REPUBLIC OF IRAQ

MINISTRY OF PLANNING

Iraq Social Fund for Development SFD (P163108)

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

FOR THE

REHABILITATING THE ELECTRICITY NETWORK IN VILLAGES (ALBU HAMIDI, AL-DABAT, ABU HEIFA, AL-GARYAFIYA)

IN Thi-Qar Governorate

9TH DECEMBER 2023

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IRAQ: Social Fund for Development Project PART A: **GENERAL PROJECT AND SITE INFORMATION**

INSTITUTIONAL &	ADMINISTRATIVE
Country	IRAQ
Project Title	REHABILITATING THE ELECTRICITY NETWORK IN VILLAGES (ALBU HAMIDI, AL-DABAT, ABU HEIFA, AL-GARYAFIYA) IN THI-QAR GOVERNORATE
Introduction	
	measures. The project is expected to result in significant socio-economic benefits for the local communities and surrounding areas in addition to developing social awareness and group responsibility.

PROJECT LOCATION & SITE DESCRIPTION

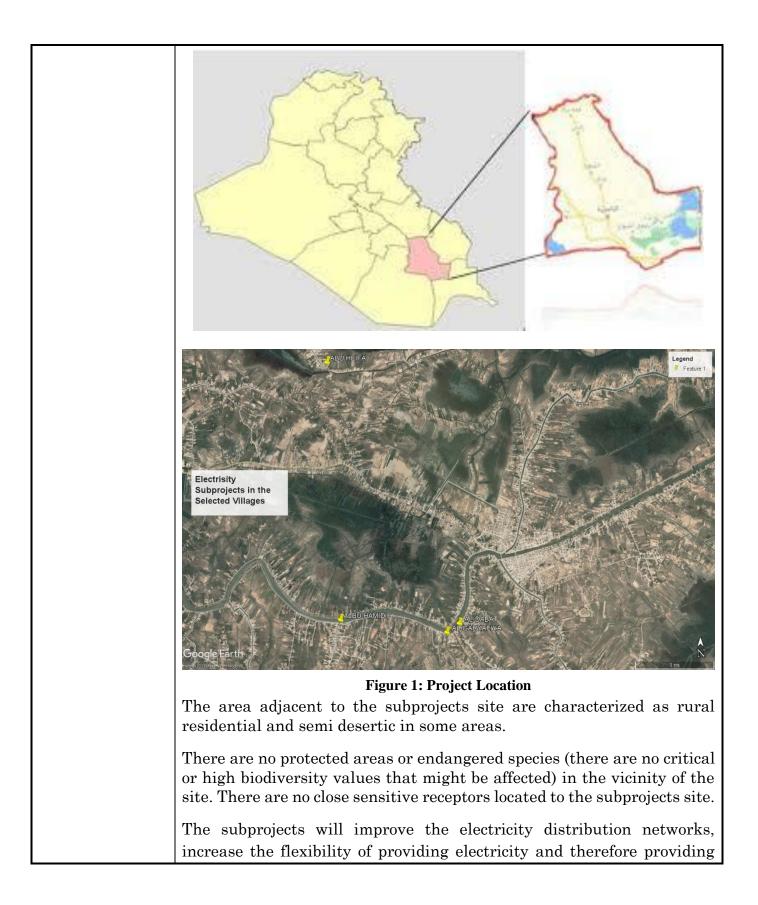
According to the Environmental and Social Management Framework (ESMF) which was prepared for the Iraq Social Fund for Development Project disclosed locally in Iraq and on the World Bank's website¹. Environmental and Social Management plan (ESMP)/ Environmental and Social Management should be prepared, cleared, publicly consulted and disclosed prior to the commencement of any rehabilitation activity. The World Bank Operational Policy 4.01 on Environmental Assessment was triggered as the proposed Subprojects has some potential negative environmental and social impacts. Accordingly, this Environmental and Social Management is required to implement the Sub-project following the requirements of the World Bank's Operational Procedures and applicable Iraqi national legislation.

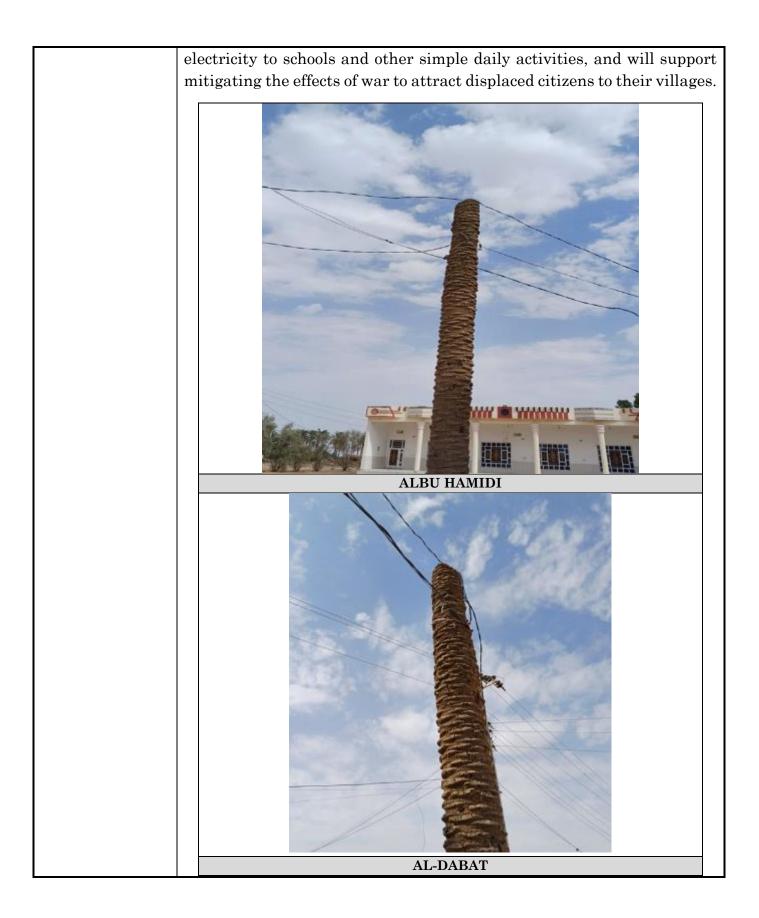
Project Location The subproject is located in the governorate of Thi-Qar that is situated in South part of Iraq, Thi-Qar shares internal boundaries with the governorates of Al-Diwaniyah, Al-Muthana, Wasit, Missan and Basra (as shown in figure below). The length of each network, coordinates, and the population in each village are shown in the table below:

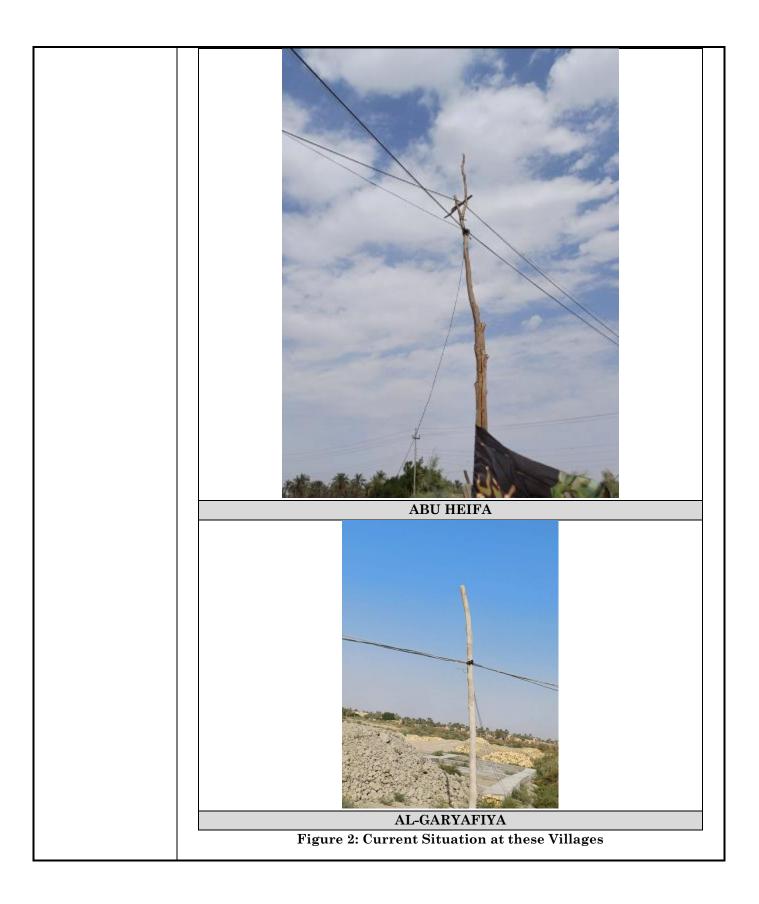
No.	Village	Length (Km)	Project Duration (day)	Population	Coordinates
1	ALBU HAMIDI	14.5	180	4434	30.868417, 46.534722
2	AL-DABAT	5.0	180	4863	30.867780, 46.560025
3	ABU HEIFA	4.0	180	1680	30.9153554, 46.5318043
4	AL- GARYAFIYA	17.5	180	10230	30.866146, 46.557374
	Total	41.0		21207	

Table 1: Information about the villages

¹<u>https://documents1.worldbank.org/curated/en/221731554372651925/pdf/Environmental-and-Social-Management-Framework.pdf</u>







Project Duration	The anticipated duration of all works is around 180 days for all electrical distribution grid lines including mobilization and demobilization of contractors in these villages.
Proposed Project Activities	Works for rehabilitation of the grid lines in these villages will include removing the old and damaged cables and all other fittings and moving them into the store that belongs to the ministry of electricity. Then the work will include installing oil type pole-mounted distribution transformers, cables and circuit breakers. The work will also comprise of some civil work (on vacant state-owned lands) such as shallow excavation for poles, lifting the soils and other waste produced during the excavation, and casting to prepare the foundations for the poles. The anticipated duration of rehabilitation works in these villages is about 6 months with about 20-25 workers per day per site and most of them are local workers and the rest are engineers and technicians. Workers from other villages will need to have their accommodation facilities in the camp, during the rehabilitation phase. Setup of a camp in the area near each electrical gridline will be on vacant state-owned lands. Also, storage of equipment and construction materials will be on vacant state-owned lands. Workers' facilities will be established within the subproject boundaries, as the contractor will use the state-owned lands Additionally, a dedicated septic tank will be available at the camp and removed once the subproject activities are completed. The site will be used for workers accommodation, administration, workers' rest, a place to eat, and include restroom facilities The rehabilitation is expected to take place by carrying the pole materials to each pole base by lorry and assembling the poles (9-11m in height) on site. Work is expected to take place at several rehabilitation locations at the same time. The rehabilitation teams at each location would consist of crews, working one after another, with each crew responsible for one of the following: preparing the foundations for the poles, erecting of the poles and installing the wires and its accessories.
Land Use and Acquisition	The area adjacent to the project site is characterized as a rural residential to agricultural area. However, rehabilitation activities will not cause an impact on agricultural areas or cause any crop damage. The electrical grid will be constructed on state land and hence there are no issues related to land acquisition. The implementation activities will not cause relocation of people, vendors, or any individuals.

Contactor's Camp	The rehabilitation of the electrical grid will need about 20-25 workers per day. Workers are expected to be hired locally, however, if a construction camp is deemed necessary, it will be installed on vacant state-owned land. Portable holding tanks will be installed in the subproject, wastes liquid and solid will be collected and disposed in an authorized waste treatment plant/authorized disposing site to be determined later by the local municipality. The contractor will establish his storage on vacant state-owned land for equipment and material within the area close to the rehabilitation activities. The construction camp should have independent sources of water and electricity, and an adequate septic tank for sanitary effluent disposal. Due to its geographical location, an influx of workers to the subprojects areas is not expected. Most of the workers will be locals from the surrounding areas and will return to their homes.
PROJECT BASELII	I CONDITIONS
Geographic Conditions	The terrain is characterized as flat. In the project area, the elevation is about 13m asl. No natural land obstacles are presented in the subproject areas. The subprojects areas are free of mountains, cliffs, and valleys.
Climate, Air Quality and noise	Thi-Qar governorate is located in the South part of Iraq. The city of Nasiriyah is located in the southern part of Iraq, about 350 km south of Baghdad. The Euphrates River crosses the governorate and feeds into the Hammar marshes. The climate is the most important factor affecting the quality of surface water, groundwater and the hydrological cycle in the study area. The prevailing climate is the continental climate, characterized by the area of study, the summer is hot and dry, and the winter is cool with little rainfall. It is characterized by high rates of air temperature and high- temperature differences between daytime and night as well as between winter and summer. It is also characterized by varying relative humidity. The year is divided into two influential seasons. A long warn dry summer, a short cold rainy winter cold season and sunny weather often year-round. Thi-Qar has a dry desert climate typical of the region. The summers are hot and dry, with average high temperatures reaching above 40°C while the winters are mild. Rainfall is limited to the months of November-April and averages 100 mm annually.

	These subpresidents sites are leasted in oner areas as the country of						
	These subprojects sites are located in open areas, so the expected concentration of air pollutants is low. Air pollutants in the village are caused mainly from movement of vehicles and trucks. Therefore, the						
	ambient air quality is expected to be within the WHO ambient air quality standards (Annex3).						
	Currently, there is no traffic congestion and consequently the existed noise level is within the normal levels.						
Hydrogeolog y Conditions	Flooding of the area near the project has not been reported in the past years. The depth of ground water in the area ranges of about 20 meters.						
Ecology Conditions	There are no Nature Reserves or other legally protected areas in the vicinity of the project or a proximity. The project areas do not contain any globally important habitats or ecosystems.						
Heritage Environment	There are no sites of historical or cultural importance in the area. There are no cemeteries, historical-cultural monuments, churches, mosques near the project that need to be removed or will be impacted due to the rehabilitation activities.						
Socio- economic Aspects	The population of the subproject area are approximately 21207. The suggested area of the electrical grids will be on state land, where no land or property expropriation will be necessary and is free from encroachers or squatters. All the areas around the sites remain clear of any settlement or economic use and are ready for rehabilitation works, no interference is registered from the local community which is eager for the works to be completed. It is important to mention that the rehabilitation of the electricity grids, it is not expected to cause restriction of access or						
	livelihood impacts.						
LEGISLATION & P							
National & Local Legislation and World Bank Policies that Apply to the Project	 Labor Law No. 37 of 2015; Regulation for the Protection of Rivers No. 25, 1967; The Law for the Protection and Improvement of Environment No. 27, 2009; Instructions No. 2 of 2014 on Environmental Protection from Municipal Waste; Law for Ministry of Electricity No.53 for 2017. Public Roads Law No. (35) of 2002. Ministry of Water Resources Law No. 50 of 2008; Public Health Law No. 89 of 1981, amended by Resolution No.54 of 2001; Law no. 37 of 2008 regarding to Ministry of Environments (MoE) roles and responsibilities. 						
	 Law No.3,1997 regarding to Environment protection 						

e 1	 Regulation for the Provision of Water Resources, No. 2, 2001; Instructions no. 3 of 2015 on Hazardous Waste Management; Law No. 6 of 1988 concerning the National Commission for Occupational Hygiene and Safety; Instructions No. 12 of the year 2016: Occupational Health and Safety; Law no. 89 of the year 1981, amended by Decree No.54 of 2001: Public Health; Law No. 41 for the year of 2015: Noise Protection and Control; Public Roads Law No. 35 of 2002; Instructions No.3 of 2012: National Emissions' Determinants for Activities and Businesses by the Ministry of Health and Environment; Regulation No. 4 for the year of 2012: Ambient Air Quality; The main WB safeguard policies applicable for SFD are: OP 4.01 Environmental Assessment OP 4.12 Involuntary Resettlement. OP 4.11 Physical and Cultural Resources (The proposed rehabilitation activities are not expected to pose risks of damaging cultural property). Grievance Redress Service labor influx guidance note (2016). WB General Environmental, Health, and Safety guideline2 WBG EHS Guidelines for Electric Power Transmission and Distribution³ The EHS guidelines entails the effective methods for managing environmental, health and safety issues in accordance with WBG requirements. This includes understanding the likelihood, magnitude and priority of the EHS risks. The EHS guidelines includes 4 primary
1 2 5	requirements. This includes understanding the likelihood, magnitude
	 <u>Environmental Guidelines</u> <u>Ambient Air Quality</u> – Limits and Guidelines <u>Energy Conservation</u> – Energy Conservation and Efficiency Methods

 ² <u>https://www.ifc.org/wps/wcm/connect/29f5137d-6e17-4660-b1f9-02bf561935e5/Final%2B-%2BGeneral%2BEHS%2BGuidelines.pdf?MOD=AJPERES&CVID=nPtguVM</u>
 ³ <u>https://www.ifc.org/EHSguidelines</u>

	0	Wastewater and Ambient Water Quality – Effluent
		water quality and indicators for water discharge and
		treatment
	0	Water Conservation – Methods for ensuring reduction
		in water consumption
	0	Hazardous Material Management – The appropriate
		Methods for managing hazardous waste and
		instructions on community and worker protection
	0	Waste Management – Instructions on waste
		management and planning, waste prevention and safe
		waste disposal
	0	Noise – Methods for prevention and control of Noise,
		and the applicable noise limits for different activities
		and exposure period
	0	Contaminated Land – Management approaches for
		contaminated land due to different hazardous
		substances or waste or oil. Includes Risk Reduction
		measures
1.	<u>Occupati</u>	onal Health and Safety Guidelines ⁴
	0	General Facility Design and Operation – ensuring
		appropriate facility integration of H&S, that integrates
		safety measures in design for different physical hazards
	0	Communication and Training – Ensuring there is an
		appropriate level of communication between workers
		and management, and that there is sufficient training
		for all workers prior to operations
	0	Physical Hazards – Methods for prevention of
		accidents or injuries that can occur due to exposure to
		mechanical or other physical works, including Noise and
		Vibrations
	0	Chemical Hazards – Injuries and accidents that could
		occur due to usage of chemicals and methods of
		protection and prevention. Includes management of fires
		and explosions
	0	Biological Hazards – Protection and Management of
	0	Diological Halardo Frotocolori and Halagoment of

⁴ <u>https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-</u> cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxyx</u>

	0	Radiological Hazards - Management and Limits for
		Radiation Exposure
	0	PPE – Guidance on usage of PPE and clearly
		highlighting that it should be considered the last resort
	0	Special Hazards Environments – Guidance on Managing
		different environments that can present a risk to
		workers such as confined spaces.
	0	Monitoring – Efficient monitoring of occupational
		health and safety programs and mitigation measures.
		This includes the Occupational Accident Reporting
		frequency
• <u>Co</u>	omn	nunity Health and Safety Guidelines ⁵
	0	Water Quality and Availability – Ensuring the
		protection of nearby water resources such as
		groundwater and surface water sources.
	0	Structural Safety of the Project – Potential Hazards
		that could occur due to poor design and methodology for
		dealing with those hazards. Includes the general
		approach that architects/structural engineers must
		follow to ensure community safety is considered during
		design
	0	Life and Fire Safety (L&FS) – Ensuring that building
		design is in accordance with local regulations and
		requirements, and that it integrates Fire safety
		standards (more focused on buildings rather than
		infrastructure)
	0	Traffic Safety – Includes the potential risks and
		impacts on traffic and from traffic that occurs due to the
		project. Includes recommend measures to deal with
		traffic risk
	0	Transport of Hazardous Material – Approach and
		Guidelines for transporting hazardous material,
		including a hazard assessment and emergency response
		plan.

⁵ <u>https://www.ifc.org/wps/wcm/connect/eeb82b4a-e9a8-4ad1-9472-</u> f1c766eb67c8/3%2BCommunity%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxTd

	 Disease Prevention – Includes the recommended interventions and methods to protect the community from communicable diseases and vector borne diseases Emergency Response and Preparedness – This sub section requires a plan and response system in place to respond to any potential emergency that could occur due to the works or operation Construction and Decommissioning Guidelines⁶ Environment – covers the different environmental factors that could be affected by the construction activities including soil erosion, disturbance to water bodies, disturbance to air quality, wastewater discharges etc. Occupational Health and Safety – Different OHS risks due to construction or decommissioning works Community Health and Safety – Different Hazards that can occur due to the project and affect the
	surrounding community.
Public Consultation Process	 ATION & GRIEVANCE REDRESS MECHANISMS The consultations were carried out in the village for the rehabilitation of the electricity grids on October 2023. One on one interviews were conducted. Accordingly, a questionnaire was formatted to cover the key environmental and social aspects related to the subproject. The purpose of conducting the consultation activities is to achieve the below: Introduce the rehabilitation subproject of the electricity grids. Disclose information regarding the Grievance Mechanism resources in place. Discuss anticipated environmental and social impacts associated with the project. Propose extensive mitigation measures to address potential environmental and social risks associated with the project activities.

⁶ <u>https://www.ifc.org/wps/wcm/connect/7d708218-2a9e-4fcc-879d-</u> 9d5051746e7d/4%2BConstruction%2Band%2BDecommissioning.pdf?MOD=AJPERES&CVID=nPtgy6x

The formatted questionnaire was then addressed to 14 women and 35 men in the surrounding community randomly to have their opinions and thoughts regarding the rehabilitation activities.

Consultation Results:

All interviewees expressed their hope that the completion of the project will lead to more goods moving through their areas. All those interviewed expressed their support to the project. Therefore, they link the project with improving their living conditions and the development of the area economically. They also stressed the importance of providing a timetable for the completion of the project because they heard of many planned projects in their district but have not seen them being completed. The participants emphasized that they know that the project's benefits are far greater than its negative impacts and confirmed their willingness to cooperate with the project. All participants in the villages expressed that the rehabilitation of the electrical grids will have a positive impact on their social daily life. Please refer to Annex 1 and Annex 2 for sample of the consultations for both men and women in these villages. The full list of participants for public consultations and individual interviews are attached in standalone document to reduce the size of the instrument. As per the questionnaire prepared for individual interview, the below are the main findings:

- 1) No vegetation covers, crops, plants, trees...etc. will be removed to execute the rehabilitation activities of the electrical grid lines.
- 2) The rehabilitation of the project will enhance the social relationship among the locals; and improve their achievements and performance via the availability of electricity.
- 3) All interviewed locals agreed that the rehabilitation activities of electrical distribution grid lines will serve all the people in the villages and have a strong positive impact from the social perspective on the locals.
- 4) They welcomed that there will be a hotline to express their suggestions or concerns that might happen during the rehabilitation phase.
- 5) No claims from any locals were recorded or alleged regarding the ownership of the land where the electrical grid lines are constructed; all agreed that is governmental land property.
- 6) The project will contribute to strength the health awareness by avoiding the purchase of cold water which might be not be disinfected in the summer, and keeping food and medicine in cool places to prevent the damage of these materials.

GRM Processin addition to the email and WhatsApp application. The digital system with multi-channels for receiving complaints, inquiries, feedback or comments like WhatsApp, Facebook, email and complain boxes for each subproject. Additionally, GRM focal points will be assigned at local level and central level to be in charge of handling complaints. The focal point will maintain a log and report on grievance management, which includes minutes of meetings, resolutions and recommendations as part of an annual project progress report. The information for the central office is:#NameJob TitlePhone NumberE-mail1Husam A. ShaaelGRM Team leader07833344263 07733344263Sfd.grm.iraq@gmail.comMeanwhile, in order to comply with the WB requirements, SFD has assigned staffs as focal points with their cell phone numbers to be disseminated at each subproject level for receiving calls and handling complaints. The contact details	 7) The project will contribute to increase the cultural and scientific awareness of the village residents by creating an opportunity for village students to perform their homework regularly and well. The Grievance Redress Mechanism is a procedure that aims to facilitate the most satisfactory solution and/or guidance to stakeholders seeking to submit their comments or complaints. Before the start of the project, local community members will be informed about the GRM via communication channels. For example, they will be informed verbally by their community leader or through social media online. Visible sign boards, hard copies of the GRM brochures, and online platforms will also be made available posting GRM-relevant contact information and an explanation of the grievance process. The SFD established a central free hotline, and it is functioning properly 						
1 Husam A. Shaael GRM Team leader 07833344263 07733344263 Sfd.grm.iraq@gmail.com Meanwhile, in order to comply with the WB requirements, SFD has assigned staffs as focal points with their cell phone numbers to be disseminated at each subproject level for receiving calls and handling complaints. The contact details will be posted on subproject signboard and the complaint boxes will be installed in each location as shown in the below table. # Name Job Title Phone Number E-mail 1 Yaqeen K. Jumaa SFD Team leader 07805483679 atona230@gmail.com 2 Azhar H. Resean Environmental environmental 0782750378 azharfforffur@umail.com	 The SFD established a central free hotline, and it is functioning properly in addition to the email and WhatsApp application. The digital system with multi-channels for receiving complaints, inquiries, feedback or comments like WhatsApp, Facebook, email and complain boxes for each subproject. Additionally, GRM focal points will be assigned at local level and central level to be in charge of handling complaints. The focal point will maintain a log and report on grievance management, which includes minutes of meetings, resolutions and recommendations as part of an annual project progress report.						
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1 Yaqeen K. Jumaa SFD Team leader 07805483679 atona230@gmail.com 2 Azbar H. Bessan Environmental 0782750378 azberffyyffyy@gmail.com							
1 Yaqeen K. Jumaa SFD Team leader 07805483679 atona230@gmail.com 2 Azbar H. Bessan Environmental 0782750378 azberffyyffyy@gmail.com	#	Name					
0'/82'/503'/8 azberttwyttwy(a)gmail.com	1		SFD Team		atona230@gmail.com		
	2	Azhar H. Ressan		0782750378	azherffvvffvv@gmail.com		

3 Ahmed A. Shamkhi	GRM Officer	0781234484	ahemd.shamkhi84@gmail.com			
The process of managing complaints will be as follows:						
the affected per community to v Individuals who that their name officer in charge is to be address	son is unable to write write the note and submit their commo be kept confidenti of the GRM is unab	te, s/he should mark the letter ents or grievance al, though this le to provide fee onymous compla	he aggrieved person. Where obtain assistance from the r with his/her thumbprint. es have the right to request may mean that the social dback on how the grievance aint can receive a code and urteously.			
listed in a Cor	nplaints/Comments	LogBook, cont	ey will be summarized and aining the name/group of eceived, brief description of			

issue, information on proposed corrective actions to be implemented (if appropriate), and the date of response sent to the commenter/complainant. Complaints should be sorted out according to complexity; Significantly, the GRM classifies feedback in two categories, high-level and standard, each has its own procedure as explained further below.

High-Level Feedback

Feedback received to be categorized as 'high' level instances will include issues that meet the following criteria:

- Incidents that caused or may potentially cause significant or great harm to the environment, workers, communities, or natural resources;
- Incidents which entail failure to implement environmental and social measures with significant impacts or repeated non-compliance with E&S policies;
- Incidents for which failure to address may potentially cause significant impacts that are complex and/or costly to reverse; and
- Incidents that may result in a fatality or some level of lasting damage or injury.

This type of feedback will be acknowledged, and an investigation will be launched by the PCU/PMO and any other relevant stakeholders with 24 hours during work days and within 48 hours if the feedback was received over the weekend. It should be noted that some types of incidents, including accidents and fatalities need to be reported to the World Bank. This guidance is provided in the Environment & Social Incident Response Procedures.

If the identity of the aggrieved person is known and the grievance is classified as 'standard', the acknowledgement of grievance will be within 3 working-days and the response will be within 20 working-days (depending on the type of grievance i.e. high or standard). The GRM Social Officer will keep a grievance log and report on grievance management (i.e. minutes of meeting, recommendations, and resolutions made) as part of annual project progress reports. At the 20 business-day mark, if a complaint/question is still pending, the GRM focal point will provide an update to the aggrieved person and inform them of the reason of delay in resolving their case, and provide the date for which a response will be provided.

Aggrieved people who are dissatisfied with the outcome of their complaint can appeal the decision by resubmitting their complaint to the GRM Social Officer within 30 working days of receiving a response to the original submitted grievance. Subsequently, the GRM Social Officer and other relevant personnel have 30 working days to investigate and address the issue. Additionally, the GRM Social Officer has 10 working days to prepare a comprehensive response, including the findings of the investigation and the rationale of the determination. Accordingly, within a maximum of 40 working days, the appeal case should be closed.

Lastly, if the aggrieved person is still not satisfied with the solution provided, s/he has the option to go to court.

Individuals who submit their comments or grievances have the right to request that their name be kept confidential. An anonymous complaint will receive a code and should be investigated appropriately and treated courteously. Ensuring confidentiality when dealing with cases of sexual harassment, sexual exploitation and sexual abuse. In order to mitigate those issues/ complaints, assigning female GRM officer in case of facing any SEA/SH incidents, in addition, all GRM officers/ focal points must be trained on how to handle SEA/SH related grievances.

In addition to PMO, the MOP, project offices in governorates, and Community Development Groups (CDGs), the World Bank's Grievance Redress System (GRS) can also be approached for reporting and resolving issues.

Disclosure activities

As soon as the site-specific ESMP gets clearance from the World Bank and approval from the Ministry of planning, the following disclosure procedures will be adapted. A final report, in English and in local

	language, will be published on the WB, SFD and Ministry of Planning websites and also will be available locally (such as at local SFD office.	
INSTITUTIONAL CAPACITY BUILDING		
Will there be any capacity building?	[] N or [x]Y It is recommended to provide safety trainings and induction sessions to the workers and engineers who will be employed throughout the construction phase. Moreover, there needs to be more training on GRM implementation in order to ensure its proper functioning in the future.	

PART B: SAFEGUARDS SCREENING AND TRIGGERS

ENVIRO	ENVIRONMENTAL /SOCIAL SCREENING FOR SAFEGUARDS TRIGGERS					
		Activity / Typology	Status	Triggered Actions		
	1.	Re/construction of public buildings, or facilities and installations for public services (e.g., substations, water treatment plants, pumping stations or similar)	[<mark>X</mark>] Yes [] No	These subprojects are rehabilitation of electrical grids		
Will the site	2.	Reconstruction of / impacts on surface drainage system	[] Yes [<mark>X</mark>] No	The subproject doesn't have an impact on Surface drainage system		
activity include/i nvolve	3.	Activities in Historic building(s) and districts	[] Yes [<mark>X</mark>] No	The rehabilitation activities do not take place anywhere near historic buildings or districts and		
any of the following	4.	Required acquisition of land or temporary / permanent impacts on livelihoods	[] Yes [<mark>X</mark>] No	No land acquisition is required for these subprojects as the activities will be constructed on state owned land.		
?	5.	Handling or presence of hazardous or toxic materials	[] Yes [<mark>X</mark>] No	There are no toxic or hazardous materials generated by the project.		
	6.	Impacts on forests and/or protected areas	[] Yes [<mark>X</mark>] No	There are no forests or protected areas surrounding the subproject area.		
	7.	Risk of unexploded ordinance (UXO)	[] Yes [<mark>X</mark>] No			
	8.	Traffic and Pedestrian Safety	[<mark>X</mark>] Yes [] No	If "Yes", see Part C		

PART C: MITIGATION MEASURES/ CONSTRUCTION PHASE

No.	Potential Impacts	Mitigation Measures
1	General Conditions	 The local construction and environment inspectorates and communities have been notified of upcoming activities. The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works). The contractor must take reasonable steps to prevent unauthorized people accessing the site.

No.	Potential Impacts	Mitigation Measures
		 All legally required permits have been acquired for construction and/or rehabilitation. Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighbouring residents and environment. There is posted material indicating the nearest police station and hospital (with accident and emergency facilities). Prohibit the burning of waste on site. Provide a first aid kits in different places of the work site with the appropriate number of materials given the number of workers on site. The workers will be noted about the locations of the first aid kits and trained how to use it. There are fire extinguishers which should be distributed within the working area. If work involving the use of flammable materials is being carried out or any other material that might make any danger, stop people smoking and do not allow other work activities involving potential ignition sources to take place nearby. Providing site boundaries (if any) by installing suitable physical boundaries (barriers, tape or fence). Marking excavation holes (if any) with physical boundaries (barriers, tape or fence). The contractor should put up barriers or covers in the area of openings and excavations if any. Clearance letter of explosive remnants of War (ERW) Unexploded Ordnance (UXO) should be obtained before commencing the work in the site area. Materials and equipment are tidily stacked, protective equipment; and an area for storing and drying clothing and personal protective equipment (PPE). Contractor to ensure PPE (personal protective equipment) is used by all workers on site. Materials and equipment are tidily stacked, protected and covered where
		light and ventilation which may also reduce the reliance on generators and other sources for energy should be considered.

No.	Potential Impacts	Mitigation Measures		
2	Generation, storage, disposal of construction, hazard, and domestic waste ⁷	 24) The new building shall be designed, constructed, and operated in full compliance with local building codes, local fire department regulations, local legal/insurance requirements, and in accordance with an internationally accepted L&FS standard. A suitably qualified L&FS professional acceptable to the Bank and hired by the Borrower shall prepare and submit a L&FS Master Plan, including preliminary drawings and specifications, and certify that the design meets the requirements of WBG General EHS guidelines. This professional should conduct a review of L&FS systems as part of the commissioning tests for new and renovated buildings and certifies that construction of the L&FS systems has been carried out in accordance with the accepted design. 1) Waste collection and disposal pathways and sites will be identified for all major waste types expected from construction activities. 2) Construction and demolition waste, if any, will be separated from general refuse, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers. 3) Construction waste will be collected and disposed properly by licensed collectors to authorized area. 4) The records of waste disposal will be maintained as proof for proper management as designed. 5) Whenever feasible Contractor will reuse and recycle appropriate and viable materials 6) Simple waste management plan for specific waste streams must be developed. 7) General waste must be collected and transported to the approved disposal sites. 8) Food wastes must be collected, where practicable, considering health and hygiene issues, for disposal off-site through licensed contractors. 9) Waste containers must be located at each worksite with sufficient numbers. 		
3	Hazardous wastes and materials ⁸ include insulating oils / gases (Polychlorinated Biphenyls [PCB] and sulfur hexafluoride [SF6], and fuels, in addition to chemicals or products for woodpreservation for poles and associated wood construction material	 Hydrocarbons, including lubricants, which will be very limited and resulted just from machines/truck shall be collected for safe transport outside the site for recycling, transport or disposal at approved sites to be nominated by the Municipality and the Ministry of Health and Environment The site will be cleaned from all wastes frequently and wastes will be stored in safe containers until transported The waste shall be transported by specially licensed Transporters and disposed of in the special areas to be determined by the authority. Empty containers of treatment chemicals shall be returned to suppliers. Replacing existing transformers and other electrical equipment containing PCB, and ensuring appropriate storage, decontamination, and disposal of contaminated units. 		

⁷ <u>https://www.ifc.org/wps/wcm/connect/456bbb17-b961-45b3-b0a7-c1bd1c7163e0/1-6%2BWaste%2BManagement.pdf?MOD=AJPERES&CVID=nPtgwEW</u>

^{8 &}lt;u>https://www.ifc.org/wps/wcm/connect/90231ba8-5bb3-40f4-9255-eaf723d89c32/1-5%2BHazardous%2BMaterials%2BManagement.pdf?MOD=AJPERES&CVID=nPtgwmI</u>

No.	Potential Impacts	Mitigation Measures	
4	Air quality ⁹	 Demolition debris, excavated soil and aggregates shall be kept in controlled area and sprayed with water mist to reduce debris dust when necessary There will be no open burning of construction / waste material at the site. All machinery will comply with Iraqi emission regulations, shall well maintained and serviced and there will be no excessive idling of construction vehicles at sites 	
5	Noise ¹⁰	 Construction noise will be limited to restricted times agreed to in the permit All the workers will be supplied with fully safety measures including earmuffs. 	
6	Runoff water and drainage systems	 Procedures will be put in place for rapid response to accidental spills of fuels, lubricants and other toxic or noxious substances, and for their recovery and appropriate disposal Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies There will be no unregulated extraction of groundwater, nor uncontrolled discharge of process waters, cement slurries, or any other contaminated waters into the ground or the water resource. 	
7	Groundwater quality	 Sewage from construction offices and rest areas will be collected in septic tanks and transferred by trucks to the nearest sewage treatment plant by authorized contractors. Providing some indigenous species of vegetation, which will also reduce dust level 	
8	Traffic	 In compliance with national regulations, the Contractor will ensure that the construction site is properly secured and construction related traffic regulated. The site will be clearly visible and the public warned of all potential hazards by signposting and barriers/fencing Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement If required, active traffic management by trained and visible staff at the site for safe passage for the public Ensuring safe and continuous access to all adjacent office facilities, shops and residences during construction 	
9	Occupational and community health & safety conditions	 Provide adequate signage to prevent accidental falling into open areas The contractor should develop and implement "EHS Procedures". Include Construction OHS Plan (submitted and approved by the Resident Engineer) prior to the start of construction. It will address all the risks anticipated including, but not limited to: Working in confined space (inside sheet piles), Risk of sinking, Electrocution, and Safety of equipment. Deployment of HSE procedures for the construction personnel. During the loading and unloading of debris specific measures should be applied: 	

 ⁹ <u>https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-</u>
 <u>1%2BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS</u>
 <u>10 https://www.ifc.org/wps/wcm/connect/4a4db1c5-ee97-43ba-99dd-8b120b22ea32/1-</u>

^{7%2}BNoise.pdf?MOD=AJPERES&CVID=nPtgwZY

No.	Potential Impacts	Mitigation Measures
		 a. Covering the trucks using polyethylene sheets to avoid the falling of debris b. Trucks should use unpopulated routes as much as possible 6) For proper implementation of Community Health and Safety mitigation measures during construction, it is essential to establish and sustain an open and transparent dialogue between MoP/contractor and the affected communities in full compliance with the WB standards related to stakeholder engagement activities. 7) Apply the concept of universal access to the design and construction of buildings or any structures where technically and financially feasible (i.e. access to all users, including persons with disabilities such as wheelchair users). 8) The contractor should maintain records of accidents and work-related injuries log with cause and location. 9) WBG EHS Guidelines for Electric Power Transmission and Distribution¹¹ should be followed and also guidance for working at heights and specific guidance for working with electricity systems for both putting up the new system and dismantling of the old power system. 10) Site management and material and waste storage systems as a part of the ESMP. 11)workers amenities during working hours should be provided. 1) A grievance mechanism should be made available to community people. 2) Rigid obligations and penalties will be added to the contractor/subcontractors' contractual agreements in order to have the contractors adhere to all World Bank policies and regulation and is in compliance with measures listed in the ESMP.
10	Social Impacts	 Reducing impacts on the community through community and neighbour engagement. Provide the proper GRM for handling complaints
11	Child labor	 Fronde the proper order for handing complaints Rigid obligations and penalties will be added to the contractor contracts in order to warrantee no child labor exists in the subproject The PMO will oblige the contractor to keep a copy of IDs of laborers in order to monitor the hired staff (Chapter 11 of the 2015 Labor Law of Iraq sets the age for hazardous works 18 years old). The contractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers in case of accidents and provide the injured persons with proper health insurance The code of conduct for workers/contractors should be introduced to prevent misconducts, including prevention of sexual harassment and also training and awareness rising for workers should be continued, through daily toolbox talks and other training opportunities. Implement all facets of the established grievance mechanism, ensuring anonymous channels are available.
12	SEA/SH ¹²	 Providing workers with the necessary training and awareness raising session on issues regarding SEA/SH and Verifying that GRM is adequately implemented to record complaints from the surrounding communities to find adequate resolutions and implement corrective

 ¹¹ <u>https://www.ifc.org/EHSguidelines</u>
 ¹² <u>Good Practice Note</u> - Addressing Sexual Exploitation and Abuse and Sexual Harassment (SEA/SH) in Investment Project Financing - 2020

No.	Potential Impacts	Mitigation Measures
		actions including but not limited to concerns for privacy, particularly, among women2) Apply the full requirements related to operating the grievance mechanism including anonymous channels

Re	ceptor	Mitigation Measures	Responsibility	Supervision	Total estimated
1	• Air quality	• The net impact of the Project on air quality is not significant and temporary, and will be limited to Construction Period.	Not Applicable	Not Applicable	Not Applicable
2	• Noise	•Vibration or humming noise can be noticeable and is most often associated with older electrical grid lines. It is usually the result of conductor mounting hardware that has loosened slightly over the years and can be easily repaired by the local authority, especially near residential areas or other sensitive receptors such as schools and hospitals	Local authorities	Local authorities	No Cost
3	Water resources	Not applicable	Not applicable	Not applicable	Not applicable
4	Soil	Not applicable	Not applicable	Not applicable	Not applicable
5	Solid & hazardous wastes	 During the operational period, some littering and waste generation resulting from the repair activities will occur (Oil from transformer). Littering may occur due to wind action. Providing adequate secondary containment for fuel storage tanks and for the temporary storage of other fluids such as lubricating oils and hydraulic fluids, Using impervious surfaces for refueling areas and other fluid transfer areas Prior to final disposal, retired transformers and equipment containing PCB should be stored on a concrete pad with curbs sufficient to contain the liquid contents of these containers should they be spilled or leaked. Disposal of PCB contaminated materials should follow the GIIP described in the WBG EHS Guidelines for Electric Power Transmission and Distribution and involve contractors and facilities capable of safely transporting and disposing of hazardous waste containing PCB. 	(Municipality)	Local authority (Municipality)	Within municipal budget

MITIGATION MEASURES DURING OPERATIONAL PHASE

Receptor		Mitigation Measures	Responsibility	Supervision	Total estimated
		• Surrounding soil exposed to PCB leakage from equipment should be assessed, and appropriate removal and / or remediation measures should be implemented.			
6	Flora & Fauna	Not Applicable	Not Applicable	Not Applicable	Not Applicable
7	Topography and landforms	Not Applicable	Not Applicable	Not Applicable	Not Applicable
8	Handling Complains	The continued operation of a GRM for one year following opening of the electrical grid lines for use will ensure that local community members have an accessible, fair and transparent means of reporting any emerging adverse impacts, and a means of obtaining mitigation.	Local authorities	Local authorities	No cost
9	Health and Safety	 Only allowing trained and certified workers to install, maintain, or repair electrical equipment Deactivating and properly grounding live power distribution lines before work is performed on, or in close proximity, to the lines Ensuring that live-wire work is conducted by trained workers with strict adherence to specific safety and insulation standards. Qualified or trained employees working on transmission or distribution systems should be able to achieve the following: 1- Distinguish live parts from other parts of the electrical system 2- Determine the voltage of live parts 3- Understand the minimum approach distances outlined for specific live line voltages 4- Ensure proper use of special safety equipment and procedures when working near or on exposed energized parts of an electrical system. Workers should not approach an exposed energized or conductive part even if properly trained unless: 1- The worker is properly insulated from the energized part is properly insulated from the worker and any other conductive object; or, 3- The worker is properly isolated and insulated from any other conductive object (live-line work). 	Local authorities	Local authorities	No cost

Receptor	Mitigation Measures	Responsibility	Supervision	Total estimated
	• Where maintenance and operation is required within minimum setback			
	distances, specific training, safety measures, personal safety devices, and			
	other precautions should be defined in a health and safety plan			
	• Workers not directly associated with power transmission and distribution			
	activities who are operating around power lines or power substations			
	should adhere to local legislation, standards, and guidelines relating to			
	minimum approach distances for excavations, tools, vehicles, pruning, and other activities;			
	• Minimum hot stick distances may only be reduced provided that the			
	distance remaining is greater than the distance between the energized part and a grounded surface.			
	• • Testing structures for integrity prior to undertaking work;			
	• Implementation of a fall protection program that includes training in			
	climbing techniques and use of fall protection measures; inspection,			
	maintenance, and replacement of fall protection equipment; and rescue of			
	fall-arrested workers, among others;			
	• Establishment of criteria for use of 100 percent fall protection (typically			
	when working over 2 meters above the working surface, but sometimes			
	extended to 7 meters, depending on the activity). The fall protection system			
	should be appropriate for the tower structure and necessary movements,			
	including ascent, descent, and moving from point to point;			
	• Installation of fixtures on tower components to facilitate the use of fall protection systems;			
	• Provision of an adequate work-positioning device system for workers.			
	Connectors on positioning systems should be compatible with the tower components to which they are attached;			
	 Hoisting equipment should be properly rated and maintained and hoist 			
	operators properly trained;			
	• Safety belts should be of not less than 16 millimeters (mm) (5/8 inch) two-			
	in-one nylon or material of equivalent strength. Rope safety belts should			
	be replaced before signs of aging or fraying of fibers become evident;			

Ree	ceptor	Mitigation Measures	Responsibility	Supervision	Total estimated
		 When operating power tools at height, workers should use a second (backup) safety strap; · Signs and other obstructions should be removed from poles or structures prior to undertaking work; An approved tool bag should be used for raising or lowering tools or materials to workers on structures. Identification of potential exposure levels in the workplace, including surveys of exposure levels in new projects and the use of personal monitors during working activities; Training of workers in the identification of occupational EMF levels and hazards; Establishment and identification of safety zones to differentiate between work areas with expected elevated EMF levels compared to those acceptable for public exposure, limiting access to properly trained workers; Implementation of action plans to address potential or confirmed exposure levels that exceed reference occupational exposure levels developed by international organizations such as the International Commission on Non-Ionizing Radiation Protection (ICNIRP), and the Institute of Electrical and Electronics Engineers (IEEE). Use of signs, barriers (e.g. locks on doors, use of gates, use of steel posts surrounding transmission towers, particularly in urban areas), and education / public outreach to prevent public contact with potentially dangerous equipment; Grounding conducting objects (e.g. fences or other metallic structures) installed near power lines, to prevent shock. 			
10	Child labor	 Rigid obligations and penalties will be added to the contractor contracts in order to warrantee no child labor exists in the subproject The PMO will oblige the contractor to keep a copy of IDs of laborers in order to monitor the hired staff (Chapter 11 of the 2015 Labor Law of Iraq sets the age for hazardous works 18 years old). The contractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers in case of accidents and provide the injured persons with proper health insurance The code of conduct for workers/contractors should be introduced to prevent misconducts, including prevention of sexual harassment and also training and 	Local authorities	Local authorities	No Cost

Re	ceptor	Mitigation Measures	Responsibility	Supervision	Total estimated
		awareness rising for workers should be continued, through daily toolbox talks and other training opportunities.Implement all facets of the established grievance mechanism, ensuring anonymous channels are available.			
		Total cost US\$ (Operation phase)			No Cost

PART D: MONITORING PLAN/ CONSTRUCTION PHASE

	Potential			Respo	nsibility	Additional	Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring
1	General Conditions	 The local construction and environment inspectorates and communities have been notified of upcoming activities. The public has been notified of the works through appropriate notification in the media and/or at publicly accessible sites (including the site of the works). The contractor must take reasonable steps to prevent unauthorized people accessing the site. All legally required permits have been acquired for construction and/or rehabilitation. Workers' PPE will comply with international good practice (always hardhats, as needed masks and safety glasses, harnesses and safety boots) The Contractor formally agrees that all work will be carried out in a safe and disciplined manner designed to minimize impacts on neighbouring residents and environment. There is posted material indicating the nearest police station and hospital (with accident and emergency facilities). Prohibit the burning of waste on site. Provide a first aid kits in different places of the work site with the appropriate number of materials given the number of workers on site. The workers will be noted about the locations of the first aid kits and trained how to use it. 	Bi-monthly: record of all the licenses and permits obtained; Compliance with the HSE requirements	Contract or	PMO E&S specialist Resident Engineer	No additional cost	No additional cost

	Potential			Respo	nsibility	Additional	Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring
		 There are fire extinguishers which should be distributed within the working area. If work involving the use of flammable materials is being carried out or any other material that might make any danger, stop people smoking and do not allow other work activities involving potential ignition sources to take place nearby. Providing site boundaries (if any) by installing suitable physical boundaries (barriers, tape or fence). Marking excavation holes (if any) with physical boundaries (barriers, tape or fence). The contractor should put up barriers or covers in the area of openings and excavations if any. Clearance letter of explosive remnants of War (ERW) Unexploded Ordnance (UXO) should be obtained before commencing the work in the site area. Everyone who works on any site must have access to adequate toilet and washing facilities, a place for preparing and consuming refreshments, and an area for storing and drying clothing and personal protective equipment (PPE). Contractor to ensure PPE (personal protective equipment) is used by all workers on site. Materials and equipment are tidily stacked, protected and covered where necessary. Additionally, there is adequate space for new materials to be stored in secured covered areas to avoid damage, theft, and to protect these items from weather conditions. Appropriate signosting of the sites will inform workers of key rules and regulations to follow. The contractor should provide full insurance coverage schema of all type of workers. The insurance should cover work related accidents (Injuries and fatalities) as well as insurance for third party. Rigid obligations and penalties will be added to the contractor/subcontractors' contractual agreements in order to guarantee child labor is prohibited in the project. Penalties to be applied in cases where workers under the age of 18 are hired. 					

	Potential			Respo	nsibility	Additional	Cost in USD
No. Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring	
		 22) The contractor must clean up and rehabilitate all sites prior to handing over. 23) Actions to make the school more energy efficient, such as use of natural light and ventilation which may also reduce the reliance on generators and other sources for energy should be considered. 24) The new building shall be designed, constructed, and operated in full compliance with local building codes, local fire department regulations, local legal/insurance requirements, and in accordance with an internationally accepted L&FS standard. A suitably qualified L&FS professional acceptable to the Bank and hired by the Borrower shall prepare and submit a L&FS Master Plan, including preliminary drawings and specifications, and certify that the design meets the requirements of WBG General EHS guidelines. This professional should conduct a review of L&FS systems as part of the commissioning tests for new and renovated buildings and certifies that construction of the L&FS systems has been carried out in accordance with the accepted design. 1) Waste collection and disposal pathways and sites will be identified for all major waste types expected from construction or the state of the second construction activities. 					
2	Generatio, storage, disposal of constructio n, hazard, and domestic waste	 activities. 2) Construction and demolition waste, if any, will be separated from general refuse, organic, liquid and chemical wastes by onsite sorting and stored in appropriate containers. 3) Construction waste will be collected and disposed properly by licensed collectors to authorized area. 4) The records of waste disposal will be maintained as proof for proper management as designed. 5) Whenever feasible Contractor will reuse and recycle appropriate and viable materials 6) Simple waste management plan for specific waste streams must be developed. 7) General waste must be collected and transported to local council approved disposal sites. 	Weekly site inspections and verifying the records on waste disposal	Contract or	PMO E&S specialist Resident Engineer	No additional cost	No additional cost

	Potential			Responsibility		Additional	Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring
3	Handling of hazardous wastes and materials	 8) Food wastes must be collected, where practicable, considering health and hygiene issues, for disposal off-site through licensed contractors. 9) Waste containers must be located at each worksite with sufficient numbers. 10) Storage, transport and handling of all chemicals must be conducted in accordance with all legislative requirements, through licensed contractors and in coordination with the local authority. 1) Hydrocarbons, including lubricants, which will be very limited and resulted just from machines/truck shall be collected for safe transport outside the site for recycling, transport or disposal at approved sites to be nominated by the Municipality and the Ministry of Health and Environment 2) The site will be cleaned from all wastes frequently and wastes will be stored in safe containers until transported 3) The waste shall be transported by specially licensed tankers and disposed of in the special areas away from the city to be determined by the paddies. 4) Paints containing solvents, solvents or lead-based paints shall not be used as per requirements, instructions and coordination with the Ministry of Science and Technology. 5) Hazardous materials in this sector include insulating oils / gases (e.g. Polychlorinated Biphenyls [PCB] and sulfur hexafluoride [SF6], and fuels, in addition to chemicals or products for wood preservation for poles and associated wood construction material. The use of herbicides for right-of-way vegetation maintenance is discussed in the above section on Right-of-Way Maintenance'. 	Weekly site inspections and verifying the records on waste disposal	Contract or	Resident Engineer	No additional cost	No additional cost
4	Deteriorati	 Demolition debris, excavated soil and aggregates shall be kept in controlled area and sprayed with water mist to reduce debris dust During pneumatic drilling or breaking of pavement and 	Ambient air quality test, 1 time prior to construction to obtain	Contract	PMO E&S specialist	Additional cost of	Testing done by accredited
	on of	foundations dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at site3) The surrounding environment (sidewalks, roads) shall be kept free of soil and debris to minimize dust	the baseline Air quality parameters:	or	Resident	water 500	Laboratorie s.

	Potential			Respo	Responsibility		Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring
	air quality ¹³	 There will be no open burning of construction / waste material at the site. All machinery will comply with Iraqi emission regulations, shall well maintained and serviced and there will be no excessive idling of construction vehicles at sites 	PM10, PM2.5, SO2, NOx, CO, Ozone and HC		Engineer		Additional cost 750 US
			Compliance with dust abatement measures (Annex 3)				
5	Increased level of noise ¹⁴	 Construction noise will be limited to restricted times agreed to in the permit All the workers will be supplied with fully safety measures including earmuffs. Compliance with the time limitations; Switching off the equipment not in use; Use of protective gear 	Weekly site inspection (Annex 3)	Contract or	PMO E&S specialist Resident Engineer	No additional cost	No additional cost
6	Disruption of the runoff water and drainage systems	 Procedures will be put in place for rapid response to accidental spills of fuels, lubricants and other toxic or noxious substances, and for their recovery and appropriate disposal Construction vehicles and machinery will be washed only in designated areas where runoff will not pollute natural surface water bodies There will be no unregulated extraction of groundwater, nor uncontrolled discharge of process waters, cement slurries, or any other contaminated waters into the ground or adjacent streams or rivers; 	Weekly site inspection during rainy season; Bi-weekly site inspection during dry seasons: □Signs of spillage of hazardous	Contract or	PMO E&S specialist Resident Engineer	additional cost: contingenc y for removal of accidental hazardous spills	No additional cost

¹³ <u>https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-</u>

^{1%2}BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS

¹⁴ <u>https://www.ifc.org/wps/wcm/connect/4e01e089-ad1a-4986-b955-e19e1f305ff0/1-</u>

<u>1%2BAir%2BEmissions%2Band%2BAmbient%2BAir%2BQuality.pdf?MOD=AJPERES&CVID=nPtgvbS</u>

	Potential			Respo	nsibility	Additional	Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring
			materials □Testing in case of accidental spills of hazardous materials Weekly site inspection during rainy season;			1000 US \$	
7	Deteriorati on of groundwat er quality	1) Sewage from construction offices and rest areas will be collected in septic tanks and transferred by trucks to the nearest sewage treatment plant (Annex 3)	Bi-weekly site inspection during dry seasons Water testing: in case of accidental spills of hazardous materials: pH, Turbidity, (EC), Color, Total Suspended Solids (TSS), (TDS), (COD), (BOD),	Contract or	Resident Engineer	No additional cost	Testing done by Accredited Laboratorie s. Additional cost 500 US \$
8	Disruption of traffic	 In compliance with national regulations the Contractor will ensure that the construction site is properly secured and construction related traffic regulated. The site will be clearly visible and the public warned of all potential hazards by signposting and barriers / fencing Traffic management system and staff training, especially for site access and near-site heavy traffic. Provision of safe passages and crossings for pedestrians where construction traffic interferes. 	Monthly site surveillance for the presence of fencing/barriers and warning signs, and	Contract or	Resident engineer PMO	No additional cost	No additional cost

	Potential			Respo	nsibility	Additional	Cost in USD
No.	Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring
		 Adjustment of working hours to local traffic patterns, e.g. avoiding major transport activities during rush hours or times of livestock movement Ensuring safe and continuous access to all adjacent office facilities, shops and residences during construction. Conduct a traffic assessment study and develop and implement a traffic plan, including safety measures, Signage should be installed in the access roads Assigning a traffic man to arrange traffic in the vicinity of subproject site Review any complaints related to traffic impact on socio-economic and accidents Speed limit should be monitored, particularly, in the vicinity of sensitive receptors located close to the route (if any). The contractor should adopt an emergency plan for construction-related incidents. 	traffic speed limitations				
9	Deteriorati on of health & safety conditions	 Provide adequate signage to prevent accidental falling into open areas Fencing of the work areas. The contractor should develop and implement "EHS Procedures". Include Construction OHS Plan (submitted and approved by the Resident Engineer) prior to the start of construction. It will address all the risks anticipated including, but not limited to: Working in confined space (inside sheet piles), Risk of sinking, Electrocution, and Safety of equipment. To ensure worker safety, health insurance must be provided to all type of workers Deployment of HSE procedures for the construction personnel. used for right-of-way maintenance, and exposure to PCB in transformers and other electrical components according to UNEP. 	Inspection and photo evidence Maintaining records of injuries and accidents with cause and location	Contract or	PMO E&S specialist Resident engineer	No additional cost	No additional cost

¹⁵ <u>https://www.ifc.org/wps/wcm/connect/1d19c1ab-3ef8-42d4-bd6b-</u> cb79648af3fe/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES&CVID=nPtgxyx

	Potential			Responsibility		Additional	Cost in USD	
No.	Impacts	Mitigation Measures	Monitoring	Implemen tation	Monitoring	Mitigation measures	Monitoring	
10	Social Impacts	 Reducing impacts on the community through community and neighbour engagement. Ensuring confidentiality when dealing with cases of sexual harassment, sexual exploitation, and sexual abuse. In order to mitigate those issues/ complaints, assigning female GRM officer in case of facing any SEA/SH incidents, in addition, all GRM officers/ focal points must be trained on how to handle SEA/SH related grievances. Ensure that the Worker's Code of Conduct and corresponding training concerning the commitment of Labour towards the community and the different behaviour that should be avoided i.e., sexual harassment, sexual exploitation and sexual abuse. 	Weekly monitoringof response tocomplaints Training on GRM + attendance sheet	Contract or	PMO E&S specialist Resident Engineer	No additional cost	Purchasing of the required equipment \$750 UD	
11	Child labor	 Rigid obligations and penalties will be added to the contractor contracts in order to warrantee no child labor exist in the subproject The PMO will oblige the contractor to keep a copy of IDs of laborers in order to monitor the hired staff (Chapter 11 of the 2015 Labor Law of Iraq sets the age for hazardous works 18 years old). The contractor also will be obliged to maintain daily attendance sheets in order to verify the attendance of workers in case of accidents and provide the injured persons with proper health insurance The code of conduct for workers/contractors should be introduced to prevent misconduct, including prevention of sexual harassment, and also training and awareness raising for workers should be continued, through daily toolbox talks and other training opportunities. The monitoring of workers' compliance with the Code of Conduct when interacting with the surrounding communities. Implement all facets of the established grievance mechanism, ensuring anonymous channels are available. 	Inspection and Bi- weekly monitoring Signed Worker's Code of Conduct Trainings on Code of Conduct + attendance sheet GRM	Contract or	PMO E&S specialist Resident Engineer	No additional cost	No additional cost	
		Expected additional mitigation costs:		I	I	USD 1500		
	Expected monitoring costs:							

ANNEXES Annex 1: Consultations Photos



Annex (2): Sample individual interviews for both men and women in these villages

استينيان الصندوق الاجتماعي للتلمية لمدافلتة <u>محيد أسمي</u> فراك الدوانو الاصنوق الاجتماع للتمية) سع سيائي لغرض التداور المجتمع مع ابتاد القربة حول الاصاعة التي سينما الفاقد بنعسومن لتلوة المداويو في لقربة ومدن الأرعا على المجتمع المحتى وغيبة لة يصنق وجيمية هي الاستينان القائم مون الدولية التر الاسه أو وسيئة الاصل .	219 44110 (0.4.) 1021	نسبتس مع ابنده الذية حون اللابية وسن الذيفا حلى النستنع النعني والميذة أو وسينة الاصل .	من الاستنهان عناقي دون تتعليمة تذكر الإنب	اموعلاقي خريزي تمومني. اردة التعقيلا (لسندوي الابتد دائيانية راكوشاعية فتي سر رافين الاهية بعنوي وهولية	شيري(وز الإجراءات المعيطة.
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74: 15 الله تحرير على التشاطات و المصالح اليرمية للاعلمي بسبب الإعمال الالتمانية للمقروع».	245 F 17		ت مالعظام.		
		عمل الااشانية للمشروع».	اطت و المصلح فيومياً تلاهلي يسبب الا 	د بيون مد مرز عن اعد ا مر ا او دلا	
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	ي) دهر		و در میلد	134	
ماه او احادة ناهل المذروع ساوار بشكل سلبي علي المجامع الإعار ضحا والانش عشائلية والمعاقوري ٢.	۲. هر اعسال اند	الافتر شعا والافتر عشائنة (النساء والمعاون) ٢.		ل اعمل الشام او إجادًا ناهل	A
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شروع في الثقافة المكتبة (امكتبة غارد مراطلين من منطق :غراق في القرية بسبب المشاريع فتي سطفة)».	۸. افر سیرتر ک	الحرى الى القرية بسبب المشاريع التي ستنفأوا	سكانية والكذية الزم مراطلين من سلطل	ن سيرتر المشروع في الطايلة (A .4
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1.	- 4
استيان الصندوق الاجتماعي للتشية لمعاقلة عدمه أرح	استبيان الصندوق الاجتماعي للتشبية لمططقة مرجو جروح
يرتي المواطقة عزيري الدواطن ردرا ونارة التعليمة / الملتوى الاجتماعي للتنمية / مسبع ميناني لغرض التشاور المجتمعي مع ابناه جراعات البينية والاجتماعية التي سينة الثقائفا بتعموهن نظية المشاريع في القريبة ومدي التره مجلحة، رابون الاجلية بمسق وهينية عن الاستينين الثلي دون المليمة لقر الاسم او وميلة الالتسان	حرّ بزائي المواطلة حرّ بزاي المواطن ثمر وزار وزارة الخطيط (المتدوى الايت عن تنتسبة) سبح ميدلي لغرض الشرور المونم الإجراءات اليبيية والايتماعية قالي سيزاد الخالط يخصوهن تلفيذ المتاريخ في القريبة المحيطة، راجين الإجابة يمدق وحيافية عن الاستيان للتي دون العنية تقام الاسر أي وس
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 فر هنگ الحاول او مطالبات من قبل السكان المحلين بعالمية الارض الملاء عليها العشروع! 	 • في هنته (دعاوت و مطالبات من قبل الستان المطيين بعديدية الإرض المقاد ها
ی تھ کی کھی اور ملاحظت اور ملاحظت	ے نمبر 🧏 کڑ 👘 اے ملاحظ اندا
۲. ف سيكون هناك خرد على الشاطات و المصالح اليومية للأهالي يسهب الاعدال الالشائية الما را المالية مالية الما مالية المالية المالية مالية مالية المالية مالية مالية مالية مالية المالية مالية مالية المالية مالية ماليالية مالية مالية ماليمالية ماليية ماليية مالية مالية مالية م	۳. هل سيكون هلكو ضرر على النشاطات و المصالح اليومية للاهاتي يسبب الاحمة
o to to the state	ن الم 🖉 کال 💿 مالامطانات
 عن هذى الوريقي تعلية ستذكر يديب الاصل الإشلابية للمشروع ٢. 	 عل هذك أن يتي تعلية ستنظر بسبب الاعمل الاشفقة للمشروع ?.
الاسم 🔧 كلا 🗇 ملاحظات	ن المم 🖍 کلا 🖂 عالمطالب
 في هناك العامة توطيق تشخص أو لعدة الشغاص بسبب الأثمة المشروع في القرية !. 	 ٥. هن هذاك اخارة ترطين تشخص او تحة اشغاض بسبب اقامة المشروع في القرية
ن نم محم کلا در دهماند	🖂 نمو 🔪 کا کا 👝 ملاحظات
٥٠ - الأسوف بتأثر المبقع المحلي بصورة سلية تتبعة المشاريع المقادة	 هن سوف بذكر المجتمع المعنى بصورة سنبية نتيجة المشاريع المقامة).
ال علم 🔪 35 👘 بالاسطال	ن الم 🔪 كَلاً 🖉 المعطرات
۲. هل احماق تشاه او اعادة ناهيل المشروع سترتر بشكل سنبي على المجاميع الانفر طبعة، والاند مركز	 ٨ العمل الضاع أو اعادة تاهل المشروع ستوفر بشائل سابي على المجاميع الاا
(السم	ی امپر کو و محفظات
٧. هل تلوقع ازائة مماضيل (راعية أو التجار أو أية غطاء لينتي نغود علميته لمراطبين أو ستار	٧. هل تتوقع ازالة مماسيل زراعية أو اشجار أو أية عطاء لياني تعود عاديلته لمو
تلىئروغ، /	هشروع. /
للاعط المح كالا () ملاحظات	11 have 2 35 2 mar (1
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مسمو هر 🗠 36 n بلاعظان	سے اہم o کلا o دلامطالت
. • • • • • • • • • • • • • • • • • • •	٥. هل تخلد ان عملية قشاء او اعدة تأهيل المشروع لها اندر بيجابية من الشاهية.
الاربية من الشتروع؟.	القريبة من المدروعة.
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لرعتيها المشروعة.	ن يعادية الأرطى المظ			. هل هنگداده	•
		_ ملاحظات.	24	per 🖂	
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		ال مائمتان	34 2		
	ية للمشروع ?.	سبب الاعمال الاشقا			5
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عريه.	ب اقامة المشروع في ا				<u>80</u>
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	المشاريع المقامة).				<u> </u>
			24		
و الافار ضعلا والافار هشاشة (الساد والمعاقين) ؟	هن ساري ڪي الموامي	استروع سوتر پد د مختلان			005
	a constantes			⊟ اور به مرد د	22.5
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ر القرى في القرية بسبب المشاريع فلي ستنطارا					8
		ال ملاحظات	22 0	14.1 1	



استيبان الصندوق الاجتماعي للتتمية لمحافظة التريق ا عزيزتي المواطلة... عزيزي المواطن.... لجرى{ وزارة التغطيط / المندوق الاجتماعي تلتلمية) سنح ميناني نغرض التشاور المجتمعي مع ابتناه اللزيبة حول الإهراءات اليبنية والاجتناصة التي سيتد تغذفنا يغصوص نظية المشاريع في القريبة ومدى الثرها طي المجتمع المحنى والبب المعيظة، راجين الإجابة بعدق وحيانية عن الاستيين التلي دون الحلجة لذكر الاسم أو وسيلة الانصال . When Safe a receiver hot اللاية الوعلميني لللصة ي التي 24 1 Also: لعهنة = موطب _ ١٩٨٠ الم والأخيط mist ال فالله ادعاوات او مطالبات من قبل السكان المطيين يعادية الارض المقاد عليها المقرر عار. Challe T 3.6 بل سراون فأله ضور على الشاطات و المصالح اليومية للإهالي بسبب الاعمل الإنشائية للمذروع ا. Charle () 35 1 ٣. على هذك أن يتى تحقية ستثقر بسبب الاحمال الالشانية للمقروع ٢. 35 8 1 all all a ۲. « هذا اعارة ترطين للنكس از تعاة النفاس بسبب اللدة المثروع في القرية !. 25 Jun Sala De D «, «ل سوف بدائر المجتمع المطي بصورة سلبية لتبجة الملتاريع المقامة). - Wadit 244 ٣. الله اعمل الشاء أو اعادة للعل المشروع ستوار يشقل سلبي على المجامئ الالش طبطة والاكثر. هششة (النساء والمعاقين) ٣. al hall a 24.2 ۲. افراغوقع ازائة محاصيل إرزاعية او اشجار او اية فطاه نبتى تعود عاديته لمواطنين او سفان محيين بسبب الاعمال الاشالية تىلررە: 15 m ومتعقات رَّا... هل سنوتر المشروع في القنَّفة السلانية (امكانية قدود مواطنين من مناطق الجري الى الترية يسبب المشاريع التي سنتلة) ا Stin De D 35 0 ٨. على تعتقد أن صفية الشاء أو أعادة تأميل المشروع لها الأر اليجابية من الشعية الاجتماعية بالنسبة للسلان القاطنين في المشاطى. انفربية من العشروع؛ diam'r. 38.11

شکرا علی وقتکم

.... استبيان الصندوق الاجتماعي للتنمية تمحافظة أأوابت لقرر استبيان الصندوق الاجتماعي للتلمية لمحقظة فريد وتدري ر الإيزاني المواطنة... عزيزي المواطن... عزيزتي المواضع ... حزيز بي المواطن.... لَجِرَوَ(وَزَارَةَ التَحْظُيُّةُ / الْمُنْقُوق الاجتماعي للتَّميةَ } مسح ميداني تقرض التشارر. المجتمعي مع ايناه القريبة مول: تَّجر ب(بزارة التغلية) الملدوق الابضاعي للتنبية) سبح مهاني لفرش التشاور. المجتمعي مع ابناه القرية حول الإجراءات البينية والإجتماعية التي سيتم انفلاها يخصوص تتفيذ تعشاريع في القريبة ومدى الأرها على المجتمع المطي واف الإجراءات تليلية والاجتماعية اللى سيلر الغلاها بخصوص تنلية المشاريع في القريبة ومدى الثرها على المبتمع المطر المعيظة، راجين الاجابة بعدق وحيدية عن الاستبين الثاني دون الحاجة لذكر الاسم أو وسيئة الالصال . المعطة، راهين الإجلية يعدق وهيدية عن الاستبيان التلي دون العاهة لذكر الاسم أو وسيلة الاتصال . المو فعلروع: ما صلى ستكن كعرب و موربا ديم In white : i and the Tay is a super or LUY 1 ast for is القرية 1.257 القضاء and marine تينى: العنس - يوذكر تعبر: End: AZ = لمهتة العهنة المرتقف المتقادير a states 1 10 10 Calle 1 -44/E بل هناك ادعادات او مطالبات من قبل السكان السعليين بعادية الارض السلام عليها المشروع?. فل هنڭ ادعادات او مطلبات من قبل انسكان المعليين بعادية الارض المقام طبيها المشروع". 250 ال نعر 25 price Cillia Se m disate of بل سياون هاي طور على الشاطات و المصالح اليومية للأمالي يديب الاحمل الاشائية للمقروع). ال سيكون علك ضرر على الشاطات و المسلح تيومية تلاهالي يسبب الاخل الاشانية للمدروع. See 442 0 35.0 Stan Sec. 11 Silate (1 (1 144 ٣. عن عند أي بلى لطبة ستتاثر بسبب الأعمال الاشاتية للمشروع ٢. ٣. ال الثان أن بني تعلية ستثار بديب الأصل الإشالية للشروع ؟. 35 0 ال تغني: 35 2 Dellastic D ار تمر 11 + C + C هن هذاك العادة توطين فلنقص أو تعاة الشادس بسبب طلمة المشروع في القريبة (. د. الل اللغاد العادة توطين تشخص أو الحدة الشغاص بسبب اللمة المشروع في القرينة. 35 1 AND D 32.0 Alice Sec. - status 447 11 ۶. «أن سوف بقائر المجتمع المطي بصورة ستبية تتبيهة المشتريع المقتمة». هـ على سوف يذكر المجتمع المعلى بصورة سلبية تتبعة المشاريع المقامة». و تعر -2000-350 Siles - O 35.2 ورتم _ ٢. عل احدل انشاد او اعادة ناهل المشروع ستوثر بشكل سلبي على المجاميع الاكثر مشطا والاكثر هشتك (السناء والمعطين) ٢. ۲. ال احمال انشاء او اعدة ناهل المذروع ستوثر بشكل سنين على المجامع الاكثر ضطا والاكثر هشاشة (اكتساء والمعافين) ٢. Window TT 35 ال: تعم Stin Sec 35 0 ري تم ر ٢. «أن تترقع الإلة معاصيل زراعية أو الشجار أو أية غطاء ليقي تتود عنديته غبواطنين أو سعان معليين بسبب الاعمل الاشدلية ٧. الل تترقع ازالة معاصيل زراحية او اشجار أو اية غشاه تباش تجرد حاديته لمواطنين أو سكان مطيين يسبب الاعمل الالشائية تىدرون. بىدرون. المشروع". 350 ے تعم ارا ماشعقات ال ملاحظات ٨. هل سيوثر الشروع في للثاغة السنانية (الثانية قدوم موعلين من منطق الدري في الفرية بسبب المشاريع فلي سنتشاره . ٨. فان معادل المشروع في تشافة السداية (الكانية قدرم مواطنين من مناطق العرى الى الغرية يسبب المشاريع التي ستطنية 36 m ا) ملاحقات 10 20 alleste () 35 = 100 ٩. هن تعتق أن صلية الشاء أو أعدة ناهل المشروع لها قار الجانية من الناهية الاجتماعية بالنسبة تسقان التاطنين في المتاطق. ٩. الانتظار ان صفية كشاء او أعادة نافيل المذروع تها التر ايمنية من النامية الاجتماعية بالنبية تتستان الاعلتين في المقاطئ. القريبة من المشروع?. اللربية من الشروع؛. - 16 ALS 35.0 mid 35.0 mit. Alization (1) شکراً على وفتکم شقراً على وفنقم

Annex (3): IRAQI STANDARDS FOR AIR, NOISE, and Water

Ambient Air Quality Guidelines

Dellutent	Iraqi Standards		WHO Standards
Pollutant	Concentration	Average Time	Concentration
со	10 ppm	8 hours	N/A
0	35 ppm	1 hour	N/A
	0.1 ppm	1 hour	500 μg/m ³
SO ₂	0.04 ppm	24 hours	20 μg/m³
	0.018 ppm	1 year	N/A
NO ₂	0.05 ppm	24 hours	200 μg/m ³
	0.04 ppm	1 year	40 μg/m³
Ozone (O ₃)	0.06 ppm	1 hour	100 μg/m³
PM ₁₀	150 μg/m³	24 hours	50 μg/m³
514	65 μg/m³	24 hours	50 μg/m³
PM _{2.5} 15 μg/m ³		1 year	15 μg/m³
Total Suspended	350 μg/m³	24 hours	N/A
Particles	150 μg/m³	1 year	N/A
	10 t/Km ² /month	30 days	N/A
Falling Dust	(Residential Zone)		
	20 t/Km²/month	30 days	N/A
	(Industrial Zone)		
Hydrocarbons	0.24 ppm	3 hours	N/A
	2 μg/m³	24 hours	N/A
Pb	1.5 μg/m³	3 months	N/A
	1 μg/m³	1 year	N/A
Benzene	0.003 μg/m³	1 year	N/A

Pollutant	Iraqi Standards		WHO Standards	
	Concentration	Average Time	Concentration	
Dioxin	0.6 pico g/m ³	1 year	N/A	

Noise:

Law no. 41 of the year 2015: Noise Protection and Control / Noise Limits for Different Working Zones

Туре	Allowable (dB)
Industrial	70
Commercial	70
Residential	55

<u>Water:</u>

The table below shows the limits defined for discharges to both natural waters (water resources) and sewers (which generally have higher permissible discharge limits).

Pollutant	Limits for discharge to water resources	Limits for discharge to public sewers	
Color	-	-	
Temperature	Less than 35°C	45°C	
Suspended solids	60	750	
рН	6 – 9.5	6 – 9.5	
Dissolved Oxygen (DO)	-	-	
Biochemical Oxygen Demand	Less than 40	1 000	
(BOD)	Less than 40	1,000	
Chemical Oxygen Demand	Less than 100	-	
(COD)		-	
Cyanide (CN ⁻)	0.05	0.5	
Fluoride (F⁻)	5.0	10	
Free Chlorine (Cl ₂)	Traces	100	
	A. If the ratio of the amount of water discharged	<u></u>	
Chloride (Cl ⁻)	to the amount of source water is 1000:1 or	600	

Pollutant	Limits for discharge to water resources	Limits for discharge to public sewers
	 less, the chloride concentration of the discharge is permitted at 1% of the concentration of the natural source before discharge. B. If the ratio of the amount of water discharged to the amount of source water is more than 1000:1 the wastewater discharge must not exceed a chloride concentration of greater than 600 mg/L. C. If the concentration of chloride in the source water is less than 200 mg/L then the permitted discharge limit must be established on a case by case basis 	
Phenol	0.01 - 0.05	5 – 10
Sulfate (SO4 ²⁻)	 A. If the ratio of the amount of water discharged to the amount of source water is 1000:1 or less, the sulfate concentration of the discharge is permitted at 1% of the concentration of the natural source before discharge. B. If the ratio of the amount of water discharged to the amount of source water is more than 1000:1 the wastewater discharge must not exceed a sulfate concentration of sulfate in the source water is less than 200 mg/L then the permitted discharge limit must be established on a case by case basis 	300
Nitrate (NO₃⁻)	50	-
Phosphate (PO ₄ ³⁻)	3	-
Ammonium (NH4 ⁺)	-	-
DDT	Nil	-
Lead (Pb)	0.1	0.1
Arsenic (As)	0.05	0.05

Pollutant	Limits for discharge to water resources	Limits for discharge to public sewers
Cupper (Cu)	0.2	-
Nickel (Ni)	0.2	0.1
Selenium (Se)	0.05	-
Mercury (Hg)	0.005	0.001
Cadmium	0.01	0.1
Zinc (Zn)	2.0	0.1
Chromium (Cr)	0.1	0.1
Aluminum (Al)	5.0	20
Barium (Ba)	4.0	0.1
Boron (B)	1.0	1.0
Cobalt (Co)	0.5	0.5
Iron (Fe)	2.0	15
Manganese (Mn)	0.5	-
Silver (Ag)	0.05	0.1
Total Hydrocarbons & Derivatives	 Allows discharge of total hydrocarbons to water sources and A1 and A2 according to the concentrations and limitations set forth in the tables below; the concentration of hydrocarbons must be measured discharging to the water source. Hydrocarbons shall not be discharged to water sources A3 and A4. For rivers in continuous flow 10 mg/l according to the ratio of the amount of wastewater discharged to the amount of the water source should not be less than 1000:1. For a river in a continuous flow 3 mg/L and in accordance with the ratio of the amount of the water source should not be less than 1000:1. 	-
Sulfide (S ²⁻)	Nil	3.0
Ammonia (NH₃)	Nil	10
Ammonia gas (free NH₃)	Nil	6.0
Sulfur dioxide SO ₂	Nil	7.0
Calcium Carbide CaC	Nil	Not allowed
Organic solvents	Nil	Not allowed

Pollutant	Limits for discharge to water resources	Limits for discharge to public sewers
Benzene	Nil	0.5
Chlorobenzene	Nil	0.1
TNT	Nil	0.5
Bromine (Br ₂)	Nil	1-3

Annex (4): Contractor's Responsibilities (Arabic) مسئوليات المقاول

يجب على مقاول الإنشاء الالتزام بالإجراءات التالية:

<u>جودة الهواء</u>

- الترطيب المنتظم للطرق بالماء لمنع الغبار
- التحكم في نواتج الحفر والتسوية للحد من إنتشار الغبار.
- أي مواد بناء قابلة للتطاير (أسمنت جاف وخلافه) يتم تخزينها في أكياس محكمة الغلق وتغطيتها لمنع تولد الغبار .
- الاحتفاظ بالمازوت والزيوت والطلاء والمواد الكيميائية الأخرى المستخدمة في الموقع بأقل كميات ممكنة وتخزينها في حاويات محكمة الغلق للحد من الأبخرة ؛
- يتم الحفاظ على جميع المعدات والآلات والمركبات المستخدمة في الموقع في حالة عمل جيدة في جميع الأوقات لضمان الحد الأدنى من استهلاك الوقود وعوادم الدخان.
 ينطبق هذا على الحافلات المستخدمة لنقل العمال من وإلى الموقع.
 - منع الحرق المكششوف للمخلفات.
- يتم تغطية الشاحنة الناقلة لمواد/مخلفات البناء أو المواد المتربة الأخرى وذلك بعد التأكد من الاحتفاظ بمسافة ٣.٠ متر تحت الحافة العلوية لجدران الشاحنة ، بالقماش المشمع للتحكم في الغبار ؛

 - تحديد سرعة قصوى للمركبات والمعدات التابعة للمشروع بحيث ألا تتجاوز السرعة القصوى داخل حدود الموقع عن ١٠–١٥ كم/ساعة.

توفير خط ساخن لتلقى الشكاوي ٢٤/٧

<u>الضوضاء</u>

- ب إقتصار تشغيل المعدات المستخدمة في أعمال البناء على أوقات محدودة خلال النهار حيث أنها ليست آمنة للعمل أثناء الليل. سيؤدي ذلك إلى تقليل اضطراب
 الضوضاء إلى حد كبير للمجتمعات القرىبة من مواقع العمل ؟
 - يتقييد استخدام الألات التي تصدر ضوضاء بالقرب من المستقبلات الحساسة ، واستخدام وسائل الحد من الضوضاء لألات البناء ، إذا لزم الأمر ؛
 - استخدام المركبات والمعدات المطابقة للمعايير الوطنية للضوضاء والاهتزاز ؛
- أثناء العمل ، يجب إغلاق أغطية المحرك للمولدات وضواغط الهواء وغيرها من المعدات الميكانيكية التي تعمل بالطاقة ، ووضع المعدات بعيدًا عن المناطق السكنية قدر الإمكان ؛
 - يجب توفير أغطية للأذنين / معدات حماية السمع لجميع العمال
 - لا يتم تشغيل محركات المركبات والآلات الأخرى إلا عند الضرورة للتحكم في الضوضاء الناتجة ؛
 - تطبيق نظام الشكاوي لتلقى الشكاوي المتعلقة بالضوضاء.

إدارة المخلفات الصلبة والخطرة

التقليل من المخلفات:

- · شراء المواد بالكمية الدقيقة المطلوبة ، لتقليل الاستخدامات المتبقية غير المستخدمة.
 - تقليل تولد النفايات في الموقع.
 - وضع خطة إدارة بسيطة للنفايات.
 - يجب جمع النفايات العامة ونقلها إلى المكان المخصص لذلك من قبل البلدية.
- - يجب وضع حاويات لتجميع النفايات في كل موقع عمل.

يجب جمع النفايات الكيميائية في براميل (أو حاويات محكومة مماثلة) ، معنونة بشكل مناسب ، وم ثم يتم إرجاعها إلى المورد أو نقلها بأمان إلى المكان المخصص من قبل البلدية. يحتوي مكب النفايات هذا على مكان مخصص لاستقبال النفايات الخطرة والطبية على حد سواء ، ويجب إجراء عمليات التخزين والنقل والتعامل مع جميع المواد الكيميائية وفقًا لجميع المتريعية ، من خلال المقاولين المرخصين وبالتنسيق مع البلدية.

- يجب تخزين جميع النفايات الخطرة بشكل ملائم في مناطق محدودة ويجب تحديدها بوضوح على أنها "خطرة".
- يجب أن يتم نقل النفايات الخطرة والتخلص منها من خلال مقاولين مرخصين وبالتنسيق الوثيق مع البلدية ذات الصلة ووفقًا للمتطلبات والتعليمات القانونية.
 - يجب إدارة السوائل الخطرة ، مثل المذيبات وعوامل مقاومة الصدأ طبقاً لمتطلبات التشريعات ذات الصلة.
 - يجب إعداد جرد للمواد الخطرة لفترة البناء.
 - يجب توفير أصحيفة بيانات سلامة المواد (MSDS) للمواد الخطرة في الموقع أثناء البناء وإتاحتها وشرحها للعمال.
- يجب جمع نفايات المواد الهيدروكربونية ، بما في ذلك زيوت التشحيم ، للنقل الآمن خارج الموقع لإعادة استخدامها أو إعادة تدويرها أو نقلها أو التخلص منها في مكب
 معين من قبل البلدية.

إعادة استخدام النفايات وإعادة التدوير

- · كلما أمكن ، سيعيد المقاول استخدام المواد القابلة للتدوير وإعادة تدويرها.
- يتم إعادة تدوير المخلفات التالية: الورق المقوى ، والمعادن ، وخردة المعادن مثل علب المشروبات الغازية ، وزيت مستهلك ، والورق ، والبلاستيك ، والخرسانة النظيفة
 وكذلك الغطاء النباتي المنزوع .

حفظ السجلات

- سيتم الاحتفاظ بكافة سجلات إزالة النفايات والإبلاغ عنها كما هو مطلوب في تقرير الأداء البيئي الشهري ؛
- السجلات التي سيتم الاحتفاظ بها تشمل: إيصالات وفواتير من مقاول نقل النفايات ومنشأة استلام النفايات
- يتم الاحتفاظ بالسجلات السالفة الذكر في سجل النفايات ، الذي يسجل تواريخ الجمع ونوع النفايات والكميات وشركة نقل النفايات والوجهة وتوقيع الشخص المفوض تخزين النفايات ومعالجتها
 - سيتم تخزين النفايات في حاويات أو صناديق. لن يتم تخزينها مباشرة على أرض غير مبطنة ؛
 - سيتم تخزين نفايات إعادة التدوير في مناطق أو حاويات منفصلة ، ولن يتم خلطها مع أنواع النفايات الأخرى ؛

- يجب تخزين جميع النفايات الخطرة بشكل ملائم في المناطق المحصورة وتحديدها بوضوح على أنها "خطرة"
- معالجة النفايات وإدارتها بشكل صحيح من خلال فصل النفايات الصلبة عن النفايات الخطرة وعدم مزجها في مكب النفايات ؛
- سيتم جدولة إزالة النفايات من الموقع ، بحيث يكون لديك دائمًا سلة للنفايات متاحة للإستخدام في الموقع ، وللتأكد من عدم الملئ الكامل للنفايات/الحاويات ؛
- أي مناطق تخزين نفايات مؤقتة (غير متضمنة في صناديق أو حاويات) سيتم تغطيتها و / أو إحاطتها بسياج شبكي لمنع هبوب الرياح منها إلي الموقع ؛ و
 - يتم تخزين النفايات السائلة ، بما في ذلك نفايات الزيوت والمواد الكيميائية السائلة ، في براميل / حاويات محكمة الإغلاق على سطح خرساني.

التخلص من النفايات

- يجب أن يتم نقل النفايات الخطرة والتخلص منها من خلال المقاولين المرخص لهم وبالتنسيق الوثيق مع البلدية المختصبة بذلك.
 - يجب جمع النفايات العامة ونقلها إلى المكب المعين من قبل البلدية.

<u>جودة التربة</u>

- وضع علامات لتحديد مكان الحفر عن طريق سور ولاصقات وعلامات ارشادية.
 - إتباع الأساليب السليمة للحد من الانسكابات/التسريات؛
 - التداول والإدارة السليمة للمخلفات ومواد البناء والمواد الخطرة.
 - يتم تخزين النفايات داخل صناديق أو حاويات، وليس على الأرض مباشرة؛
 - عدم دفن و / أو حرق النفايات المنزلية في موقع المشروع.
- التخزين المؤقت للنفايات الصلبة عن طريق الاحتواء المناسب لتجنب انتشار النفايات والرائحة وتجنب الغبار ؛ احتواء ثانوي لمنع التسرب.

- ضمان أن تكون حاويات المواد السائلة الخطرة / حاويات النفايات محكمة الإغلاق بشكل صحيح دائمًا ومؤمنة من الانقلاب / السقوط / التلف / أشعة الشمس المباشرة أثناء النقل والتخزين؛

- تخزين المواد الكيميائية، مثل الزيوت ومضادات التآكل بكميات قليلة بالموقع.
- تحفظ جميع أنواع الوقود والمواد الكيميائية السائلة في أوعية أو براميل أو خزانات محكمة الإغلاق وفوق سطح الارض.
 - يجب إجراء الصيانة والإصلاح الروتيني للمعدات / المركبات المتنقلة في ورشة عمل.

- يتم الاحتفاظ بمجموعات التنظيف الخاصة بالانسكابات بالقرب من المناطق المستخدمة لتخزين الوقود أو المواد الكيميائية السائلة وسيتلقى الموظفون تدريباً على استخدام أدوات تنظيف الانسكابات؛

 التأكد من وجود البراميل والحاويات المستخدمة في تخزين الوقود أو المواد الكيميائية السائلة (بما في ذلك الزيوت المستعملة والدهانات) في حالة جيدة وخالية من الصدأ أو التلف؛

- تنظيف موقع البناء من المخلفات الصلبة قبل إغلاقه.
- تخصيص مناطق معينة لتخزين مخلفات التربة ومخلفات البناء.
- يجب أن يتم ترميم التربة السطحية والمناطق المتضررة بعد انتهاء مرحلة البناء.

<u>جودة المياه</u>

- يجب تنفيذ أعمال الأرض (إزالة الغطاء النباتي، والحفر، والتسوية) خلال فترات الطقس الجاف.
 - يجب أن يتم تخزين التربة على مسافة آمنة بعيداً عن المجاري المائية.
- يتم تخزين النفايات داخل صناديق أو حاويات ، وليس على الأرض مباشرة لمنع التسرب ؛
- عدم إلقاء / التخلص من النفايات الصلبة (غير الخطرة أو الخطرة) ومياه الصرف في المسطحات المائية أو بالقرب منها.
 - التنظيف الجيد لتقليل الانسكابات / التسريبات.
- · الاستجابة السريعة للانسكابات العرضية للوقود ومواد التشحيم والمواد السامة أو الضارة الأخرى ، واستعادتها والتخلص منها بشكل مناسب (يجب على المقاول إعداد خطة استجابة للطوارئ).
 - عدم غسل أو صيانة المركبات والآلات بالقرب من المسطحات المائية.

<u>المياه الجوفية:</u>

- - ليجب إجراء الصيانة والإصلاح الروتينية للمعدات / المركبات المتنقلة في ورشة ؛
- إجراء الصيانة والتفتيش الدوريين على خزانات الصرف الصحي والسباكة ومرافق الصرف الصحي المرتبطة بها لضمان ظروف صحية جيدة

السلامة والصحة المهنية

يجب على المقاول إعداد خطة الصحة والسلامة المهنية وتحليل مخاطر العمل خلال مرحلة البناء. سيقوم المقاول أيضًا بتعيين شخص متخصص للإشراف على الخطة. فيما يلى بعض تدابير التخفيف الرئيسية التي يجب تضمينها في الخطة:

- يجب تدريب العمال على تحديد وتقييم مخاطر السقوط وأن يكونوا على دراية كاملة بكيفية التحكم في التعرض لمثل هذه المخاطر.
 - يجب على العمال وموظفي الموقع دائمًا استخدام معدات الحماية الشخصية خاصة عند التعامل مع المواد السامة.
 - يجب على العمال الامتثال لقاعدة إدارة الصحة والسلامة المهنية التي تخص الاستخدام الأمن للسلالم.
- لمنع مخاطر معدات البناء الثقيلة ، يجب على العمال اتباع إرشادات سلامة البناء المصممة للقضاء على التعرض لمثل هذه الإصابات والحوادث
 - يجب أن تكون معدات الطوارئ (مواد تنظيف الانسكاب ، طفايات الحريق ، إلخ ..) متوفرة دائمًا في الموقع.
 - يجب توفير الفحوصات الصحية الأولية والدورية للعمال.
 - يجب أن تتضمن الخطة تدابير الاستجابة لفيروس كورونا المستجد كما هو موضح في الملحق ٤.
- يجب تزويد العمال بتأمين صحي (يغطي تقديم الدعم الطبي في حالة الإصابة بالأمراض) وتأمين السلامة (الذي يغطي العمال في حالة الحوادث

السلامة المجتمعية

- يجب وضع خطط أمن وأمان كافية لمنع وصول الجمهور إلى مواقع العمل والمواد الخطرة والمخلفات
 - يجب على المقاول الالتزام بخطة إدارة المخلفات لتجنب أي عوائق أو مخاطر على السلامة.
 - يجب توفير آلية للتظلمات لضمان التواصل الفعال فيما يتعلق بمخاوف المجتمع.

<u>السلامة المرورية</u>

- يجب تثبيت لافتات أمان لإخطار المجتمع بأن مركبات البناء ستستخدم الطرق المؤدية إلى محطة المياه
 - يجب على المقاول التأكد من أن النقل المرتبط بالبناء يتوافق مع حدود السرعة

عمالة الأطفال

- يجب كتابة شروط صارمة في عقد المقاول لحظر تعيين الأطفال دون سن ١٨ عامًا
 - يجب أن يحتفظ المقاول بنسخة من هويات جميع العاملين

التراث الثقافي

اتباع إجراء العثور على الآثار (مرفق رقم (٣))

تدفق العمالة و العنف القائم على النوع الإجتماعي

- إعداد مدونة سلوك مناسبة تنص على التزام العمال تجاه فئات المجتمع والسلوكيات التي يجب تجنبها
 - يجب تدريب جميع العاملين على قواعد السلوك.
 - يجب توقيع قواعد السلوك من قبل المقاول من الباطن

- تعريف بمدونة قواعد السلوك يتم إجراؤه كل أسبو عين للعاملين الدائمين والوافدين الجدد قبل بدء العمل.
 - تطبيق المتطلبات الكاملة المتعلقة بتشغيل آلية التظلم بما في ذلك القنوات المجهولة
- زيادة وعي السكان المحليين حول التزام المشروع تجاه المجتمعات والتدابير المتخذة لذلك من خلال المشاورات العامة ومناقشات على شكل مجاميع
 - تطبيق العقوبات على العاملين المخالفين لقواعد السلوك

البنية التحتية والمرافق

- في حالة تلف أحد المرافق الموجودة تحت الأرض وأنابيب البنية التحتية ، يجب اتباع الإجراءات القياسية ، بالإضافة إلى إعداد تقرير توثيقي للحادث.
 - في حالة قطع المياه، يجب إعلام المجتمع المحلى قبل القطع
 - تنفيذ آلية للشكاوى

إدارة الخدمات الموقعية

- إقامة المخيم داخل أراضي محطة المياه
- ضمان إقامة كرفانات البناء الملائمة ومرافق الصرف الصحي للبناء، أي إنشاء خزان لتخزين المياه العادمة المنزلية الناتجة عن المخيم.
 - اتباع أفضل ممارسات إدارة المخلفات وتدابير التخفيف الواردة في خطة الإدارة البيئية والاجتماعية.
 - مراقبة ظروف العمل عن كثب ، وفرض تدابير للتحكم في انتقال الأمراض المعدية.
- الحفاظ على آلية فعالة للتظلم (تمت مناقشتها في فصل مشاركة أصحاب المصلحة). يجب أن تكون آلية معالجة المظالم هذه حساسة للنوع الاجتماعي وتضمن السرية
 - انخراط محدد مع النساء والفتيات يتضمن التوعية بالعنف القائم على النوع الاجتماعي والوصول إلى قنوات مجهولة للإبلاغ عن الحالات.

العقوبات وإلغاء التعاقد

إذا فشل المقاول في الوفاء بأي من الالتزامات المذكورة أعلاه بموجب العقد ، فسيتم تطبيق العقوبات التالية:

التفاصيل	الإجراء	المراحل
يجب أن يتلقى المقاول بيان تحذير يتضمن الإجراء التصحيحي المقترح. يجب أن تبدأ جميع الإجراءات التصحيحية في مدة لا تزيد عن أسبو عين. يجب على المقاول اتخاذ الإجراء التصحيحي بشكل سريع.	التحذير	المرحلة الأولي
يجب على المعاول المحاد الم جراع المتعصيصي بنشل شريع. في حالة عدم التزام المقاول بخطة الإدارة البيئية والاجتماعية ، لا يحق للمقاول الحصول على الدفعات النقدية بموجب شروط هذا العقد. لن يتم صرف المدفو عات حتى يتم وضع خطة عمل واضحة ويبدأ المقاول في تنفيذ الإجراءات المتفق عليها.	الدفعات النقدية	المرحلة الثانية
لن يتم إنهاء العقد بسبب عدم الوفاء بالتزامات خطة الإدارة البيئية والاجتماعيَّة. ومع ذُلك ، سيخصم مالك المشروع تكلفة تنفيذ خطة الإدارة البيئية والاجتماعية من العقد. وفي هذه الحالة يجب إرفاق دليل واضح على فشل المقاول في تنفيذ خطة الإدارة البيئية والاجتماعية	إلغاء التعاقد	المرحلة الثالثة