

Bajil Rural Hospital - Al-Hodeida Governorate

Rehabilitation of Rainwater Channel and Connecting the Health facility to the Public Water Network including Implementation of Ground Water Tank Project

Environmental and Social Management Plan ESMP

March 2021

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Abbreviations and Acronyms

BOQ	Bill of Quantities
CoC	Code of Conduct
COVID-19	Coronavirus Disease 2019
EHNP	Emergency Health and Nutrition Project
ESHS	Environmental, Social, Health and Safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GBV	Gender Based Violence
GRM	Grievance Redress Mechanism
MoPHP	Ministry of Public Health and Population
PMU	Project Management Unit
PPE	Personal Protective Equipment
SEA	Sexual Exploitation and Abuse
SH	Sexual Harassment
UNICEF	United Nations Children's Fund
WASH	Water, Sanitization and Hygiene
WB	World Bank
WHO	World Health Organization

1. Introduction

Emergency Health and Nutrition Project EHNP is jointly implemented in the Republic of Yemen by World Health Organization WHO and United Nations International Children's Emergency Fund UNICEF with the support and finance of the World Bank. The EHNP's development objective is to contribute to the provision of basic health, essential nutrition, water, and sanitation services for the benefit of the population of the Yemen across all 333 districts and 22 governorates.

Bajil Rural Hospital, Al-Hodeida Governorate is one of the healthcare facilities supported by WHO under EHNP in which the consultation results, studies, screening, and need assessment concluded that the intervention detailed within this plan is necessary and would improve the overall and sustainability of health service provision within the Hospital. The proposed intervention will be entirely implemented within the Bajil Rural Hospital and no work will be implemented outside the hospital boundaries.

The proposed intervention will include mainly: rehabilitation / modification of the rainwater channel in addition to implementation of ground water tank with storage capacity of 150 m³. Summary of the proposed intervention and baseline data are included hereafter within the plan.

Meanwhile, the detailed design, BOQ, test results, studies, layouts, and implementation arrangements have been prepared in coordination with the MoPHP official authorities and shared with World Bank WASH team for validation and approval.

This plan however is meant to present the environmental and social risks associated with the proposed intervention in Bajil Rural Hospital in addition to the mitigation measures that need to be implemented. The plan also defines the project activities summary, level of responsibilities, communication, consultation, reporting requirements as well as the Grievance Redress Mechanism.

The Environmental and Social Safeguards of this intervention will be implemented in accordance with the Emergency Health and Nutrition Project EHNP requirements that detailed in the [Environmental and Social Management Framework ESMF](#).

Contractor will be obliged to follow all the Environmental and Social Safeguards measures accordingly as stated in this plan as well as per the EHNP project ESMF requirements. Engineer responsible for the supervision shall ensure the implementation effectiveness in addition to report to the EHNP PMU any issues related to the project implementation.

2. Baseline Information

Location and Geographical Data

Bajil is one of the main cities of Al-Hodeida Governorate and it is the capital of the Bajil district. The district of Bajil covers an area of about 1,644 square kilometer and lies almost in the center part of Al-Hodeida governorate 55 km north side of Hodeida city along the main road between Sana'a and Hodeida and the population in Bajil district as per the last 2004 census was 167,781. Currently the city contains large numbers of internal displaced people and the Mapping of Local Governance in Yemeni Governorates¹ estimates the number of inhabitants in Bajil district by 251,017.

The annual Rainfall in Bajil is characterized by high variability (spatial and temporal) in the context of semi-arid climate where rained mostly between July and September with rain intensity value of 100 mm, as determined by the research that involved the concerned authorities in addition to the last 10 years data.

¹ [Mapping of Local Governance in Yemeni Governorates issued by Berghof Foundation in January 2020](#)

The proposed intervention will be completely implemented inside the Bajil Rural Hospital, which is in the west of Bajil city, the general site area of the hospital is 15207 m². The length of the wall is 525 meters, and the site contains more than 15 health and service buildings, with building area more than 3000 m².

Rainwater Channel

To the south, the site of the hospital is cut from east to west by a channel of 135 meters length, 5 meters width, and the height of the channel side walls is 85 cm. This channel is located within the hospital premises since the initial operation of the health facility. The hospital's general sites floors are made of sand, except for the sidewalks around the buildings and the entrance of the dialysis building.

The ground level of the hospital general sites is not even, and it is lower than the level of the surrounding streets. Meanwhile, it is at the same level of the rainwater channel and lower in some other locations.

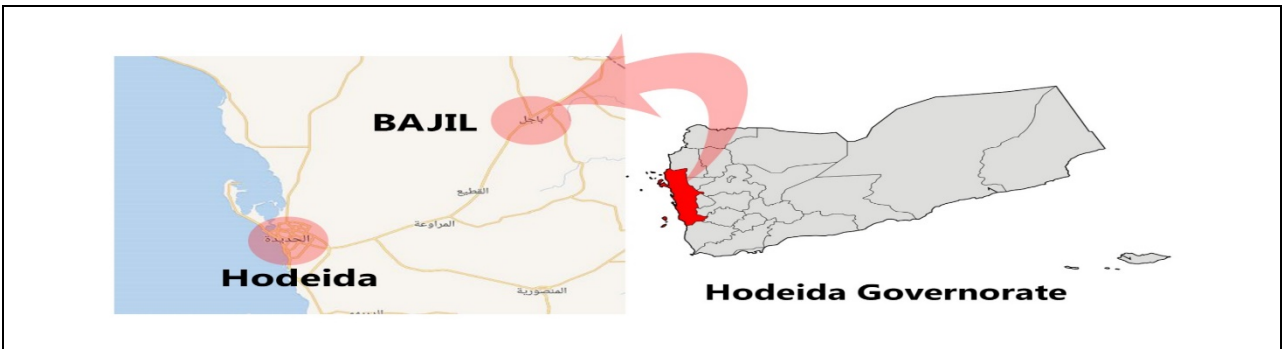
Consequently, the facility experienced recently repeated rainwater flooding from the channel to the buildings and services in addition to failure in drainage the rainwater from the hospital premises.

Potable Water Supply

The hospital currently relies mainly on water tanks, and the rest of the other uses are through the saline well in the hospital's yard. Due to the lack of quality of water from these sources for medical use and dialysis in particular, UNICEF intervened, and a limited hotline from the public network of the local water and sanitation corporation was connected to the dialysis department only.

The daily water consumption in the hospital is approximately 45 cubic meters (45,000 liters) and the local water corporation confirmed the ability to supply the daily needs of potable water. In other hand, the current water storage capacity is 15,000 liters (small plastic tanks of different sizes on the buildings roofs) and to ensure continuous water supply there is a need for extra storage capacity, sufficient for at least three days to face emergency cases and any interruptions of water supply.

Photos / Maps



2.1 Bajil City Map



2.2 Bajil Rural Hospital – Aerial photo (Google Earth)



2.3 Rainwater channel direction – Aerial photo (Google Earth)



2.4 View of the streets around the discharge point. View from the channel inside the hospital



2.5 View of the streets around the discharge point / external view



2.6 Street view southside of the channel discharge point



2.7 Street view northside of the channel discharge point

3. Project Activities Description

Consultation results, studies, screening, and need assessment concluded that there is a need for immediate intervention to modify the rainwater channel and to implement the ground water tank to overcome the current challenges and to sustain the health service provision.

The detailed design, BOQ, test results, studies, layouts, and implementation arrangements have been prepared in coordination with the MoPHP official authorities and shared with World Bank WASH team for validation and approval.

The work activities expect to take around 40 working days in which the number of workers will vary depends on the implementation stage. The expected maximum number of workers in any working day is 10 workers with limited use of heavy machineries.

The proposed intervention and activities (hereafter “project”) are summarized below:

I. Rainwater channel rehabilitation and modification

Extension of the current channel side walls height reinforce and implementation of the necessary civil work and sloping to prevent any rainwater flooding to the hospital premises. The current channel side wall height is 0.85 meter and the proposed extension will raise the height up to 1.75 meter. The water downstream the channel will be discharged to the nearby street (the same discharge point of the current channel at the west side of the hospital). The street located to the west of the hospital is in the same direction of the outlet of the channel; and it is wide enough and convey the water to out of the west city without any diversion in between residential area. As per the hydraulic report attached with the design documents the catchment area of the basin is 0.8 km²; from the street east of hospital; and the exit to a wide street west of the hospital. This rehabilitation is limited to raising the retaining walls of the existing channel to protect the hospital from overflowing, no change in the direction of the flow of water.

Work will include the implementation of small side channel, beside the current one to collect and drain the cumulated rainwater from the hospital premises and areas.

Layout, specifications as well as direction of water cumulation and discharge is available in the next chapter, diagrams 4.2 and 4.3.

II. Ground water tank implementation

Implementation of ground water tank and connection the public water network to sustain the hospital water consumption needs for at least three days. The tank will be located within the hospital yard and the exact location is presented in the layout available in the next chapter 4.4. The proposed tank capacity is 150 m³ and the dimensions are 4.5 meter height (in which 3.5 meter are underground), 9.5 meter length and 3.5 meter width.

Once completed, the source of underground tank filling will be from the local water corporation and no other sources will be used to fill the tank. At present, the local water corporation source of supply is available within the hospital yard and this will be connected directly to the underground tank.

The scope of work will include the piping and interconnections between the underground tank and the service buildings in which elevated water tanks are available as source of storage for the water pumped from the underground tank.

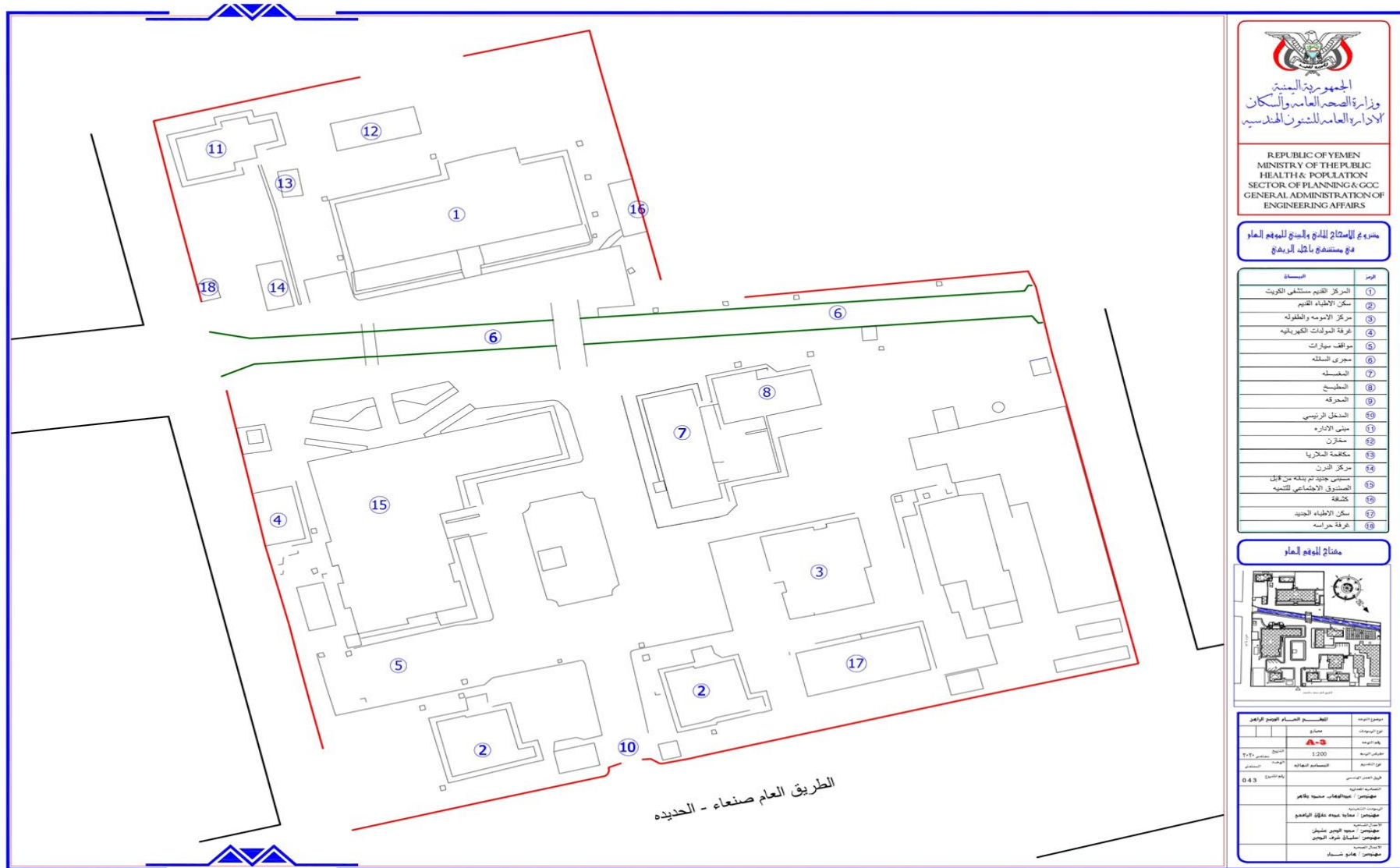
III. Leveling, sloping, and paving works for the general site's floor of hospital.

The activities' categories listed below cover the work that will be implemented under the rainwater channel rehabilitation and the ground water tank implementation:

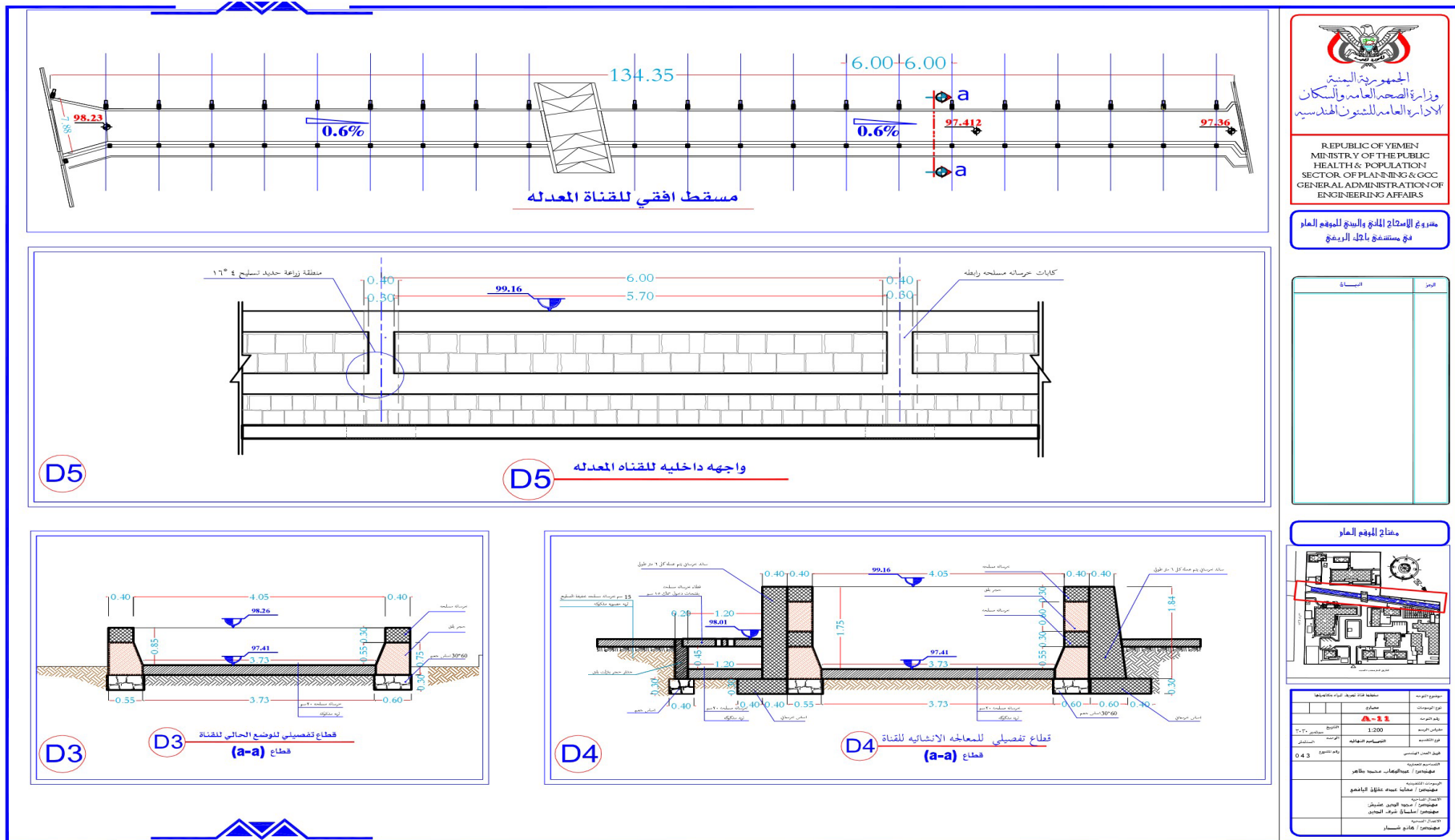
- Excavation, compacting and filling
- Concrete and cementing works
- Flooring and cladding works
- Plaster and painting work
- Waterproofing layer works
- Rainwater drainage and sloping work
- Pavement works

4. Drawings and Layout

4.1. Hospital Premises and General Layout



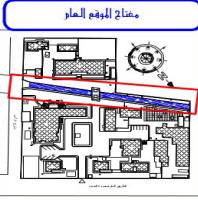
4.2. Rainwater channel structural details




 الجمهورية اليمنية
 وزارة الصحة والعمامة والسكان
 الادارة العامة للشؤون الهندسية
 REPUBLIC OF YEMEN
 MINISTRY OF THE PUBLIC
 HEALTH & POPULATION
 SECTOR OF PLANNING & GOC
 GENERAL ADMINISTRATION OF
 ENGINEERING AFFAIRS

مخروج الإسماخ الحثي والسحب للموقع العام
 تق مستندة على القياس

الرقم	المساحة



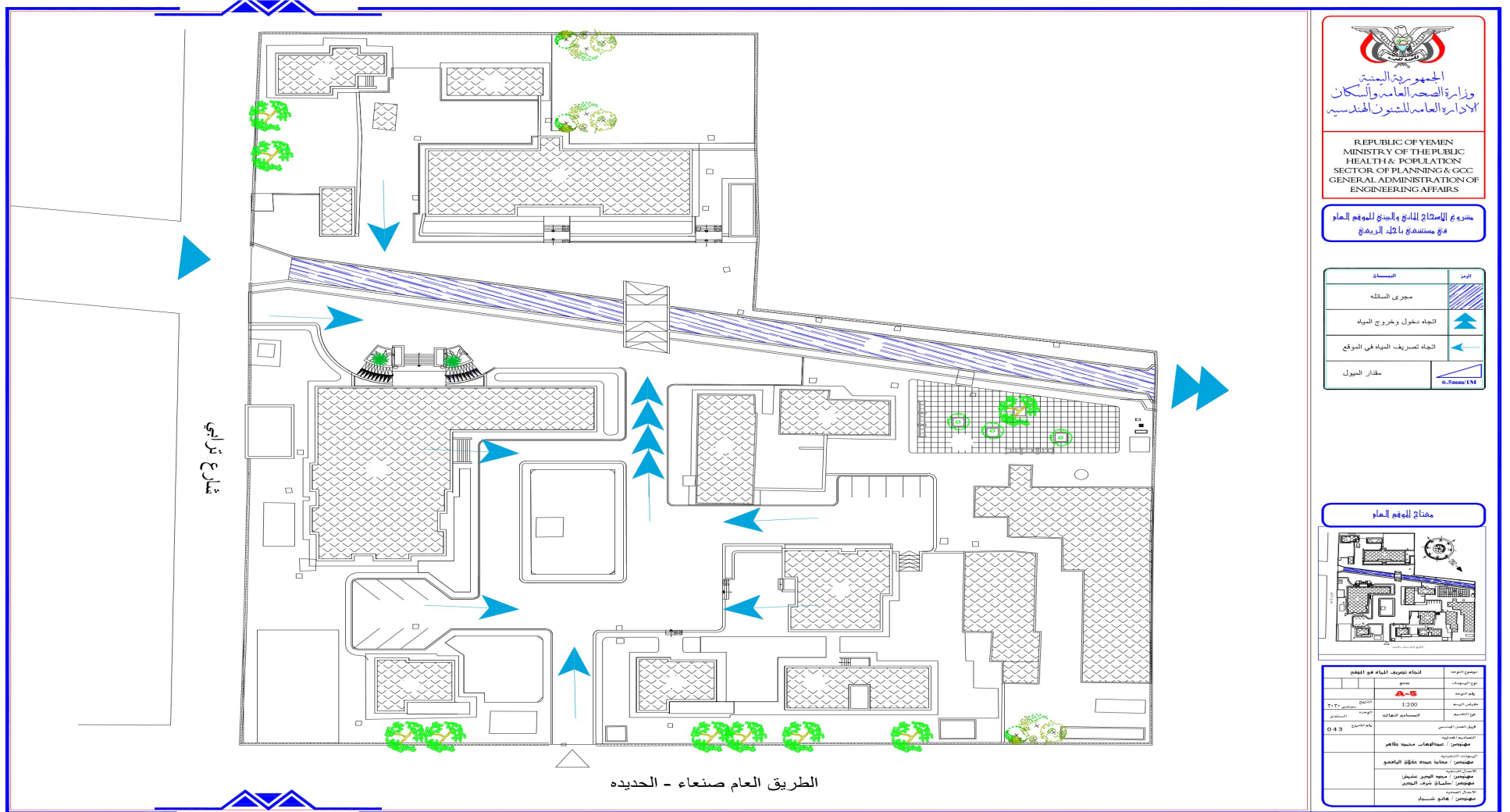
الرقم	المساحة

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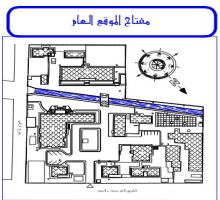
4.3. Water drainage direction




 الجمهورية اليمنية
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 ENGINEERING AFFAIRS

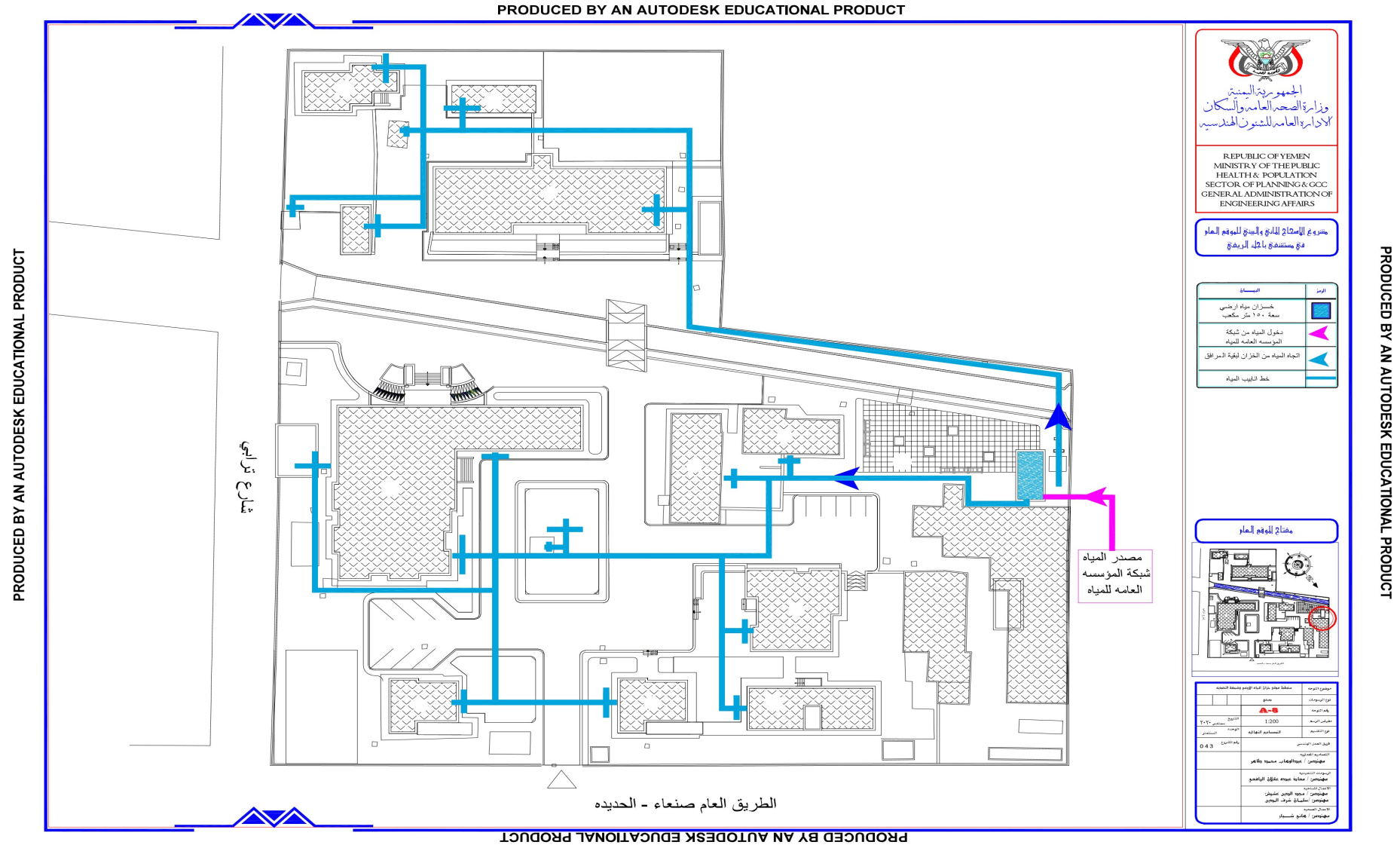
مشروع الإسحاق المادي والسيد للهوج العام
في مستشفى باثله الزيدع

اللون	الخط
حجري الشكل	الخط المائل
الاتجاه دخول وخروج المياه	الخط الأزرق
الاتجاه تصريف المياه في الموقع	الخط الأزرق
مقدار الميل	6.5mm/1M



اسم الوحدة	البناء الجديد
رقم الوحدة	043
تاريخ الوحدة	2023
مقياس الوحدة	1:200
رقم الوحدة	043
اسم المهندس	مهندسين / منجيا عبد الله بنوع الناصح
اسم المهندس	مهندسين / طارق عثمان

4.4. Proposed Ground Water Tank Location and Connections



5. Institutional Arrangements and Responsibilities

5.1. EHNP Current Organization

The Project Management Unit PMU within the WHO is responsible for the overall implementation of the EHNP activities in Yemen in addition to liaise with World Bank WB the implementation progress. Safeguards team within the PMU is responsible for ensuring the Environmental and Social Safeguards requirements are well addressed and implemented and the safeguards team consists of: Environmental and Social Safeguards officers, Gender Based Violence GBV officer and Grievance Redress Mechanism GRM Officer. In other hand the WASH team within the PMU is responsible for implementing the WASH interventions at the supported facilities as well as maintaining the necessary coordination with the MoPHP authorities and WB WASH team.

5.2. Responsibilities during the Project Implementation

Entity / Position	Responsibilities
EHNP WASH Team	Responsible for preparation the design, documentations and contracting arrangement for the project. Meanwhile, will be in charge for the follow up of the overall implementation of the project activities as per the proposed design and timeframe and to ensure adequate cooperation with the official MoPHP authorities.
Supervision Engineer	Assigned from the EHNP project side to follow up onsite the implemented activities and to ensure the work performed by the contractor is in line with the proposed design and the necessary safeguards are adequately addressed. Regular reporting to the EHNP PMU shall be maintained by the Supervision Engineer on the project implementation status as well as the level of compliance to the safeguards' requirements. The assigned Engineer, in collaboration with the MoPHP official authorities, will be responsible for site hand over to / from the contractor upon the work start / completion.
EHNP Environmental and Social Safeguards Officers	Will oversee the safeguards implementation during the varies implementation stages of the project. Responsible for maintaining the communication and visits to the project site where needed.
EHNP GBV Officer	Responsible for the implementation the GBV requirements as stated in this plan in addition to follow up, address and resolve any GBV issues.
EHNP GRM Officer	Responsible for the overall GRM process ensuring all related grievances are recorded, followed up and resolved accordingly.
Contractor	Responsible for onsite implementation of the Environmental and Social Safeguards requirements as stated in this plan and in the EHNP ESMF as well as the applicable rules and regulations. Contractor shall nominate and hire qualified and trained personnel to implement the project activities including Environmental, Social, Health and Safety ESHS Officer responsible for following up closely the activities onsite and to ensure adequate protection for the Environment, Assets, Communities, and Workers form any adverse impact that might be resulted from project implementation. Meanwhile the

Entity / Position	Responsibilities
	contractor shall ensure all workers involved in the project implementation are covered with insurance for any work-related injuries or incidents.

5.3. ESMP Implementation Cost

ESMP implementation cost is estimated as below:

No	Implementation Cost	USD
1	Production and dissemination of communication materials on the safeguards and GRM requirements at the project site	500
2	Travel to for monitoring and reporting purposes where needed	2,000
3	Assignment of the Environmental and Social safeguards staff for contractors. Provision of training and awareness sessions on OHS to the project workers.	5,000
	TOTAL	7,500

6. Methodology and Considerations

The following were considered during the development of project documentations including this plan:

- Review of existing condition at the hospital site to evaluate the current issues and to propose the necessary solutions and mitigations
- Site inspections, visits, data collection and tests
- Stakeholders communication including the official authorities
- Assessment and study details
- Identify the potential impacts on the healthcare service, environment, and community

7. Communication and Consultation

7.1. Project Preparation and Design

During project preparation and design phase, the proposed project activities and implementation arrangements have been discussed, communicated, and agreed with the MoPHP, facility and local responsible authorities.

The communication and consultation on the project components and expected benefits involved the healthcare workers, nearby communities, and beneficiaries.

EHNP team maintained the necessary arrangements to address the World Bank WASH team comments and recommendations in addition to include the environmental and social safeguards requirements. In other hand and as part of the consultation with communities and beneficiaries, virtual communications have been implemented to evaluate the overall satisfaction and acceptance of the proposed intervention. The interviewees were briefed with the project interventions, proposed safeguards as protection from any adverse impact. List and designation of the interviewees is available in the annex 1 along with the main issued discussed.

The concerned individuals who interviewed were encouraging the implementation of the project components (particularly the rainwater channel modification) within the Bajil Hospital at the soonest as this will be outstanding achievement.

The requirements and mitigations indicated in this plan have been addressed with the official authorities and will be furtherly communicated to the contractor and involved personnel.

This ESMP will be translated to Arabic and both English and Arabic versions will be disclosed in the World Bank and WHO EHNP project website.

7.2. Project Implementation

Communication with the involved parties during project implementation will be maintained as well to ensure safe and smooth implementation of the project components. EHNP team will maintain the necessary arrangements with contractor, Engineers, MoPHP and facility authorities to follow up closely the activities implementation as per the proposed design taking in consideration the safeguards and mitigation requirements indicated in this plan as well as the EHNP ESMF.

8. Grievance Redress Mechanism GRM

8.1. Introduction

The main objective of a Grievance Redress Mechanism GRM is to assist to resolve complaints and grievances in a timely, effective, and efficient manner that satisfies all parties involved. Specifically, it provides a transparent and credible process for fair, effective, and lasting outcomes. It also builds trust and cooperation as an integral component of broader community consultation that facilitates corrective actions.

The project within Bajil Hospital will be implemented under the Emergency Health and Nutrition Project EHNP and the EHNP GRM channels have been previously disseminated and circulated via several means including the social media channels and posts at the supported facilities. Those channels will be made available to receive any complaints or requests related to the proposed intervention in the Bajil Rural Hospital. The GRM channels will be posted and visible around the project site and will be communicated regularly through the social media the Supervision Engineer assigned from the project side to supervise the work implementation.

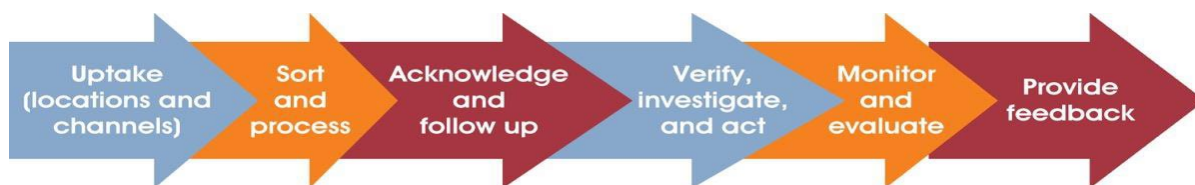
8.2. Grievances Management

The EHNP GRM channels detailed hereafter are managed by the EHNP GRM officer who will be responsible for following up the grievances received and ensure adequate follow-up and closure of all grievances. The grievances will be referred to relevant officer in the organization. Unsolved complaints are escalated to the project management level (or WHO management level) as appropriate.

The GRM will be accessible to a broad range of project stakeholders who are likely to be affected directly or indirectly by the project. These will include beneficiaries, community members, project implementers/contractors, civil society, media—all of whom will be encouraged to refer their grievances and feedback to the GRM. All stakeholders could submit their comments or grievances anonymously through the complaint boxes, an email, or through the call. They also could request that their name be kept confidential.

The grievance raised will be recorded within one day. While the timeframe for redress will depend on the nature of the grievance, health and safety concerns in work environment or any other urgent issues will be addressed immediately. The complainant can appeal if he is not satisfied and reopen the complaint.

GRM process is detailed in the following chart:



Meanwhile, the Supervision Engineer onsite will be responsible for handling and raising any project related grievances (especially from the complaint boxes) to the EHNP GRM officer.

<u>EHNP- GRM channels</u>	
Toll free number	8004090
Email	YEMGRMehnp@who.int
Complaint Boxes	Inside the HF

8.3. SEA/SH Grievances

SEA/SH related grievances that received and related to the project will be handled by the EHNP GBV officer with strict confidentiality in accordance with the Good Practice Note on Addressing Sexual Exploitation and Abuse in World Bank-Financed Projects². This will include referrals to GBV service providers, if the survivor approves, to support as appropriate. All reports will undergo Investigation and appropriate action.

Relevant training has been provided on the GBV SEA/SH grievances appropriate handling method as well as the referral channels. This included training on how to collect SEA/SH cases confidentially and empathetically (with no judgement). The guidelines on how to address SEA/SH grievances in accordance with Good Practice Note on Addressing Sexual Exploitation and Abuse in World Bank-Financed Projects are integrated in the training provided for any focal points that are part of the SEA/SH grievances mechanism and resolution mechanism.

WHO's fundamental principles of integrity, accountability, independence, impartiality, respect, and professional commitment are documented in the Code of Ethics and Professional Conduct. WHO has no tolerance for physical violence and sexual harassment and has clear guidelines and recourses for its staff and collaborators to make available reporting and protection mechanisms and address any acts of physical violence and sexual harassment. The objective of this policy is to address the behavior of WHO staff and collaborators towards third parties and to protect vulnerable populations in the countries that WHO serves from sexual exploitation and abuse at the hands of WHO staff and collaborators in order to ensure the integrity of WHO's activities.

WHO makes available channels to facilitate the reporting of such violations, giving priority to SEA, and is committed to ensuring prompt and effective response to SEA reports (i.e. investigate and sanction as appropriate), not retaliating and defending/protecting staff who come forward. In addition, WHO is committed to acting to prevent SEA from occurring in the first place by putting in place a communication and raising awareness plan, and monitoring/tracking information concerning SEA.

Any suspect misconduct or SEA issues could be reported by the staff or beneficiaries to WHO's [Integrity Hotline](#) which facilitates the reporting across the Organization. It is an independent service which takes in reports in confidence and, where warranted, **anonymously**. A [web intake form](#) and an email address (ethicsoffice@who.int) are available to report SEA issues and it will be dealt as a priority, and WHO's

² [Good Practice Note – Addressing SEA/SH in World Bank Financed Projects](#)

relevant Regional Directors and the Director-General will be informed immediately upon receipt of such a report.³

9. Environmental and Social Management at Project Site

9.1. Introduction

In general, the project components (rainwater channel modification and ground tank implementation) will have positive Environmental and Social Impacts as it will enhance the rainwater drainage around the hospital as well as enable sufficient provision and storage capacity of water for the facility. Additionally, the health services provision to the communities will be sustained and there will be no suspension resulted from any natural environmental events or temporary water supply cutoff.

This section, however, details the negative or positive potential impacts of the project during the implementation stages in addition to the applicable mitigation measures. The potential negative impacts of the project expected to be site based, localized and with temporary Environmental and Social effect. Screening of project activities as per the requirements of EHNP ESMF has been performed and the screening form is available in the annex 2.

Contractor shall implement all safeguards requirements as included in this plan and any other project documents by qualified and trained personnel and Any violations to the project safeguards requirements during the implementation various stages will lead to penalties against the contractor.

9.2. Monitoring and Reporting

Monitoring of the safeguards implementation onsite shall be performed in daily basis by the Supervision Engineer assigned from the EHNP project side as well as the visits of EHNP safeguards team where necessary. Regular progress reports shall be issued on the implementation status and shall address / overcome any challenges in the implementation. Such reports need to include any deviations or anomalies with the necessary corrective and preventive measures.

From the contractor side the safeguards implementation monitoring shall be performed by dedicated and qualified ESHS officer assigned permanently for the project.

Contractor and Supervision Engineer are required to report immediately, to the EHNP responsible officer, any incident or accident in relation with the project activities; the event then shall be reported to the World Bank within 48 hours.

9.3. Project Potential Risks and Impacts

I. Water and Landscaping

Contractor shall ensure all materials that will be used in the civil work activities are sourced from authorized quarries. Usage of explosives, child or forced labor is prohibited to source any of the civil work materials. Only limited amount of the civil work materials shall be stored within the work area that is enough for the daily work and contractor to avoid excessive storage of such materials in the hospital yards.

Solid waste generated from the project will be considered as domestic solid waste and construction waste. Disposal of such waste in an uncontrolled way might result in soil contamination or might affect the human health at the area.

Wastewater will be generated from the civil work activities that may cause soil contamination when it is not properly managed.

³ [WHO Sexual Exploitation and Abuse Prevention and Response, Policy and procedures, March 2017](#)

Contractor, Supervision Engineer, and official authorities will be required to follow up closely the implementation of waste management process and disposal according to the project requirements and the applicable rules and regulations. In addition to reduce the waste generation to the possible extent and to ensure all recyclable waste is properly segregated and treated.

Waste management guideline is available in Annex 3 for the contractor to ensure appropriate waste management in the project site.

II. Ambient Air Quality

The potential impact on air quality during the project civil work is the generation of dust from different site activities such as excavation, concrete work, cleaning, ... etc. The generated dust might impact the health of workers, patients, healthcare workers and potentially the neighboring communities (when the work is implemented at the areas adjacent to the hospital external walls).

Although painting work is limited, the emitted volatile components might cause irritation to eye and respiratory system of the workers.

Mitigation measures required for this component are to limit the dust generation during civil work or excavation by spraying water in addition to install barriers around the civil work areas to avoid any emissions to the occupied premises. Additionally, provision of the necessary PPE to the workers as well as regularly conducting the appropriate training and supervision.

III. Natural habitats; Flora and Fauna

The project activities are limited in the boundary of Bajil health facility, additionally the scope of work included the provision of planting green and tress within the hospital vicinity.

IV. Noise and visual impacts

The different activities that will be implemented during the civil work activities will potentially have noise and visual impact risks. This could be resulted from machinery movement, concrete work, excavation, and the building activities. The health service provision as well as the nearby communities (when the work is implemented at the areas adjacent to the hospital external walls) might be temporarily disturbed because of generated noise.

Noise generating activities will be avoided in the peak hours of health service provision and the contractor will ensure the integrity of equipment and the provision of PPE to the workers. Additionally, the barriers surrounding the work area will be implemented to help in decreasing the impact on the health service provision or the neighboring communities.

V. Archeology and Cultural Heritage

The project will be implemented within the boundary and vicinity of the Bajil Rural Hospital in which it is not considered as archeological or cultural heritage area, therefore no impact is expected on this component.

VI. Transportation and Vehicle Movements

Vehicles and equipment movement within the civil work areas might lead to routs obstruction and injuries to the workers or to the communities, therefore the following measures at minimum shall be implemented:

- Dedicated routes for the movement of machinery, vehicles, and equipment away from the patients flow or emergency access.
- Trained and qualified operators / drivers.
- Movement within the hospital yards needs to be always guided by banks man for signaling.

- The dedicated route shall be arranged away from any excavated or work at height area and no movement is allowed during the nighttime.
- Regular checks and inspections for the vehicles or equipment to confirm the integrity, records to be kept available for any inspection by the project team.
- Reduction of any route closure times, if any, and considering the health service provision as priority
- Any alternative routes shall be provided with adequate lighting and signage.

VII. Occupational Health and Safety

Occupational health and safety risks might be resulted and affected the project workers if the necessary safeguards are not well implemented. Those risks are associated with the; excavation work, vehicles movement, work at height, confined spaces, cementing / concrete work, and the other civil works within the project scope.

The magnitude and impact of those risks is expected to be low and this is subjected to the implementation of necessary mitigations such as: activities risk assessment by the contractor, provision of the necessary PPE and training, adequate supervision, prevention of any soil or structure collapse, provision of barriers around the civil work areas, safe access and egress to the excavated areas, correcting and reporting the unsafe condition within the project site.

COVID-19 infection transmission among the workers could be resulted and the contractor will be responsible for providing the necessary PPE, handwashing facilities, disinfectants as well as any other infection prevention and control measures. Contractor in other hand shall ensure all workers onsite are fit, not developing any COVID-19 symptoms, and provided with the necessary awareness, training, and communication in regular basis.

Contractor workers and work areas shall be kept separated, to the best possible extent, from any interaction with the healthcare services provided within the hospital.

The contractor shall ensure all workers involved in the project implementation are covered with insurance for any work-related injuries or incidents.

VIII. Community Health and Safety

In general, the project implementation will cause positive impact on the community as it will ease and ensure sustainable healthcare services through the hospital.

In other hand, some negative impacts might be resulted from the civil work activities such as dust, noise, vehicle movements and disturbing temporarily the healthcare services. Movement restriction in some areas might be resulted as well and there will be a need for alternative routes provision. Patients, healthcare workers, and visitors might be affected or injured from the exposure to civil work or excavation activities, therefore all work areas (civil or excavation areas) shall be controlled, provided with adequate barriers, sufficient lighting during night, and clear signs / instructions to avoid any unauthorized entry.

Upon the completion of rainwater channel modification, the rainwater quantities will not have an impact on the neighboring communities and households as it will be discharged to the same discharge point before modification (street in the west side of the hospital). Continuous cleanliness of the channel shall be maintained to avoid any blockage, stagnant water, or waste cumulation and this arrangement shall be maintained by the facility management.

IX. Employment Opportunities

Employment opportunities will be generated to the local society from the project implementation. This will have a positive impact on society' economic especially with the current crisis in the country whereas limited private sector employment opportunities and irregular salary payment to the governmental workers.

X. Labor Issues, GBV and SEA/SH

All project workers are expected to be local and from the same communities. Labor risks including forced labor, child labor, GBV, SEA and SH are not expected or with low magnitude and impacts, and to mitigate this risk the requirements will be included in the contracts and Code of Conduct CoC in which the contractor will be obliged to follow along with his workers. Enforcement of CoC implementation among the contractor and workers will be ensured by the project safeguards and GBV team.

Register of the workforce detailing the necessary personnel information including the age in addition to screening / verification of labors involved in the project activities shall be implemented by the Supervision Engineer and any finding shall be reported immediately.

In addition, the EHNP GRM channels will be made available for contractor workers as well as any concerned party to raise any grievance related to the labor issues during the project implementation.

9.4. Environmental and Social Risks Assessment and Mitigations

No	Environmental / Social Aspect	Potential Impact	Significance	Risk Response and Mitigation Measures	Action by
1	Water and Landscaping	Soil contamination	Low	<ul style="list-style-type: none"> Implementation of waste management process and disposal according to the project requirements and the applicable rules and regulations. Reduction of the waste generation to the possible extent and to ensure all recyclable waste is properly segregated and treated. Eliminate any waste disposal to the water ways or within the health facility boundary. Contractor to assign of dedicated waste collection team provided with the necessary training and Personal Protective Equipment PPE. Dedicated waste collection area shall be arranged by the contractor and to include adequate number of bins for each type of waste. Waste segregation at sources and the waste collection outside the hospital yards shall be performed at least twice a day to avoid any waste cumulation within the hospital. Work areas shall be kept free of any debris, scattered litters, or any type of waste at any point of time. Only limited amount of the civil work materials shall be stored within the work area that is enough for the daily work and contractor to avoid excessive storage of such materials in the hospital yards. 	Contractor
		Improper waste management and disposal	Low		
		Human health and safety	Low		
2	Ambient Air Quality	Human health impacts from generated dust	Low	<ul style="list-style-type: none"> Spraying water regularly to reduce dust generation. Install barriers around the civil work areas to avoid any emissions to the occupied premises. Dust generated activities durations and timing to be arranged in accordance with the health service provision and in coordination with the facility management. Additional protection around the kitchen and healthcare provision areas needs to be implemented to avoid any dust ingress such as curtains around the entrances, windows, or any other openings. Provision of the necessary PPE to the workers as well as regularly conducting the appropriate training and supervision. 	Contractor
		Effect on the facility Healthcare services	Moderate		
3	Natural habitats; Flora and Fauna	NA	NA	NA	NA

No	Environmental / Social Aspect	Potential Impact	Significance	Risk Response and Mitigation Measures	Action by
4	Noise and visual impacts	Nuisance to the nearby facilities and personnel Disturbance of the hospital services	Low	<ul style="list-style-type: none"> Noise generating activities will be avoided in the peak hours of health service provision and the timing to be arranged with health facility management Usage of noise reduction tools and equipment. Contractor will ensure the integrity of equipment and the provision of PPE to the workers The barriers surrounding the work area shall be installed to help in decreasing the impact on the health service provision or the neighboring communities. 	Contractor
5	Archeology and Cultural Heritage	NA	NA	NA	NA
6	Transportation and Vehicle Movements	Personal injuries Damage to the assets or equipment	Low	<ul style="list-style-type: none"> Dedicated routes for the movement of machinery, vehicles, and equipment away from the patients flow or emergency access. Trained and qualified operators / drivers. Movement within the hospital yards needs to be always guided by banks man for signaling. The dedicated route shall be arranged away from any excavated or work at height area and no movement is allowed during the nighttime. Regular checks and inspections for the vehicles or equipment to confirm the integrity, records to be kept available for any inspection by the project team. Reduction of any route closure times, if any, and considering the health service provision as priority. Any alternative routes shall be provided with adequate lighting and signage. 	Contractor
7	Occupational Health and Safety	Workers Injuries	Low	<ul style="list-style-type: none"> Provision of the necessary PPE to the workers as well as regularly conducting the appropriate training and supervision. Provision of handwashing facilities, disinfectants as well as any other COVID-19 infection prevention and control measures. Install the protection in any excavated area to prevent any soil collapse. Provide safe egress and ingress from any excavated area. Movement of vehicles and equipment shall be properly controlled in dedicated routes by certified operators. To properly arrange the work area and avoid any slip/trip or fall hazards. Separate access for contractor workers to the work areas without any interaction with the healthcare activities (to the possible extent). 	Contractor

No	Environmental / Social Aspect	Potential Impact	Significance	Risk Response and Mitigation Measures	Action by
				<ul style="list-style-type: none"> Contractor to prepare the necessary plans and measures to prevent any hazardous condition that affect the workers occupational health or safety. 	
8	Community Health and Safety	Sustainable healthcare services provision to the communities	Positive	NA	Health facility Management
		Affect human health and safety by the waste, blockage, or stagnant water at the rainwater channel	Low	<ul style="list-style-type: none"> Rainwater channel to be checked and kept free of any blockage / waste or pollutants at any point of time. 	
		Human injuries from exposure to the vehicle movement, civil or excavation work	Low	<ul style="list-style-type: none"> All work areas (civil or excavation areas) shall be controlled, provided with adequate physical barriers. Sufficient lighting during night, in addition to clear signs / instructions to avoid any unauthorized entry to the work areas. 	Contractor
		Restricted movement within the hospital premises	Low	<ul style="list-style-type: none"> Alternative and safe routes or walkways shall be provided for any access blocked by the project activities, safe patients flow shall be ensured. Adequate lighting, signage and protection for any alternative routes shall be implemented. Priority shall be given to the patients flow and emergency access at any point of time during civil work activities. Routes closure or access blockage to be minimized and the work areas shall be categorized and divided in coordination with the health facility management. 	Contractor
9	Employment Opportunities	Employment opportunities will be generated to the local society from the project implementation activities	Positive	NA	NA
10	Labor Issues	Labor influx, child labor, forced labor GBV, SEA/SH	Low	<ul style="list-style-type: none"> Contractual obligations to reduce the labor issues as well as SEA/SH risks. Enforcement of the CoC implementation for GBV- SEA/SH among contractor and staff. Labor register to be maintained and updated by contractor to include necessary information as well as labors' age. Labors screening and age verification at work site by the Supervision Engineer and to report immediately to PMU any observed deviations. EHNP GRM channels will be made available to contractor workers as well as any concerned party to raise any grievance related to the project implementation. 	Contractor

Significance Rating	High	Moderate	Low	Positive
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Annex 1 Consultation with Beneficiaries / Community members

The Consultation and communication with the community members as well as the hospital workers aims to:

- Providing briefing on the proposed intervention components.
- Discussing project risks, impacts, and proposed mitigations.
- Evaluating the overall satisfaction and acceptance of the proposed intervention in Bajil Rural Hospital.
- Gathering recommendations and suggestions that could improve the project implementation.

List of interviewees from the Bajil Rural Hospital and the neighboring communities is as below:

No	Name	Gender	Designation
1	Dr. Nabil Sharah	Male	Pharmacy Supervisor
2	Dr. Arafat Mohamed	Male	Doctor / Neighborhood Resident
3	Ali Hasan	Male	Neighborhood Community leader
4	Fatoom Bahr	Female	Doctor
5	Aziza Munasar	Female	Midwife
6	Hassan Alharazi	Male	Doctor
7	Samira Imam	Female	Nurse / Neighborhood Resident
8	Taha Ahmed Mohamed	Male	Neighborhood Resident
9	Abkar Saleh	Male	Neighborhood Resident

Main issues raised by the individual are as below:

- The accumulated rainwater from the channel to the hospital premises is affecting badly the operation of the hospital.
- There is an immediate need to resolve this outstanding issue in regards the rainwater channel to ensure the service continuity within the hospital and to avoid further degradation to the hospital premises and equipment.
- During the flood of rainwater from the channel to hospital premises several equipment damaged and many of the patients also affected.
- We have experienced previously flood from the rainwater channel to the hospital premises, immediate and appropriate action is needed.
- If the rainwater channel issue solved within the hospital, there will be smooth flow downstream the channel in the nearby streets.
- Potable water to the hospital is not sustainable and sometimes the hospital services in affected by this issue.

Annex 2 Subproject Screening Form

B1- Screening Checklist for WASH Intervention in Health Facility by WHO/UNICEF

قائمة الفحص الخاصة بالتدخل في مجال المياه والصرف الصحي والنظافة الصحية في المرفق الصحي من قبل منظمة الصحة العالمية / اليونيسيف

NOTE: Any subproject that triggers Physical Cultural Resources OP 4.11, Involuntary Resettlement OP 4.12 and/or International Waterways shall be excluded.

ملاحظة: يستثنى أي مشروع فرعي يؤدي الموارد الثقافية المادية أوب 4.11، إعادة التوطين القسري أوب 4.12 و / أو الممرات المائية الدولية.

Project Name: Bajil Hospital / Bajil / AL-Heidaidah ...Date

15-February-2021

Project ID:.....

Aspect/1s of EA	Checklist questions Will the new health Unit? هل الوحدة الصحية؟	Yes,	No	Additional data needed
Sources of Impact	1. be an extension of an existing one امتدادا للوحدة القائمة	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2. raise land ownership problems and potential impacts to the use Of land (including encroachers in ROW or public land) ترفع مشكلات ملكية الأراضي والتأثيرات المحتملة على الاستخدام من الأراضي (بما في ذلك المتعددين في رو أو الأراضي العامة)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	3. be run by sufficiently qualified personnel; have qualified WASH personnel . يديرها موظفون مؤهلون بما فيه الكفاية؛ لديها موظفين مؤهلين في مجال المياه والصرف الصحي والنظافة الصحية	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Receptors of Impact	4. affect water sources تؤثر على مصادر المياه	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	5. affect sites of historical or cultural importance تؤثر على المواقع ذات الأهمية التاريخية أو الثقافية	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	6. affect agricultural land تؤثر على الأراضي الزراعية	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	7. affect the life of surrounding human settlements تؤثر على حياة المستوطنات البشرية المحيطة	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	8. affect the life of plants or animals of special importance تؤثر على حياة النباتات أو الحيوانات ذات أهمية خاصة	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

9. be a source of hazardous solid, liquid or gaseous waste (e.g. infected syringes or bandages, expired medicines, chemicals, gases, etc.)

أن تكون مصدرا للنفايات الصلبة أو السائلة أو الغازية الخطرة (مثل الحقن أو الضمادات المصابة، والأدوية المنتهية الصلاحية، والمواد الكيميائية، والغازات، وما إلى ذلك)

10. during construction, present a significant pollution hazard to workers and local communities

أثناء البناء، تشكل خطرا كبيرا على التلوث على العمال والمجتمعات المحلية

11. once operational, present a significant pollution risk to potable water supplies

بمجرد تشغيلها، تشكل خطرا كبيرا على تلوث إمدادات المياه الصالحة للشرب

12. not disturb the social structure of the surroundings

لا يزعج الهيكل الاجتماعي للمحيط

13. be likely to require mitigating measures that result in the project being financially or socially unacceptable

من المرجح أن تتطلب تدابير تخفيفية تؤدي إلى عدم قبول المشروع ماليا أو اجتماعيا

14. require safety instructions with regards to the disposal of hazardous waste

تتطلب تعليمات السلامة فيما يتعلق التخلص من النفايات الخطرة

15. have its own water resource

لديها موارد مائية خاصة بها

I recommend that the subproject will have no significant adverse environmental impacts. وأوصي بأن لا يكون للمشروع الفرعي آثار بيئية سلبية كبيرة.



I recommend that the subproject may have significant adverse environmental impacts and requires further analysis وأوصي بأن يكون للمشروع الفرعي آثار بيئية سلبية كبيرة ويتطلب مزيداً من التحليل



All the required mitigating measures have been included within the design and contract conditions for the construction and operation phases.

وقد أدرجت جميع التدابير التخفيفية المطلوبة ضمن شروط التصميم والعقود الخاصة بالبناء ومراحل التشغيل.



Name and signature of YEHNP engineer

date

Name and signature of environmental specialist

date

Eng. Abdulkudus Al-Sharafi

15-February-2021

Annex 3 Waste Management Guideline

1. Introduction

This procedure is meant to provide the necessary guideline to the contractors onsite on the appropriate management and disposal of the generated waste from rehabilitation site at the supported facilities under EHNP. This procedure includes guidelines on the types of generated waste, segregation, storage, and disposal methods.

Contractor is responsible for implementation the waste management at the project site as per the applicable rules and regulation and shall avoid under any circumstances dispose the generated waste in a way that could result in harm to the environment or communities.

Storing materials delivered to site carefully to minimize potential damage and creation of waste (off ground storage, maintain original packaging, covered protection from the weather and protection from collision by vehicles).

The main principles of effective waste management in the project site are:

Reduce: efficient use of resources to eliminate or reduce the generation of waste

Reuse: eliminate the waste disposal or incineration by reuse the generated waste

Recycle: recycle the generated waste and avoid disposal or incineration

2. Storage of hazardous substances and wastes

Storage and handling of hazardous substances

Substances that may harm people or the environment shall be handled and stored in a way that prevents accidental release.

- drip trays shall be placed under leaking under generators, vehicles, and other equipment to prevent spills of hydrocarbons reaching the soil or watercourses.
- storage tanks shall have secondary containment, so that leaking liquids may be collected in the event of a failure. Secondary containment should ideally have a capacity of at least 110% of the holding capacity of the tank it is protecting.
- to avoid leaks, proper funnels should be used when decanting to other containers. It is recommended to use a hand pump rather than a funnel and smaller containers for frequent/routine transfers from one container to another (or to a vehicle tank).

Waste storage areas shall be provided on site:

- enough space should be allocated on site for the waste expected to be generated,
- storage areas shall be indicated on site plans for communication purposes,
- storage areas shall have clear signage to ensure different wastes are stored in the correct place,
- storage area shall be enclosed to prevent waste escaping – i.e. spread of waste by wind-blown; if possible covered skips are suggested to be used,
- if possible, waste should be protected from the rain fall/water ingress,
- waste storage shall not be in the area prone to flooding or on the slope,
- location of the waste storage should be away (min 30 m) from human settlements, animal pastures, water bodies, water sources etc

Hazardous wastes shall not be mixed with non-hazardous waste:

- organic waste shall not be mixed and stored with non-organic waste,
- hazardous wastes shall be stored in suitable containment, on impermeable surface

3. Waste segregation, treatment, and disposal

3.1 Types of waste

- Organic waste
- Inert waste - materials that do not cause environmental pollution or harm to human health or endanger the quality of any surface water or groundwater when deposited in a landfill under normal conditions. These include rocks, ceramics, concrete, masonry, and brick rubble.
- non-hazardous waste - include timber and bitumen
- hazardous waste - waste that is deemed to be harmful to life and/or damaging to the environment. It may be corrosive, reactive, explosive, oxidizing, carcinogenic or flammable i.e asbestos, acids, alkaline solutions, oily sludges, waste oils and wood preservative

3.2 Waste Reuse / Recycle

To the possible extent, the construction and demolition debris should be prevented from disposal into the landfills. This can be achieved by reuse and recycle materials on site. Following examples present how materials can be re-used in which some of the items are applicable to the Bajil Rural Hospital intervention:

- excavated stone can be used to build retaining wall in place of the gabions; this allows for cost saving on installation of gabions and disposal of the stone,
- concrete from demolition of existing structures can be crushed and then used as general fill material – i.e. concrete can be used on haul roads and when these are removed, it can be used as a capping layer for the new footpaths.
- trees removed as part of construction can be shredded and reused as mulch, which is used for landscaping and promoting the growth of new habitats
- excavated material can be reused for backfilling, this eliminates the need to import other material onto site saving time and money.
- excavated material (gravel, stone, sand) or other suitable construction waste (brick, concrete) can be used as cover material at the landfill, backfill at new construction sites, for the reclamation of wetlands, for the filling of low-lying areas subject to regular flooding or can be sold to other engineering contractors.
- scrap metal - has a residual value and can be sold to the scrap metal dealers
- the local waste market should be investigated - there may be potential for recovery and reuse of materials from the waste such as recycling of paper, metals, glass, and plastic.

3.3 Waste Segregation

Segregation is an important step in the waste management procedure as it will help in the recycling and treatment process. It will also ensure no contamination is resulted from the generated hazardous waste:

- provision of designated waste bins and areas as per each type of generated waste.
- briefing and awareness to staff on the segregation requirements
- organic waste SHALL be segregated from non-organic waste
- hazardous waste SHALL be segregated from non-hazardous waste
- allocate enough space for the storage and ensure regular transportation.

3.4 Waste Disposal

Disposal of waste from site must only be carried out as per the applicable rules and regulations in an authorized and licensed areas / facilities.

It is essential to carry out review of the local waste practices - what waste facilities are available in the country/governorate. No extension or implementation for new waste disposal areas is allowed under the project.