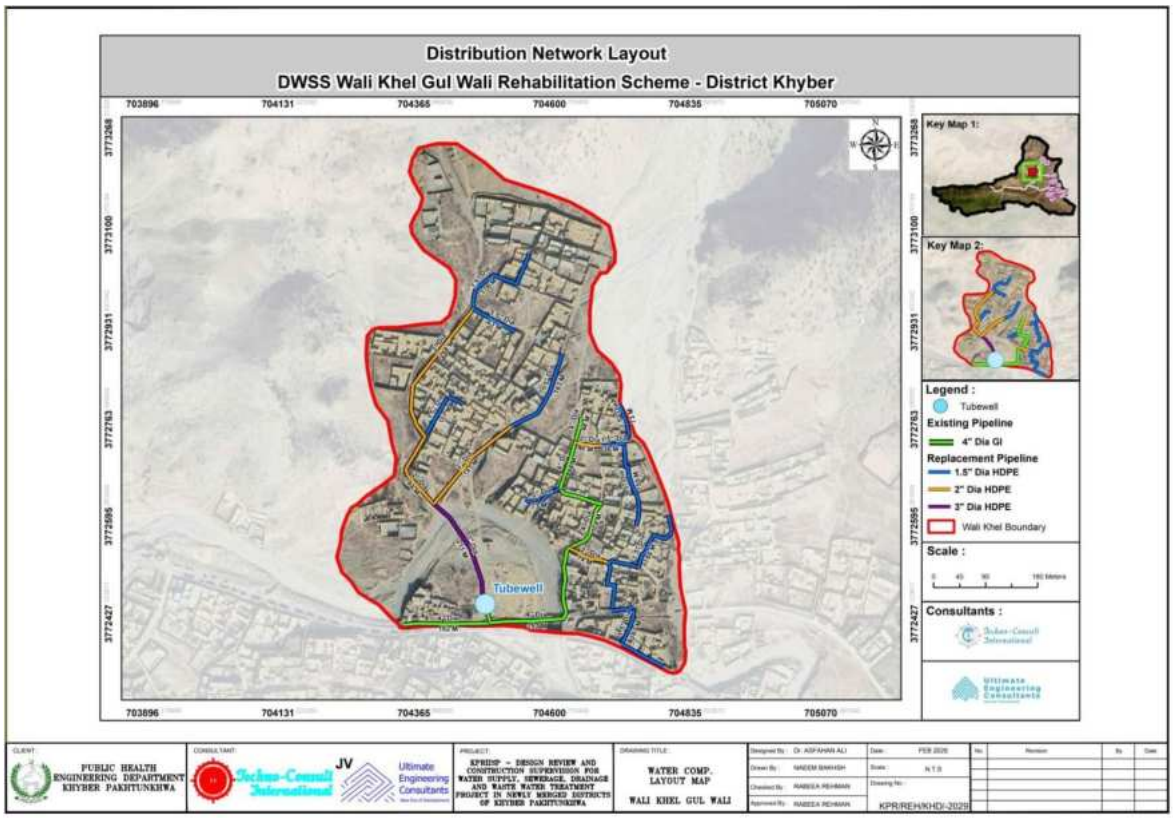


Figure 30: DWS Wali Khel Gul Wali, District Khyber: Distribution Network Layout

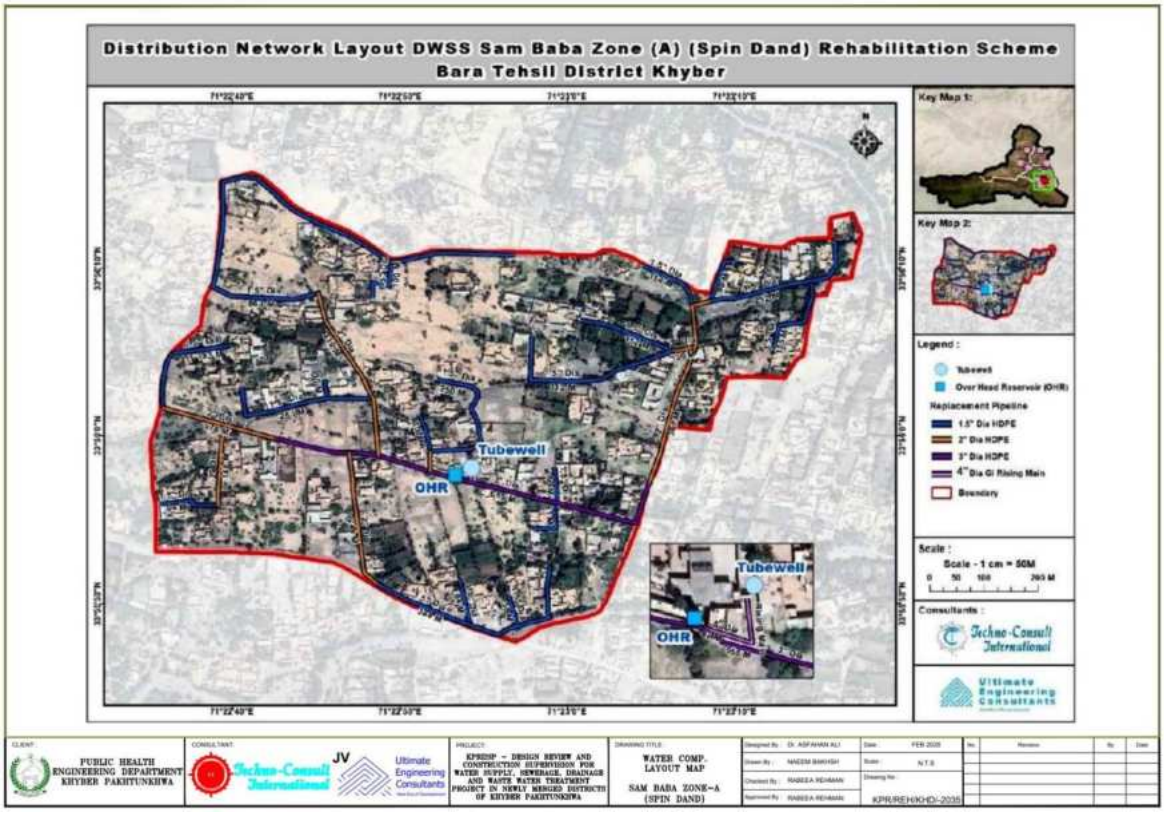


Figure 31: DWS Sam Baba Zone-B, District Khyber: Distribution Network Layout

Annex 4. EPA Environmental Assessment Rules

GOVERNMENT OF THEKHYBER PAKHTUNKHWA
FORESTRY, ENVIRONMENT AND WILDLIFE DEPARTMENT

NOTIFICATION

Dated Peshawar the, 02nd September, 2021

No. SO (Envt)/FE&WD/1-29/2021/Vol-II. In exercise of the powers conferred by section 31 of the Khyber Pakhtunkhwa Environmental Protection Act, 2014 (Act No. XXXVIII of 2014) read with section 13 thereof, the Government of Khyber Pakhtunkhwa is pleased to make the following rules, namely:

THE KHYBER PAKHTUNKHWA ENVIRONMENTAL ASSESSMENT RULES, 2021.

1. Short title and commencement.---(1) These rules shall be called the Khyber Pakhtunkhwa Environmental Assessment Rules, 2021.

(2) They shall come into force at once.

2. Definitions.---- (1) In these rules, unless there is anything repugnant in the subject or context;

(a) **"Act"** means the Khyber Pakhtunkhwa Environmental Protection Act, 2014 (Khyber Pakhtunkhwa Act No. XXXVIII of 2014);

(b) **"Director-General"** means the Director-General of the Khyber Pakhtunkhwa Environmental Protection Agency;

(c) **"Environmental Assessment Advisory Committee"** means the Committee constituted under rule 23 of these rules;

(d) **"EIA"** means an Environmental Impact Assessment as defined in clause (s) of section 2 of the Act;

(e) **"GEA"** means as General Environmental Approval to be submitted with the Agency by proponent, which are not covered by Environmental Impact Assessment or Initial Environmental Examination;

(f) **"GIS"** means Geographic Information System;

(g) **"GPS"** means Global Positioning System;

(h) **"IEE"** means an Initial Environmental Examination as defined in clause (ff) of section 2 of the Act; and

(i) **"Schedule"** means a Schedule appended to these rules.

(2) Words and expressions used in these rules but not defined shall have the same meanings as are assigned to them in the Act.

1

3. Application for screening and scoping of project.--- The proponent shall file an application with the Agency, having project description or activities on attached proforma as specified in **Schedule-I** to get clear directives for screening and scoping of the project, as per rule 4.

4. Projects requiring an EIA or IEE or GEA.---Where the project falls with the categories mentioned in **Schedules-II, III and IV**, the proponent shall file EIA or IEE or GEA respectively, with the Agency.

5. Directions for a specific project.---Where the project does not fall within the categories as mentioned in **Schedule-II, III and IV** and the Agency is of the opinion that said project may create an environmental hazard, the Agency shall direct the proponent to file an EIA, IEE or GEA, as the case may be, for reasons to be recorded in such directions:

Provided that such directions shall not be issued without the recommendations in writing of the Environmental Assessment Advisory Committee.

6. Preparation of guidelines for EIA, IEE and GEA.--- Guidelines for preparation of EIA or IEE or GEA of general and sectoral applicability may be specified by the Agency; provided that such guidelines may indicate specific assessment requirements for planning, construction and operation of a project relating to a particular sector.

7. Review Fees.---The proponent shall pay, at the time of submission of an EIA or IEE or GEA, a non-refundable review fee to the specified account of the Agency, as per rates given in **Schedule-V**.

8. Filing of EIA, IEE and GEA.--- (1) The proponent shall file ten paper copies and two electronic copies of an EIA or IEE with the Agency.

(2) Every EIA or IEE shall be accompanied by–

(a) an application, in the form set out in **Schedule-VI**; and

(b) original receipt of the review fee slip.

(3) The process for filing the GEA shall be the same as mentioned in sub-rule (1) and (2) except one hard and electronic copy of the report shall be submitted with the Agency.

9. Preliminary scrutiny.---(1) Within ten (10) working days of filing of the EIA, IEE or GEA, the Agency shall,-

(a) confirm that the EIA, IEE or GEA is complete for purposes of initiation of the review process and issue confirmation letter to the proponent; or

(b) require the proponent to submit such additional information as may be specified at any stage during the review process; or

SCHEDULE-VI
(see rule 8 (2) (a))

Application Form

1	Name and Address of Proponent ----------		Phone: ---------- Fax: ---------- Telex: ----------	
2	Description of project----------			
3	Location of project and GPS Coordinates/GIS map:----------			
4	Objectives of Project:----------			
5	IEE/EIA/GEA attached?	EIA/IEE/GEA		Yes/No
6	Have alternative sites been considered and reported in EIA/IEE/GEA?			Yes/No
7	Existing land use		Land Requirement	
	Is basic sites data available, or has it been measured?	(Only tick yes if the data is reported in the EIA/IEE/GEA)		
			Available	Measured
8		Meteorology (including rainfall)	Yes/No	Yes/No
		Ambient air quality	Yes/No	Yes/No
		Ambient Water Quality	Yes/No	Yes/No
		Ground Water quality	Yes/No	Yes/No
			Measured	Reported
9	Have estimates of the following been reported	Water balance	Yes/No	Yes/No
		Solid waste disposal	Yes/No	Yes/No
		Liquid waste treatment	Yes/No	Yes/No
10	Source of power		Power Requirement	
11	Labour force (number)	Construction: Operation:		

Verification: I do solemnly affirm and declare that the information given above and contained in the attached IEE/EIA/GEA is true and correct to the best of my knowledge and belief.

Date_____

Signature, name and Designation of proponent (with official stamp/seal)

SCHEDULE-IX
(see rule 13)

Decision on GEA

1. Name and address of proponent _____

2. Description of project _____

3. Location of project and GPS Coordinates/GIS map._____

4. Date of filing of GEA _____

5. After careful review of the GEA, and all comments thereon, the Agency has decided

(a) to accord its approval, subject to the following conditions:
_____
_____

or

(b) that the proponent should submit a GEA with the following modifications-

_____

_____

or

(c) that the proponent should submit an IEE of the project, for the following reasons:-

_____

_____

or

(d) to reject the GEA report of the project, being contrary to environmental objectives, for the following reasons:

_____

_____

[Delete (a)/(b)/(c)/(d), whichever is inapplicable]

Dated _____ Tracking no.___

Director-General Agency (with official stamp/seal)

SO (Envt)/FE&WD/1-29/2021/Vol-II/ **Dated 02-09-2021**

Copy forwarded to the:

1. Principle Secretary to Governor, Khyber Pakhtunkhwa.
2. Principle Secretary to Chief Minister, Khyber Pakhtunkhwa.
3. All Administrative Secretaries, Khyber Pakhtunkhwa.
4. Accountant General, Khyber Pakhtunkhwa.
5. All Commissioners, Khyber Pakhtunkhwa.
6. All Heads of Attached Department, Khyber Pakhtunkhwa.
7. Chairman Environmental Protection Tribunal, Peshawar.
8. All Deputy Commissioners, Khyber Pakhtunkhwa.
9. Registrar, Peshawar High Court, Peshawar.
10. PSO to Chief Secretary, Khyber Pakhtunkhwa.
11. PSO to Chief Minister, Khyber Pakhtunkhwa.
12. Director General, Environmental Protection Agency, Khyber Pakhtunkhwa, Peshawar **with the request to depute a representative to collect 100 gazatted copies of the Notification from Government Printing Press**.
13. Director Information, Khyber Pakhtunkhwa.
14. Chief Executive Officer, WSSP, Peshawar.
15. Manager, Government Printing Press for publication in next official gazette. **He is requested to provide 100 Gazatted copies of the same for information and record**.
16. Section Officer (Cabinet), w/r to his letter No. SOC(E&AD)/13-3/through circulation/21 dated 01-09-2021
17. PS to Secretary Forestry, Environment and Wildlife Department, Khyber Pakhtunkhwa.
18. Master file.

(Muhammad Qasim)
Section Officer (Environment)

Annex 5. Water Quality and Ambient Air Test Reports

Water Quality Test Result Report

DWSS Bara Tehsil

GOVERNMENT OF KHYBER PAKHTUNKHWA
Public Health Engineering Department
Central Water-Quality Laboratory Peshawar
Plot # 40, Sector B-2, Phase-5, Hayatabad, Peshawar
Ph: 091 9217788, Mob: 03339656580 e-mail: srupbed@gmail.com

No: 25/PWR PHE

Techno Consultants

WATER QUALITY ANALYSIS REPORT

Source Name/ID	Bara Tehsil	Sampling Date & Time	21-May-25
Source/Sampling point	Source	Sample receipt Date & Time	21-May-25
District / Address	DISTRICT KHYBER	Temperature (during test)	25C
GPS Cordinates	0 0	Date of Analysis	21/May/25
Collected by/Received From	Amin Ullah	Reporting Date	5/Jun/25
Ay Complaint by Client	Gneral Quality Analysis	Reference	
Desired Tests	TDS,Hardness, pH,Chloride,Sulphate ,Sodium,Alkalinity, Nitrite,Calcium, Magnesium,Potassium,EC,TSS,Bicarbonate,Arsenic,TPC, E.coli,Coliform	Contact No.	+92 -915852244-45

PHYSICAL AND AESTHETIC PARAMETERS

S.#	Water Quality Parameters	Unit	Detectable Limit	Reference method	Permissible limits	Analysis Results
1	Color	-	-	Sensory evaluation	Clear/Colorless	U.O
2	Odor	-	-	Sensory evaluation	Unobjectionable (U.O)	U.O
3	Taste	-	-	Sensory evaluation	Unobjectionable (U.O)	U.O
4	pH	-	0.02	APHA, 20th Edition	6.5-8.5 (WHO 2004)	7.72
5	E.C	µS/cm	0.2875	APHA, 20th Edition	NGVS	472
6	Turbidity	FNU	0.1	APHA, 20th Edition	5 (WHO 2004)	0.43
7	TSS	mg/L		APHA, 20th Edition		0.86
	MAJOR CHEMICAL PARAMETERS					
7	TDS	mg/L	-	APHA, 20th Edition	1000 (WHO, 2004)	283.2
8	Hardness	mg/L	5	APHA, 20th Edition	500 (WHO, 2004)	232.8
9	Calcium	mg/L	2	APHA, 20th Edition	200 (WHO, 2004)	36.2
10	Magnesium	mg/L	1	APHA, 20th Edition	150 (WHO, 2004)	
11	Alkalinity	mg/L	-	APHA, 20th Edition	NGVS	175.2
12	Carbonate	mg/L	5	APHA, 20th Edition	NGVS	0.0
13	Bicarbonate	mg/L	5	APHA, 20th Edition	NGVS	175.2
14	Chloride	mg/L	2	APHA, 20th Edition	250 (WHO, 2004)	30.7
16	Nitrite	mg/L	0.01	APHA, 20th Edition	01 (WHO, 2004)	0.07
17	Sulphate	mg/L	0.04	APHA, 20th Edition	500 (WHO, 2004)	29
18	Sodium	mg/L	1	APHA, 20th Edition	200 (WHO, 2004)	17
15	Potassium	mg/L	1	APHA, 20th Edition	200 (WHO, 2004)	14
16	Arsenic	mg/L	0.01	APHA, 20th Edition	0.05 (PSQCA, 2004)	0.005
	MICROBIOLOGICAL PARAMETERS					
1	Total Coliform	1 CFU/1 ml		Petrifilm	0 CFU / 1 ml	0
2	Fecal Colifrom	1 CFU/1 ml		Petrifilm	0 CFU /1 ml	0
3	Total Coliform	+Ve/-Ve		KIT-Method	-Ve	-Ve

Abbreviations:

NGVS: No Guideline Value Set **WHO: World Health Organization**
+Ve/-Ve: Positive/Negative **NT: Not Tested** **P: Physical, C: Chemical, M: Micro**
E.C: Electrical Conductivity **FNU: Formazin Nephelometric Units** **µg/L: micro-gram per Liter**
TDS: Total Dissolved Solids **BDL: Below Detection Level** **µS/cm: microsiemens / cm**

Terms and Conditions

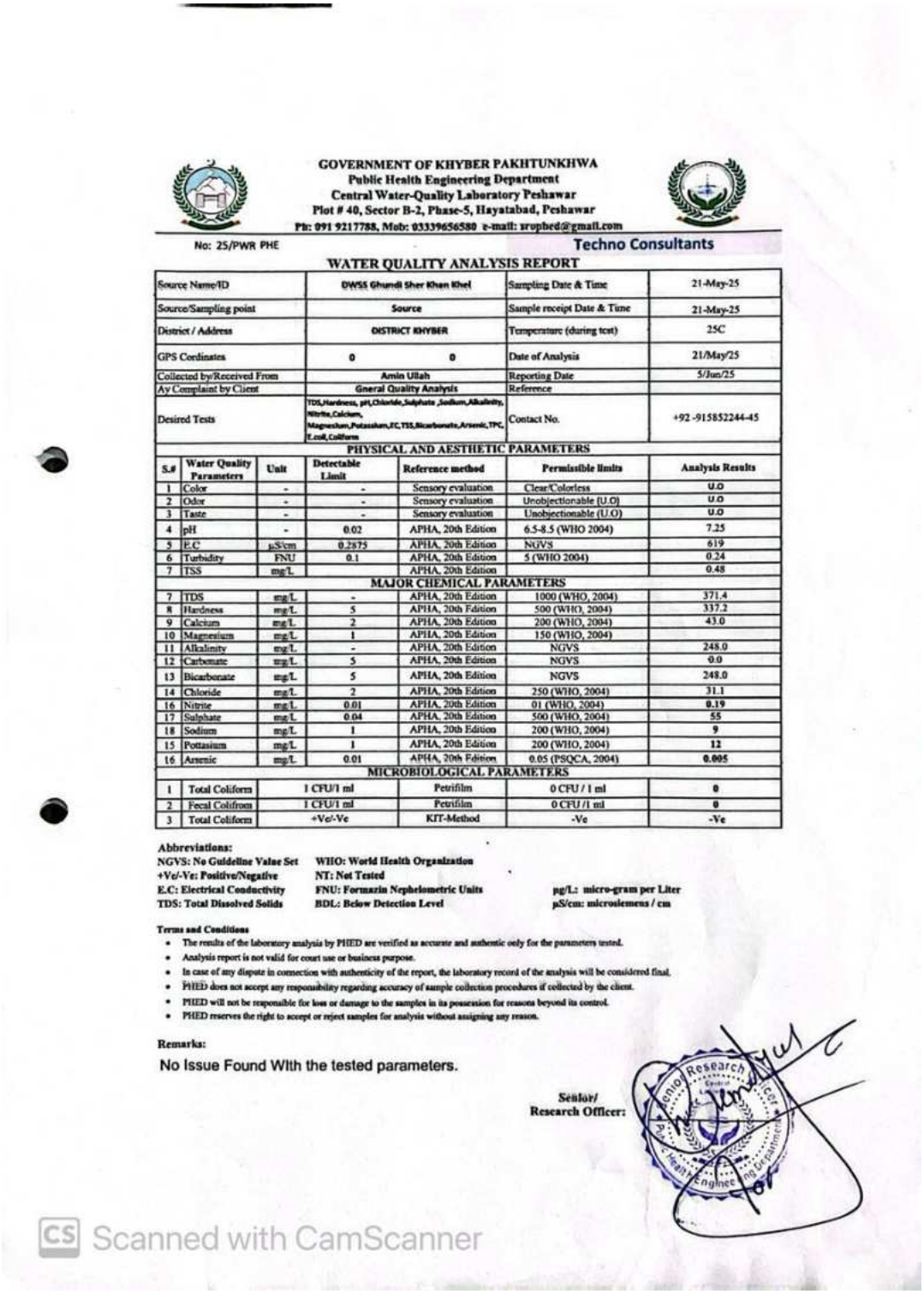
- The results of the laboratory analysis by PHED are verified as accurate and authentic only for the parameters tested.
- Analysis report is not valid for court use or business purpose.
- In case of any dispute in connection with authenticity of the report, the laboratory record of the analysis will be considered final.
- PHED does not accept any responsibility regarding accuracy of sample collection procedures if collected by the client.
- PHED will not be responsible for loss or damage to the samples in its possession for reasons beyond its control.
- PHED reserves the right to accept or reject samples for analysis without assigning any reason.

Remarks:

The anaylzed water Sample found safe for drinking purpose , for analyzed parameteres under the prescribed standards.

Senior/
Research Officer:

DWSS Ghundi Sher Khan



GOVERNMENT OF KHYBER PAKHTUNKHWA
Public Health Engineering Department
Central Water-Quality Laboratory Peshawar
Plot # 40, Sector B-2, Phase-5, Hayatabad, Peshawar
Ph: 091 9217788, Mob: 03339656580 e-mail: srophed@gmail.com

No: 25/PWR PHE

Techno Consultants

WATER QUALITY ANALYSIS REPORT

Source Name/ID	DWSS Ghundi Sher Khan Khel	Sampling Date & Time	21-May-25
Source/Sampling point	Source	Sample receipt Date & Time	21-May-25
District / Address	DISTRICT KHYBER	Temperature (during test)	25C
GPS Cordinates	0 0	Date of Analysis	21/May/25
Collected by/Received From	Amin Ullah	Reporting Date	5/Jun/25
Ay Complaint by Client	Gneral Quality Analysis	Reference	
Desired Tests	TDS,Hardness, pH,Chloride,Sulphate ,Sodium,Alkalinity, Nitrite,Calcium, Magnesium,Potassium,FC,TSS,Bicarbonate,Arsenic,TPC, E.coli,Coliform	Contact No.	+92-915852244-45

S.#	Water Quality Parameters	Unit	Detectable Limit	Reference method	Permissible limits	Analysis Results
	PHYSICAL AND AESTHETIC PARAMETERS					
1	Color	-	-	Sensory evaluation	Clear/Colorless	U.O
2	Odor	-	-	Sensory evaluation	Unobjectionable (U.O)	U.O
3	Taste	-	-	Sensory evaluation	Unobjectionable (U.O)	U.O
4	pH	-	0.02	APHA, 20th Edition	6.5-8.5 (WHO 2004)	7.25
5	E.C	µS/cm	0.2875	APHA, 20th Edition	NGVS	619
6	Turbidity	FNU	0.1	APHA, 20th Edition	5 (WHO 2004)	0.24
7	TSS	mg/L		APHA, 20th Edition		0.48
	MAJOR CHEMICAL PARAMETERS					
7	TDS	mg/L	-	APHA, 20th Edition	1000 (WHO, 2004)	371.4
8	Hardness	mg/L	5	APHA, 20th Edition	500 (WHO, 2004)	337.2
9	Calcium	mg/L	2	APHA, 20th Edition	200 (WHO, 2004)	43.0
10	Magnesium	mg/L	1	APHA, 20th Edition	150 (WHO, 2004)	
11	Alkalinity	mg/L	-	APHA, 20th Edition	NGVS	248.0
12	Carbonate	mg/L	5	APHA, 20th Edition	NGVS	0.0
13	Bicarbonate	mg/L	5	APHA, 20th Edition	NGVS	248.0
14	Chloride	mg/L	2	APHA, 20th Edition	250 (WHO, 2004)	31.1
16	Nitrite	mg/L	0.01	APHA, 20th Edition	01 (WHO, 2004)	0.19
17	Sulphate	mg/L	0.04	APHA, 20th Edition	500 (WHO, 2004)	55
18	Sodium	mg/L	1	APHA, 20th Edition	200 (WHO, 2004)	9
15	Potassium	mg/L	1	APHA, 20th Edition	200 (WHO, 2004)	12
16	Arsenic	mg/L	0.01	APHA, 20th Edition	0.05 (PSQCA, 2004)	0.005
	MICROBIOLOGICAL PARAMETERS					
1	Total Coliform	1 CFU/1 ml		Petrifilm	0 CFU / 1 ml	0
2	Fecal Colifrom	1 CFU/1 ml		Petrifilm	0 CFU /1 ml	0
3	Total Coliform	+Ve/-Ve		KIT-Method	-Ve	-Ve

Abbreviations:
NGVS: No Guideline Value Set **WHO: World Health Organization**
+Ve/-Ve: Positive/Negative **NT: Not Tested**
E.C: Electrical Conductivity **FNU: Formazin Nephelometric Units** **µg/L: micro-gram per Liter**
TDS: Total Dissolved Solids **BDL: Below Detection Level** **µS/cm: microsiemens / cm**

Terms and Conditions
- The results of the laboratory analysis by PHED are verified as accurate and authentic only for the parameters tested.
- Analysis report is not valid for court use or business purpose.
- In case of any dispute in connection with authenticity of the report, the laboratory record of the analysis will be considered final.
- PHED does not accept any responsibility regarding accuracy of sample collection procedures if collected by the client.
- PHED will not be responsible for loss or damage to the samples in its possession for reasons beyond its control.
- PHED reserves the right to accept or reject samples for analysis without assigning any reason.

Remarks:
No Issue Found With the tested parameters.

Senior/ Research Officer:

Scanned with CamScanner

DWSS Kam Shalman

GOVERNMENT OF KHYBER PAKHTUNKHWA
Public Health Engineering Department
Central Water-Quality Laboratory Peshawar
Plot # 40, Sector B-2, Phase-5, Hayatabad, Peshawar
Ph: 091 9217788, Mob: 03339656580 e-mail: arophed@gmail.com

No: 25/PWR PHE

Techno Consultants

WATER QUALITY ANALYSIS REPORT

Source Name/ID	Kam Shalman Speen Haji	Sampling Date & Time	21-May-25
Source/Sampling point	Source	Sample receipt Date & Time	21-May-25
District / Address	SHALMAN , DISTRICT KHYBER	Temperature (during test)	25C
GPS Cordinates	0 0	Date of Analysis	21/May/25
Collected by/Received From	Amin Ullah	Reporting Date	5/Jun/25
Ay Complaint by Client	Gneral Quality Analysis	Reference	
Desired Tests	TDS,Hardness, pH,Chloride,Sulphate ,Sodium,Alkalinity, Nitrite,Calcium, Magnesium,Potassium,FC,TSS,Bicarbonate,Arsenic,TPC, E.coli,Coliform	Contact No.	+92 -915852244-45

PHYSICAL AND AESTHETIC PARAMETERS

S.#	Water Quality Parameters	Unit	Detectable Limit	Reference method	Permissible limits	Analysis Results
1	Color	-	-	Sensory evaluation	Clear/Colorless	U.O
2	Odor	-	-	Sensory evaluation	Unobjectionable (U.O)	U.O
3	Taste	-	-	Sensory evaluation	Unobjectionable (U.O)	U.O
4	pH	-	0.02	APHA, 20th Edition	6.5-8.5 (WHO 2004)	7.51
5	E.C	µS/cm	0.2675	APHA, 20th Edition	NGVS	781
6	Turbidity	FNU	0.1	APHA, 20th Edition	5 (WHO 2004)	0.28
7	TSS	mg/L		APHA, 20th Edition		0.56

MAJOR CHEMICAL PARAMETERS

7	TDS	mg/L	-	APHA, 20th Edition	1000 (WHO, 2004)	468.6
8	Hardness	mg/L	5	APHA, 20th Edition	500 (WHO, 2004)	298.0
9	Calcium	mg/L	2	APHA, 20th Edition	200 (WHO, 2004)	48.3
10	Magnesium	mg/L	1	APHA, 20th Edition	150 (WHO, 2004)	
11	Alkalinity	mg/L	-	APHA, 20th Edition	NGVS	235.2
12	Carbonate	mg/L	5	APHA, 20th Edition	NGVS	0.0
13	Bicarbonate	mg/L	5	APHA, 20th Edition	NGVS	235.2
14	Chloride	mg/L	2	APHA, 20th Edition	250 (WHO, 2004)	73.8
16	Nitrite	mg/L	0.01	APHA, 20th Edition	01 (WHO, 2004)	0.5
17	Sulphate	mg/L	0.04	APHA, 20th Edition	500 (WHO, 2004)	114
18	Sodium	mg/L	1	APHA, 20th Edition	200 (WHO, 2004)	42
15	Pottasium	mg/L	1	APHA, 20th Edition	200 (WHO, 2004)	61
16	Arsenic	mg/l	0.01	APHA, 20th Edition	0.05 (PSQCA, 2004)	0.005

MICROBIOLOGICAL PARAMETERS

1	Total Coliform	1 CFU/1 ml	Petrifilm	0 CFU / 1 ml	100+
2	Fecal Colifrom	1 CFU/1 ml	Petrifilm	0 CFU /1 ml	0
3	Total Coliform	+Ve/-Ve	KIT-Method	-Ve	+Ve

Abbreviations:
NGVS: No Guideline Value Set **WHO: World Health Organization**
+Ve/-Ve: Positive/Negative **NT: Not Tested**
E.C: Electrical Conductivity **FNU: Formazin Nephelometric Units** **µg/L: micro-gram per Liter**
TDS: Total Dissolved Solids **BDL: Below Detection Level** **µS/cm: microsiemens / cm**

Terms and Conditions

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- PHED does not accept any responsibility regarding accuracy of sample collection procedures if collected by the client.
- PHED will not be responsible for loss or damage to the samples in its possession for reasons beyond its control.
- PHED reserves the right to accept or reject samples for analysis without assigning any reason.

Remarks:

Biological Contamination Found , Too Nomerous to count.

Senior/ Research Officer

Ambient Air Quality — Results Matrix, Khyber

Sr.	Parameters	Unit	NEQS	Observed Range	Remarks
1	Nitrogen Dioxide (NO2)	µg/m3	80.0	11 µg/m3	Good
2	Sulphur Dioxide (SO2)	µg/m3	120.0	12 µg/m3	Good
3	Carbon Monoxide (CO)	mg/m3	5.0	6 mg/m3	Unhealthy
4	Ozone (O3)	µg/m3	130.0	98 µg/m3	Good
5	Particulate Matter (PM2.5)	µg/m3	35.0	30 µg/m3	Moderate
6	Particulate Matter (PM10)	µg/m3	150.0	75 µg/m3	Moderate

Source: https://weather.com/forecast/air-quality

Annex 6. Participants' List of Stakeholders' Consultation

Techno-Consult International Ultimate Engineering Consultants

KP-RIISP TCI-UEC JOINT VENTURE

Attendance Sheet

Meeting/ Visit Purpose Stakeholders Consultation

Vanue/ Site HAJI Abdul Qayum Tool Band BOK

Date: 07-01-2026

S.No	Name	Designation/Department	Contact/email	Signature
1	Saiman Afridi	Community Member	0302-4225387	
2	M. Ali	Community Member	0301-8886186	
3	M. Jamil	"	0303-0585095	
4	Rahid Khan	"	0313 9565584	
5	M. Sadiq	"	0302-8888748	
6	Shah Haider	"	0301-8896405	
7	Khan Bacha	"	0307-7121515	
8	Burhan	"	0302-9139191	
9	Abbas	"	0333 915 3735	
10	M. Hayat	"	0332-1574930	
11	Nasib Khan	"	0305-8583891	

Address House No. 68C, Gul Mohar Road, University Town, Peshawar, Khyber Pakhtunkhwa
Email(s) kp-riisp@waterdivision.com.pk
Phone +92-91-5852244 - 45

Techno-Consult International Ultimate Engineering Consultants

KP-RIISP TCI-UEC JOINT VENTURE

Attendance Sheet

Meeting/ Visit Purpose E&S Assessment & Community Consultation

Vanue/ Site DWSS Malik Jan Killi BQK Shalobar (Faresh Killi)

Date: 06-01-2026

S.No	Name	Designation/Department	Contact/email	Signature
1	Fahad	Community Member	0327 5839134	
2	Jabad Noor	PHE Operator	0302-8883443	
3	Israr	Community Member	0301-5917773	
4	Fazal	"	0323-5684159	
5	Salman Haider	"	0305-9558689	
6	Haris	"	0335-9773975	
7	M. Amin	"	0306-9130678	
8	M. Sajad	"	0303-5457053	
9	Fazal Amin	"	0307-5588470	
10	Ibrahim Khan	"	0302-5772802	
11	Abdul Amin	"	03009364733	
12	Abdul Jalil	"	0306-5661618	

Address House No 68C, Gul Mohar Road, University Town, Peshawar, Khyber Pakhtunkhwa
Email(s) kp-riisp@waterdivision.com.pk
Phone +92-91-5852244 - 45

Techno-Consult International Ultimate Engineering Consultants

KP-RIISP TCI-UEC JOINT VENTURE

Attendance Sheet

Meeting/ Visit Purpose Stakeholders Consultation

Vanue/ Site Ghulam Sakhi

Date: 08-01-2024

S.No	Name	Designation/Department	Contact/email	Signature
1	M. ASim	community Member	03349410491	
2	Gul Nawaz	"	0304-9929334	
3	Naveed	"	0319-9602170	
4	Rizwan	"	03361192461	
5	Abdur Razial	"	03361192463	
6	Siraj Khan	"	03360055314	
7	Wajid Khan	"	03259113759	
8	Ghulam Sakhi	Land owner	0303905557	
9	M. Arif	Land owner	03339233110	

Address House No. 68C, Gul Mohar Road, University Town, Peshawar, Khyber Pakhtunkhwa
Email(s) kp-riisp@waterdivision.com.pk
Phone +92-91-5852244 - 45

Techno-Consult International Ultimate Engineering Consultants

KP-RIISP TCI-UEC JOINT VENTURE

Attendance Sheet

Meeting/ Visit Purpose ESMS Assessment & Stakeholder Consultation

Vanue/ Site WSS Janis/

Date: 07-01-2026

S.No	Name	Designation/Department	Contact/email	Signature
1	Zahid Shah	Community Member	0319-036015	
2	ILYAS	//	0333-9103621	
3	Abdur Rauf	//	0333-3673023	
4	Abbas	//	0341-5252938	
5	Sheryar Afridi	//	0331-5929264	
6	Hanif	//	0305-9837422	
7	Janis Khan	Operator PHE	0302-9193276	
8	Khurshed Adam	Community Member	0304-5888828	

Address House No 68C, Gul Mohar Road, University Town, Peshawar, Khyber Pakhtunkhwa
Email(s) kp-riisp@waterdivision.com.pk
Phone +92-91-5852244 - 45

Techno-Consult International · Ultimate Engineering Consultants

KP-RIISP TCI-UEC JOINT VENTURE

Attendance Sheet

Meeting/ Visit Purpose VLD Procedure Training

Vanue/ Site PHED Khyber Division Office

Date: 9-2-2026

S.No	Name	Designation/Department	Contact/email	Signature
#1	Ashfaq Ahmad	DWS Subhan Shah	03113113130	09/02
#2	M. ARIF	DWS Hakim Khan Kalay	03339444533	
3.	Samiullah	DWS Sam Bala Zone B	0333-9103949	
4.	Tikka Khan	DWS Hayat Khan	0333-6398751	
5	Akbar Hussain	DWS Kam Shalman	0334-5092564	
6.	Aleem Khan	DWS Ghazi Tubewell	0334-9139619	
7.	Shakir Khan	DWS Javed Killi	0333-9167153	
8.	Jamzoz	DWS Doran Gul	033)-9173607	
9.	Hawa Kha	DWS Hayat Khan	0344-2491596	
10.	M. Umar	DWS Hisara Shahab	0334-9076508	
11.	Engr. Ubaid Ullah	E&S Officer PIU PHED	0346-9100149	
12.	Khalid khan.	DWS Ghundi Sher Khan	0542.9292522	
13	Abdul Qahar	DWS Wali Khel Gul Wali	0301-5901271	
14.	Sadaqat Mir	DWS Lower Moira	0323-9161565	
15.	Samad Khan	DWS Jawal Khel	0332-9248299	

Address: House No. 68C, Gul Mohar Road, University Town, Peshawar, Khyber Pakhtunkhwa
Email(s): kp-riisp@waterdivision.com.pk
Phone: +92-91-5852244 - 45

Annex 7. Photos (with captions) of the Site and the Consultations


Stakeholder consultation with Tehisldar and TMO Jamrud, Khyber. Both the offices were briefed, their roles in the project and shared their feedback


Consultations with community members at DWSS Haji Abdul Qayum Toot Dand and DWSS Sam Baba Zone-B


Consultations with community members at DWSS Ghundi Sher khan Khel and DWSS Haji Janis/Tawas khan kily BQK


Consultations with community members at DWSS Hissara Shalobar and DWSS Malak Jan kily BQK Shalobar


Consultation with female community members at DWSS Haji Abdul Qayum Toot Dand and DWSS Sam Baba Zone-B


Stakeholder consultation with SDO Jamrud and PHED Khyber district staff-Land owners' training about the procedures and execution of Voluntary Land Donation (VLD)

Annex 8: Labor Camp Management Details

Considering the sub-project activities being spread across 21 DWS schemes, a small worker's camp having basic facilities/arrangements of rest area, washroom, drinking water facility shall be provided at each of these 21 schemes. It is anticipated that around 5-8 laborers will be present at each scheme during the construction phase of this subproject. It is anticipated that only the work site guard will stay overnight, therefore, necessary arrangements for accommodation of 1 staff member shall be ensured. Each camp should also be equipped with emergency tools like fire extinguisher, first aid kit etc.

Annex 9: Components of Site Specific OH&S Plan

1. Risk Assessment & Planning

- **Hazard Identification:**
  - Working at Height: Construction/repair of overhead reservoir (OHR) presents fall hazards for workers.
  - Climate Hazards: Extreme heat during June/July (mean max 40°C) increases the risk of heatstroke and dehydration for laborers.
  - Traffic Hazards: Construction material delivery vehicles
- **Planning:**
  - All safety tools related to Work at Height including scaffoldings, safety harness, platforms shall be provided for all the construction activities involving work at height. Training regarding the use of these tools shall be provided

2. Clear Roles & Responsibilities

- **Contractor's Site HSE Officer:**
  - Responsible for implementing this OH&S plan, conducting daily safety inspections, and ensuring workers wear PPE.
  - Must prepare sub-plans (Traffic Diversion, Site Rehabilitation) and submit them to the Supervision Consultant.
- **Site Supervisor:**
  - Ensures that only authorized workers enter the construction boundary and that visitors follow safety protocols.
- **Supervision Consultant's HSE Officer (SC-HSE):**
  - Oversees the Contractor's performance and issues instructions for corrective actions regarding safety violations.
- **PIU (PHED):**
  - Conducts spot checks and monitors compliance with the World Bank's Environmental and Social Standards (ESS2 & ESS4).

3. Training & Awareness

- **Induction Training:** All laborers will receive mandatory training on site safety, cultural norms, and the Code of Conduct (GBV/SEA/SH) before accessing the site.
- **Toolbox Talks:** Daily briefings will be conducted on specific daily hazards (e.g., "Working on Scaffolding," "Electrical Safety," "Handling Hazardous Materials").
- **Specialized Training:**

- **Heat Stress Management:** Educating workers on hydration and recognizing heatstroke symptoms during the hot summer.
- **First Aid & Fire Safety:** Designated staff will be trained in basic medical services and firefighting.

4. Safe Work Procedures

- **Personal Protective Equipment (PPE):**
  - **Mandatory:** Safety helmets, high-visibility vests, and safety shoes for all workers.
  - **Task-Specific:**
    - Dust Masks: For excavation and demolition crews (preventing respiratory issues).
    - Ear Muffs/Plugs: For workers operating heavy machinery or drill rigs (noise abatement).
    - Safety Harnesses: For work on OHR.
- **Machinery Maintenance:** Regular checks of mixer machines and vehicles to prevent hydraulic leaks or mechanical failure.

5. Site Safety Controls

- **Barriers & Fencing:**
  - fencing around the rehabilitation site using green mesh shall be provided to prevent entry of any irrelevant personnel.
- **Signage:** Safety signs (e.g., "Hard Hat Area," "Work at Height," "No Entry," "Emergency Exit") will be displayed in Urdu and Pashto at prominent locations.
- **Traffic Management:**
  - Construction vehicle movement will be restricted during school start/end times to protect students.
  - Speed limits will be enforced.
- **Dust Control:** Regular water sprinkling on sites and construction material storage yard to maintain air quality and visibility.

6. Monitoring & Reporting

- **Inspections:**
  - **Daily:** Site Supervisor to check PPE compliance, hygiene of toilets/kitchens, and machinery safety.
  - **Weekly:** Use the Environmental Monitoring Checklist (Annex 11) to audit comprehensive safety measures.
- **Incident Reporting:**
  - Any accident or "near-miss" must be recorded using the Incident Reporting Format (Annex 5) and reported to the PIU within 24–48 hours.
- **Audits:** Quarterly OH&S audits will be conducted by the Supervision Consultant.

7. Emergency Preparedness

- **Emergency Response Plan:** A specific plan will be developed for fire and medical emergencies.
- **Medical Facilities:**
  - **On-Site:** Fully stocked First Aid Boxes (minimum 3 units) and trained first-aiders available at all times.
  - **Referral Hospital:** The respective DHQ Hospitals of Tehsil Bara, Jamrud, Landi Kotal and Mula Gori are located approximately within 2 km radius from the DWS sites, allowing for rapid transport in case of serious injury.
- **Fire Safety:** Fire extinguishers and sand buckets will be strategically placed near fuel storage, kitchens, and electrical panels.

- **Communication:** Emergency contact numbers (Hospital, Fire Brigade, PIU Safety Officer) will be posted at the site office and labor camp.

Annex 10: KPRIISP Code of Conduct

Code of Conduct (GBV and SEA/SH Prevention)

Khyber Pakhtunkhwa Rural Investment & Institutional Support Project (KP-RIISP)

Responsible Authority: KPRIISP E&S Unit | **Applicability:** All Staff, Consultants, Contractors

Definitions

To ensure clarity and alignment, basic key terms are defined below:

GBV (Gender-Based Violence):

GBV is an umbrella term for any harmful act that is perpetrated against a person's will, and that is based on socially ascribed (i.e., gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. These acts can occur in public or private (2015 Inter-Agency Standing Committee Gender-based Violence Guidelines, pg. 5).

SEA (Sexual Exploitation and Abuse):

Sexual Exploitation: any actual or attempted abuse of a position of vulnerability, differential power or trust for sexual purposes, including, but not limited to, profiting monetarily, socially or politically from the sexual exploitation of another (UN Glossary on Sexual Exploitation and Abuse 2017, pg. 6).

Sexual Abuse: actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions (UN Glossary on Sexual Exploitation and Abuse 2017, pg. 5).

SH (Sexual Harassment):

Any form of unwanted verbal, non-verbal or physical conduct of a sexual nature with the purpose or effect of violating the dignity of a person, in particular when creating an intimidating, hostile, degrading, humiliating or offensive environment. This may include unwelcome sexual advances, requests for sexual favors, and may take place through online activity or mobile communications as well as in person.

GRM (Grievance Redress Mechanism):

The KPRIISP has set up a GRM to respond to the concerned grievances in both community and workplace settings. Under the project's GRM there will be a dedicated GBV reporting mechanism ensuring confidentiality and survival centered approach. It will further ensure that every report is handled professionally, with the survivor's safety, dignity, and access to support services as top priorities.

1. General Responsibilities

All personnel must:

· Consent to a security background check.

· Treat all individuals (women, men, children, persons with disabilities, transgenders, etc.) with respect and dignity, free from discrimination.

· Comply with National & Provincial Laws, World Bank's Good Practice Note, GBV Risk Assessment Tool, and KPRIISP's GBV and SEA/SH Mitigation Plan.

Maintain a safe environment by:

· Ensuring workplaces are risk-free.

· Following emergency procedures (availability of first aid box, fire extinguishers, displaying of CoC in English, Urdu & local dialect and all mitigation measures must be in effect).

· Report concerns via KPRIISP's GRM or to the designated focal person.

· Attend mandatory annual GBV and SEA/SH training, with bi-annual refreshers for field teams.

2. GBV/SEA/SH and Child Protection

Prohibited Conduct:

· Inappropriate language/behavior, sexual advances, or transactional sex.

· Any sexual activity with children (consent or mistaken age is no defense).

Mitigation Measures:

· Report suspicions to the GBV Grievance Redress Committee/designated focal person.

· Ensure workplaces/communities are harassment-free as per the Khyber Pakhtunkhwa Protection Against Harassment of Women at Workplace (Amendment) Act, 2020.

· Collaborate with provincial/local authorities/NGOs to support survivors.

3. Contractor/Consultant Obligations

Contractors/consultant must:

· Implement CoC requirements in HR policies, site protocols, and grievance mechanisms.

· Ensure compliance is a condition of contract performance.

4. Accountability & Compliance

· Zero Tolerance: Violations lead to warnings, termination, or legal action.

· Confidentiality: Whistleblowers and survivors are protected.

Signature Section

By signing, I commit to upholding this Code:
Name: _____
Designation: _____
Organization: _____ (for contractors/consultants/staff)
CNIC: _____
Signature: _____
Date: _____

Reporting & Enforcement:

Focal Persons:

· PCMU: Senior Social Development Specialist/Gender Officer

· PIU: Senior Social Development Specialist/Gender Officer/ Established Arrangements

Process:

1. Report to focal persons via GRM (anonymous options available)/direct report to senior management.

2. Preliminary inquiry within 15 days.

3. Outcomes: Verbal/written warnings, disengagement, or legal referral.

4. Confidentiality: Survivor identities protected; retaliation prohibited.

Implementation Requirements

· Visual Display: Mount CoC in English, Urdu, and Pashto across offices.

· Onboarding: Include CoC in orientation kits for all personnel.

Approved by:

Project Director

Project Coordination and Management Unit (PCMU)

Khyber Pakhtunkhwa Rural Investment and Institutional Support Project (KP-RIISP)

Planning and Development Department, Khyber Pakhtunkhwa

Annex 11. Environmental Monitoring Checklist

The following checklist will be used by the Contractor/Consultant field staff during site monitoring visits to assess E&S compliance at the sub-project sites.

Khyber Pakhtunkhwa Rural Investment and Institutional Support Project (KP-RIISP)

Environmental & Social (E&S) Monitoring Checklist

Contractor/Consultant and Package Name: _____District: _____

Date of Visit: _____Sub-Project/Location: _____

ENVIRONMENTAL COMPLIANCE CHECKLIST

#	Questions	Response	Remarks
	Exposure of soil surface to erosion/grubbing of the topsoil during site preparation		
1	Has the excavation been carried out as per actual excavation plan?	Yes / No	
2	Is all the excavated material been reused in backfilling?	Yes / No	
3	Is the waste from excavated material (if any) been disposed of in the nearest Municipality container or community dumping site?	Yes / No	
4	Did the site clearance/excavation involve removal of trees/vegetation?	Yes / No	
5	After the completion of work, grubbed soil is used in landscaping?	Yes / No	
	Air quality impacts (Dust and Exhaust emissions)		
6	Is the construction site been sprinkled with water for dust control?	Yes / No	
7	Has the machinery been regularly checked for excessive exhaust emissions on-site?	Yes / No	
8	Has the carried material been properly covered with green cloth or a tarpaulin sheet to avoid dust emissions?	Yes / No	
9	Have the drivers been trained with caution signage to follow the speed limit at the premises?	Yes / No	

10	Is the raw material been covered in the storage yard with the cover sheet?	Yes / No	
11	Are the workers using proper PPEs for dust, i.e. face masks, on site?	Yes / No	
12	Are all those activities which create dust been scheduled off-peak hours?	Yes / No	
	Noise Generation		
13	Has the contractor scheduled all noisy activities during the off-peak hours?	Yes / No	
14	Have all the workers signed the Code of Conduct? To avoid disturbance and shouting on site.	Yes / No	
15	Is the machinery i.e. excavator, concrete mixing machine and generator etc. well maintained to avoid excessive noise?	Yes / No	
	Waste Generation (Solid & Liquid)		
16	Are bins of 04 Colors (RED, Yellow, Green, and Blue) used for disposal of different type of waste on site?	Yes / No	
17	Is the waste disposed in the nearby municipality container or dumping site on daily basis?	Yes / No	
18	Is the equipment washout been discharged to the existing drainage system by saving/ avoided the natural water bodies?	Yes / No	

WORKERS HEALTH & SAFETY INSPECTION CHECKLIST

#	Questions	Response	Remarks
1	Is appropriate personal protective equipment (PPE) provided, used, and maintained when required?	Yes / No	
2	Is the site free from tripping hazards, e.g., cables, potholes, footpath defects, etc.?	Yes / No	
3	Are in-house procedures for handling employee safety and health complaints is in place?	Yes / No	
4	Have current weather conditions created new hazards to be addressed?	Yes / No	
5	Are all potentially hazardous activities segregated and/or fenced as required?	Yes / No	
6	Have any unanticipated hazards been introduced?	Yes / No	

7	Are first aid boxes and fire extinguisher facilities in place and in working condition?	Yes / No	
8	Is the Grievance Redress Mechanism (GRM) of KP-RIISP in place for the workers and community members, and is it working?	Yes / No	
9	Were any incidents/accidents reported during the work?	Yes / No	
10	Are all ladders/scaffolding, safety harness, platforms used during work at height maintained and in good condition?	Yes / No	

COMMUNITY HEALTH & SAFETY CHECKLIST

#	Questions	Response	Remarks
1	Have the members of the community adjacent to the sub-project been consulted and notified/informed prior to construction activities to limit unnecessary disturbances or interference?	Yes / No	
2	Has the construction site been appropriately cordoned off (with a green sheet) or barricaded to prevent stray animals and vagrant persons, particularly children, from entering the site?	Yes / No	
3	Have the excavated areas and pits been marked with appropriate signage, with provision of do not enter/do not pass signs and danger signs ensured at the site.	Yes / No	
4	Have the awareness sessions been organized to sensitize construction workers and local communities regarding the project objectives and activities?	Yes / No	
5	Is the free flow of traffic around the work site maintained?	Yes / No	
6	Do the vehicles accessing the site abide by speed limits and other traffic rules?	Yes / No	
7	Are the drivers briefed on safety requirements and exercise caution?	Yes / No	
8	Are the construction activities undertaken during the daylight hours between the hours of 07:00 am – 4:00 pm?	Yes / No	
9	Did the sub-project activities cause any interruption to existing utilities (water supply, electricity etc.)?	Yes / No	

IMPLEMENTATION OF GRM AND SEA/SH MITIGATION MEASURES

#	Questions	Response	Remarks
1	Have all workers signed the CoC, confirming conduct aligned with SEA/SH sensitivities?	Yes / No	

2	Are CoCs displayed at worksites in local languages?	Yes / No	
3	Have workers received training on the CoC, SEA/SH, and the GRM?	Yes / No	
4	Is the GRM active and accessible (e.g., through complaint boxes) at worksites?	Yes / No	
5	Are GRM information materials/banners displayed at worksites with contact details for focal points?	Yes / No	
6	Have any instances of child labor been identified at the worksite?	Yes / No	
7	Have brochures with GRM/complaint cell information been distributed to community members?	Yes / No	
8	Have community members received awareness sessions or consultations on SEA/SH and the GRM?	Yes / No	

LABOR CAMP MANAGEMENT

#	Questions	Response	Remarks
1	Labor camp area is clean and solid waste is properly managed	Yes / No	
2	Adequate safety and security measures in place (lighting, gates/locks, boundary, guards)	Yes / No	
3	Labor camp located at a safe distance from nearby communities	Yes / No	
4	Clean and adequate living accommodations provided (ventilation, space, bedding)	Yes / No	
5	Clean and adequate washroom and bathing facilities available and functional	Yes / No	
6	Adequate and hygienic kitchen/cooking facilities available	Yes / No	
7	Clean and safe drinking water provided	Yes / No	
8	Separate facilities for male and female workers (if applicable)	Yes / No	
9	Camp rules and grievance mechanism communicated to workers	Yes / No	

Major Non-Compliance at site:

1) _____
_____

2) _____
_____

3) _____
_____

Corrective Actions advised with timeline:

a) _____
_____

b) _____
_____

c) _____
_____

Visiting Officer: _____
Signature_____

Annex 12. Incident Reporting Format (ESIRT) Form

Details of Incident (e.g., to a worker or visitor) and Treatment		
Date of incident		
Time of incident		
Nature of incident	☐ Near miss ☐ First aid ☐ Medical treatment/doctor	
Name of injured person		
Address		
Occupation		
Date of birth		
Telephone		
Employer		
Activity in which the person was engaged at the time of injury		
Exact site location where injury occurred		
Nature of injury–e.g. fracture, burn, sprain, foreign body in eye etc.		
Body location of injury		
Treatment given onsite and Name of Treating Person		
Referral for further treatment? ☐ Yes ☐ No	Name of doctor or hospital	Medical certificate received? ☐ Yes ☐ No
Injury management required? ☐ Yes ☐ No	Return date	

Witness to Incident (Include all witnesses)	
Witness name and contact	

Details of Incident	
Date of incident	
Time of incident	
Details of damage to equipment or property	
Name of person who received the report	
Description of incident	

Annex 13. Waste Management Plan

1. PURPOSE

This Plan aims to

- Provide a guideline through which the contractor will manage the waste produced from the project activities.
- Ensure control over the waste generated within the work sites.
- Ensure that consistent and environmentally friendly methods are adopted for disposal of waste.

2. SCOPE

This procedure is applicable at all the sub-project sites for collection and disposal of waste.

3. RESPONSIBILITIES

Contractor's Project Manager and HSE Officers are responsible for the implementation of this procedure. While Consultant Environmental Specialist and Assistant Resident Engineer are responsible for monitoring of the implementation.

4. PROCEDURE

For the purpose of Waste Management Procedure, the following four main categories of waste have been identified

5. WASTE SEGREGATION & STORAGE

All wastes, hazardous and non-hazardous, must be segregated and stored in designated waste containers at the appropriate waste storage area at each work site. The waste containers must be clearly marked, such as;

5.1 Chemical Waste (RED)

Chemical waste will have one or more of the characteristics of ignitibility, corrosively, reactivity and toxicity. This includes waste such as: Printing Material, Ink, Paint and Thinner

5.2 Hazardous waste (YELLOW)

Hazardous waste will have one or more of the characteristics of ignitibility, corrosively, reactivity and toxicity. This includes waste such as:

- Medical waste
- Oily sludge
- Filter cartridges
- Batteries Acids
- Electrical Waste
- Lubricating oils
- Oily water
- Material or packaging of material classified as harmful to environment.

5.3 Recyclable Waste (GREEN)

The Recyclable waste is a waste which does not have the characteristics of the hazardous waste & can be recycled such as Paper and card, Wood

5.4 General Waste (BLUE)

General waste, also known as residual waste, refers to materials produced by businesses and households that cannot be recycled or composted. This includes items such as non-recyclable plastics, broken glass, certain packaging, and kitchen scraps.

4 colour waste bins (as shown below) shall be used at all sub-project sites to ensure effective waste segregation and disposal

Chemical (Red) Hazardous (Yellow) Recyclable (Green) General (Blue)

Annex 14: Voluntary land Donation (VLD) document template (Urdu)

KP-RIISP

معاہدہ برائے رضاکارانہ زمین عطیہ

یہ رضاکارانہ عطیہ کی دستاویز مورخہ _____ _____کو ترتیب دی گئی ہے۔

فریق اول

جناب/محترمہ_____ ولد/دختر/زوجہ _____

شناختی کارڈ نمبر _____

فریق دوم

حکومت خیبر پختونخوا بذریعہ ویلج کونسل /نیبرہڈ کونسل _____، جو کے_____ کی نگرانی کی خدمت سرانجام دے گی۔

آئندہ اس کو "وصول کنندہ "کہا جائے گا، جو کہ "پراجیکٹ مینجمنٹ یونٹ، رورل انویسٹمنٹ اینڈ انسٹیٹیوشنل سپورٹ پراجیکٹ حکومت خیبر پختونخوا "کی طرف سے ہوگا، اور اس میں ان کے جانشین، نامزد افراد اور مجاز نمائندے شامل ہوں گے۔

زمین اور مقام کی تفصیلات:

مقام /گاؤں	کوآرڈینیٹس GIS
ضلع	تحصیل اور یونین کونسل
زمین پر موجود تعمیرات	زمین کا رقبہ
شمالی حد کی وضاحت	جنوبی حد کی وضاحت
مغربی حد کی وضاحت	مشرقی حد کی وضاحت

(نوٹ :نقشہ بمعہ پیمائش منسلک ہے)

زمین کے مالک کی تفصیلات

مالک زمین کا نام شناختی کارڈ نمبر	والد/شوہر کا نام شناختی کارڈ نمبر
عمر پیشہ	حیثیت
رہائش	صنف

شرائط و ضوابط:

زمین کے مالک کے پاس مذکورہ زمین پر قابل منتقلی حق موجود ہے۔

زمین کے مالک کی گواہی ہے کہ زمین پر کوئی قانونی یا دیگر دعویٰ موجود نہیں ہے۔

زمین کا عطیہ مکمل طور پر رضاکارانہ بنیاد پر کیا جا رہا ہے، بغیر کسی دباؤ یا مجبوری کے۔

عطیہ کنندہ کو عطیہ شدہ زمین پر بننے والے انفراسٹرکچر تک دوسرے کمیونٹی ممبران کی طرح مساوی رسائی حاصل ہوگی، اور کوئی ترجیحی سلوک نہیں کیا جائے گا۔

عطیہ کی جانے والی زمین مالک کی مجموعی زمین کے 10 فیصد سے زیادہ نہیں ہے۔

وصول کنندہ پبلک ہیلتھ انجینئرنگ ڈیپارٹمنٹ کی طرف سے تعمیر کردہ سہولیات اس پروجیکٹ کے مقصد کے لیے ہوں گی اور ارد گرد کے اثاثوں کو نقصان سے بچانے کا خیال رکھا جائے گا۔

دستخط کنندگان

تحصیلدار		**زمین کا مالک**	
نام		نام	
مہر سرکاری		شناختی کارڈ	
رجسٹریشن نمبر کی منتقلی			
قبائلی بزرگ /معتبر		**ویلج کونسل /نیبرہڈ کونسل چیئرمین**	
نام		نام	
شناختی کارڈ		شناختی کارڈ	
گواہان			
(VC/NC) سیکرٹری	نام		دستخط
	شناختی کارڈ		
ویلج نمبر دار	نام		دستخط
	شناختی کارڈ		
نمائندہ PHED	نام		دستخط
	شناختی کارڈ		