Gaza Solid Waste Management Project
GSWMP

Environmental & Social Management Plan
For
The Permanent Disposal of Subsoil

Addendum No. 4 to the GSWMP Environmental & Social Impact Assessment

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Table of Acronyms
AFD French Development Agency
ESIA Environmental and Social Impact Assessment
ESMP Environmental and Social Management Plan
GRM Grievance Redress Mechanism
GSWMP Gaza Solid Waste Management Project
JSC-KRM Joint Service Council for Solid Waste Management in Local Governorate Units of Khan Younis, Rafah and Middle Area
KYWWTP Khan Younis Waste Water Treatment Plant
MDLF Municipal Development and Lending Fund
Overview and Sub-Project Description

This document addresses the stockpiling of excess subsoil resulting from the excavation works at the new Sofa Landfill at Al-Fukhari. An estimated 1.5 million cubic meters of benign subsoil will result from excavating the main landfill cell (cells 1A and 1B) according to the design prepared by the Joint Venture of Antea Group France, Engicon Jordan, and EMCC. The Contractor had stockpiled an estimated amount of 330,000 cubic meters of unconsolidated subsoil on-site that will be used later during landfill operations as daily cover material. The remaining amount considered as excess amounts of subsoil is planned to be transported to an off-site location. This ESMP addresses the stockpiling site of the new landfill funded by GSWMP: World Bank Group and the French Development Agency (AFD). It is an Addendum to the ESIA completed in September 2012 for the proposed sanitary landfill in Al Fukhary (Sofa).

The proposed permanent disposal site is located approximately 10 km from the Sofa Landfill Site. Figure (1) shows location for the new subsoil disposal site in relation to the Sofa dumpsite, and Al Fukhary Sanitary landfill (under construction). The disposal site is not used for agriculture. It used to be an Israeli settlement in the past. The land is currently vacant, and it is sufficiently large to accommodate excess subsoil. It is expected to use about 60,000 m² of the land with a height of 6m above the ground. The subsoil will be smoothened and leveled and the side slope will be gentled at one to two. A fence is installed at the side of the street, and no access could be possible other than through the main gate. Upon completion of disposal, the subsoil will be compacted and seeded with alfalfa to reduce dust emissions and soil erosion. The site is not proposed to be used for any economic or agricultural activities.

Figure 1. Satellite Photo (Google Earth) of the Sanitary Landfill and Surrounding Area
The proposed transfer route will pass through 10 km of roads with different conditions and widths ranging between 8 – 34m. The route passes firstly through 2.5 km of sofa access road (width 8 m) used mainly for Rafah solid waste trucks going to the Sofa dump. It provides also access to agricultural lands to farmers. Subsequently, the route passes through 500 m of main Salah Al Dien Street street (Width 34m) before entering a sub-paved road towards the western direction (Width 12 – 15m). Finally, the route finishes in unpaved road (about 1,000m) close to the disposal site (Image 1). Traffic on the described roads is not heavy except for the Salah Al-Dien Street considered main street with heavy traffic during the day. The sub paved road is used for some farmers to access to their lands and it is used to pass to western side of Rafah City. There are no schools in the proposed route, and most of the route is vacant without any special activities.
ESMP Objectives
This report is prepared for carrying out an Environmental and Social Management Plan (ESMP) for permanent stockpiling site. This will include the proposed mitigation and monitoring measures based on the existing baseline information, and the expected potential impacts significant on the physical environment, biological environment, socioeconomic, cultural and heritage and human health. This report aims to be in conformity of the World Bank safeguard policies, taking into consideration the environmental and social regulations of the Palestinian Environment Quality Authority (EQA). Final draft of the ESMP will be disclosed in electronic format on MDLF website; JSC Facebook page; and the World Bank InfoShop. The ESMP document in hard copy format will be available in MDLF office – Khan Younis Branch; and JSC-KRM main office.

1. Baseline Conditions
Most of the environmental and social baseline data were available in the ESIA of the GSWMP\(^1\). The data were updated in the recent ESMP for the Khan Younis transfer station. The environmental baseline data that were studied include: meteo-climatologically conditions; ambient air quality; soil characteristics; geological survey; water resources; geophysical survey and fauna and flora. The social baseline data include also the neighboring communities of the nearby Al Namswai neighborhood, Khan Younis city.

The proposed stockpiling site is a government owned empty and uncultivated land. The disposal area is characterized by natural sand dunes - Image (2). The dunes are not under environmental protection. There are not valuable flora or fauna species or habitats within the disposal site. The site is not used for agriculture. The site is sufficiently large to accommodate excess subsoil, it is vacant and has only two small greenhouses used for cultivating vegetables for personal use of the guards of the location. It is easy to avoid the greenhouses during downloading the extracted subsoil since the land space is large enough to avoid the greenhouse spot. The greenhouses will be avoided and no impacts to the greenhouses are expected, inspections will be conducted to ensure full commitment to the avoidance of the two small greenhouses.

Image 2. Site proposed for disposal of subsoil excavated from Al Fukhary landfill

The average annual precipitation in the area is about 256 and 273 mm in 2015 and 2016, consequently. Most of the precipitation falls between December and March. Storms can occur in winter when maximum wind speeds reach about 18 m/s. In winter, the prevailing wind direction is SW with an average speed of 4.2 m/s and during summer the prevailing winds are from the NW sector.

The groundwater level is reported at the depth of 18 m in this area. The groundwater has high concentration of ammonia content, but acceptable level of chloride concentration (250 – 600 ppm). The nearest municipal groundwater well is Al Naem Well which is about 900 m far from the site. Soils texture in the surrounding area is mainly sandy to sandy loam.

The nearest residential area is far about 500 m from stockpiling site, and it is considered an illegal residential area. About 40 – 50 tents and small houses are present. The residents live in this area for more than 5 years. They are mostly unemployed. The stockpiling site is opposite to Al Rahma water reservoir located in the distance of 200 m.

2. Expected Impacts of Subsoil Disposal

It is estimated that the subsoil disposal process will last for about six months with a range of 300 round trip for transferring spoil per day (about 6,000 cu. m per day). This activity is expected to affect the surrounding environment primarily due to the dust emissions resulting from both the unpaved parts of roads leading to the disposal area, and the unloading and reshaping process itself. The agricultural lands along the way (around the unpaved parts of the road) are expected to be affected adversely by dust emissions. Dust emissions contain fine particulate matters that inhibit the normal respiration and photosynthesis mechanisms within
the plants leaves. The fine dust particulates are easily inhaled, even short-term exposure can cause respiratory problems and allergic reactions to humans. The workers/drivers are also expected to be exposed to dust emissions.

In general, movement of heavy vehicles, transferring earth material and the influx of relatively high number of dump trucks will affect the traffic on the proposed road. The Sofa Road has light civilian traffic, but it is used also for transfer of solid waste to the Sofa dumpsite. It is likely to result in temporary congestion and inconvenience to the neighboring farmers using it. Temporary traffic congestion is expected also at entering and exiting the excavation site at Sofa Road with the incoming municipal solid waste collection vehicles which still use the existing dumpsite. In the other hand, the transfer trucks are expected to use high quantity of fuel daily, and most likely the fuel filling point will be at the start point (Sofa Landfill); soil contamination could occur at the site due to spill of fuel which may require special measures to prevent it.

In the meantime, the stockpiling process and transferring the subsoil is expected to result in number of negative social impacts, most importantly, temporary inconvenience to the neighboring communities is expected due to movement of heavy vehicles in term of noise, dust and traffic matters. The route does not pass through densely populated areas or markets. On the other hand, the stockpiling process will create number of temporary jobs (especially drivers), Most of drivers are expected from the local community in the region.

The overall stockpiling process and transferring the subsoil is associated with safety concerns due to the long-travelled distance, the use of heavy vehicles, and the stockpiling process over various heights and side slopes.

The potential environmental impacts after completion and levelling of the subsoil (spoil) is limited to soil erosion and dust arisings during dry and windy weather.

3. Mitigation Measures

Mitigation measures follow the approved ESMP provided in the works contract of the new landfill construction with additional specific measures as provided in this ESMP. The excavation works of the new sanitary landfill will consider a separate stockpiling of the first meter topsoil and subsoil to limit the damage of its richness in the biological activity. The topsoil being a valuable natural resource is planned to be applied for agricultural uses by farmers in agricultural fields located near the sanitary landfill (it will reduce the volume of stockpile). For all affected zones, work will be limited to day time to decrease noise pollution. Workers and drivers will follow the safety measures indicated in the approved Safety Plan of the aforementioned works contract including wearing the required protective gear including masks, and other safety measures will be implemented in term of side slopes of stockpile.

The traffic inconvenience is anticipated due to the heavy use of the Road during the stockpiling process, especially the Sofa Road. The main traffic affected group is the in- and out-coming solid waste transfer trucks. A daily presence by Rafah Municipality Staff and directing/monitoring vehicles will mitigate the traffic impact by managing timing of solid

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waste transfer truck and subsoil trucks. Other parts of route will be monitored and managed once a traffic jam is repeatedly noticed in any location. The pace of work will be decreased at the rush hours in order to prevent traffic jam. The workers involved in the transfer and disposal operations will be wearing masks to protect them from inhaling dust.

Water spraying will be applied to produce a hardened thin top layer that reduces windblown dust emission during the initial stockpiling process. Water spraying will also be applied on the sandy parts of the road. Disposal process shall also be carefully carried out to decrease potential negative impacts such as on-site dust emission, horizontal flux of dust to neighboring lands as shown in figure (3). All trucks transferring subsoil will be covered during their trips to decrease the blowing of soil particulates.

The complaints mechanism will be activated and ready to receive any complaints during the stockpiling phase, complaints will be treated as required. In addition, the community committee will conduct site visits during stockpiling period, and information will be shared regularly with the local community. JSC social specialist will conduct regular meetings and will involve the Municipality in communication with the local community and receive their feedback and remarks. The project environmental specialists will also include the monitoring of stockpiling activities in their normal monitoring tasks currently undergoing for the landfill construction activities and will observe and record impacts on the surrounding agricultural lands and enforce implementation of mitigation measures.

Mitigation measures after completion of transfer and disposal of subsoil (spoil) include levelling and partial compaction of the spoil body, seeding the site with alfa alfa during the rainy season. Alfa alfa will reduce subsoil erosion and emission of dust during dry and windy weather. After the first year, additional seeding will be applied in areas where alfa alfa did not grow sufficiently and left open areas.

Figure 3: Proposed Disposal Method

1. **Primary Row** of earth material stored in rotational manner around site, acting as barrier for horizontal dust flux resulting from **Secondary Row** stockpiling.
2. Repeat process with subsequent layers, as height progresses maintaining safe side slope.

Primary Row Secondary Rows

Cross Section

Top View

Lot Boundary Direction of Stockpiling Entrance
3.1. **Note on Grievance Redress Mechanism (GRM)**

There are several channels for receiving complaints from local community. Following is a summary of the GRM in use for the specific activity of earth material stockpiling, utilizing the existing grievance redress mechanism currently in use by the Joint Service Council (JSC-KRM).

A. **Venue:**

Al Fukhary site office has a complaint box that can be always used to receive written complaints. Other complain boxes are distributed in JSC-KRM offices and workshops in Khan Younis. Supervision Engineer at Al Fukhary site has always showed willingness to receive and communicate public inquiries, the same applies to the administrative staff of the contractor on the site. Overall the landfill construction site offices are well known to the surrounding community and can always be accessed for inquiries and complaints.

Al Fukhary is a small municipal area with low population, it enabled close and personal relationship between municipal employees and the population which is reflected clearly in the duties of the Mayor himself who is in personal and daily contact with his farmer community. Therefore, a main channel of complaints is the Municipality of Al-Fukhari, and the mayors’ office himself. Khan Younis Municipality will also accept any complaints by their complaint center, and it will transfer any related complaints to JSC-KRM.

Other channels can be reach online by JSC-KRM Facebook page, where it checked daily. Telephone and Email channels will also be available for any potential complaints. The communication details of JSC-KRM is clearly announced on the Facebook page for any potential complaints or even any inquires as shown in Figure (4), another banner will be installed in front of the stockpiling site and include information about the project and communication details. Figure (4) will be printed as a sticker and it will be stick on trucks, but this measure is expected to be not completed as the trucks are changed every few days based on the contractor demand in this project and other projects, so that some of trucks with stickers could be used in other projects.

![Figure 4: Communication details of JSC-KRM](image)
B. Complaints Handling and Follow-Up:

Grievances mechanism will be activated for the local community to receive any complaints related to permanent stockpiling site. For the whole project, GRM will be activated for the local community to receive any complaints related to permanent stockpiling site and the project at large. The system includes different channels, most importantly:

1- The complaint box: A complaint box will be installed in all the JSC facilities; these boxes will be supplied with an instruction board and hard copies of grievances application to be filled when there is a grievance to be submitted.

2- Using the Facebook page: by inviting the people to send their complaints using the JSC Facebook page since the website is still under construction, and the Facebook page will be announced in all the public meetings and on a board located besides the complaint box at the landfill camp.

3- Phone calls and emails: the instruction board above the complaint box will contain phone numbers of the JSC-KRM (Telephone: +97082076001, Fax: +970820776008) and the mobile number of the social specialist (+970597652008) and email address of JCKRM (jsckrm2014@gmail.com) and the email address of the social specialist (eqandeel.jsckrm@gmail.com). Those will also be disseminated to the public through the Project Facebook page and in community meetings.

4- Online application: a website for the JSC is under construction and it will contain a link to an online grievance application to be filled by the different communities all the time.

Acknowledgment for receiving the complaint will be offered to complainant in 2 business days from receiving and then 5 business days will be taken to resolve and close the complaints under the direct control of the projects and the contractors. Longer period might be needed to address complaints that are not under the direct autonomy of the project and in such cases, the complaint will be diverted to the concerned parties and feedback will be offered to the complainant accordingly.

As soon as the grievance received the following steps will be followed to apply the process:

1- Sort and process: the grievance will take a serial number. The compliant urgency will be checked using the priority sheet.

2- Acknowledge and follow up: the complainant will receive a confirmation SMS that his/her complaint was received and is being handled using the GRM process.

3- Verify, investigate and act: the PDSU-MDLF, and TOU-JSC teams will verify and investigate about the grievance in the field and send a reply back to the complainant to inform about the response and the solution, this will be according a certain time plan for every action as mentioned above.

4- Monitor and evaluate: the JSC-KRM social specialist will check the satisfaction of the complainant through monitoring plan and then record all the process in the monthly report.

5- In case, the complainant can declare about his/her dis-satisfaction with the response of the tier one channels mentioned above, and submit another complaint for a higher level in the JSC-KRM. The social specialist will report about the problem, its solution, the person/the department who contributed in solving the problem and then the comments of the complainant on the provided solution. The executive manager of the JSC-KRM will receive the report and investigate it, then take an action, and report it to the chairman of JSC-KRM, to be involved in the action.

Note: the chairman of the JSC-KRM is a Mayor who had authorization to take any action in the southern and middle governorates with cooperation with any other entity (municipality, governmental associations, NGOs,..), so involving the chairman will ensure the fairness of the solution.
4. Social Survey and community consultations

A questionnaire was prepared to collect the views of the surrounding population with regard to the activities of moving the extracted material from the landfill to the permanent stockpiling by the heavy vehicles. 20 questionnaires were distributed to the respondents around the route of subsoil transfer, knowing that questionnaires were hardly filled due to the absence of residential units in the targeted areas. The questionnaire contains major questions about the Air Quality, Transportation, Public Health and GRM as shown in Annex 1, respondents were also asked to suggest effective mitigation measures to mitigate the possible impacts. The results of the questionnaire are as follows:

Geographical Distribution of Respondents

Figure (6) shows that the geographical distribution of respondents around the project area, around the access road to the permanent stockpiling area. Around 65 % of targeted respondents live along the Sofa Access Road, and 35% live along Street No. 18 (Gezan Rashwan Area) and the unpaved road.

The respondents were distributed to all age groups youth and old persons living along the access road. The gender distribution had been taken into consideration, however, around
65% of participants are males while 35% of them are females as shown in Figure (7). Social survey targeted men and women above 15 years old. 10% of the participants are below 25 years old and 10% of them are more than 60 years old, while 30% of participants are between 25-40 years old and 50% of them are between 40 – 60 years old as shown in Figure (7).

![Figure 7. Gender among the local communities participated in the questionnaire](image1)

![Figure 8. Age distribution among the local communities participated in the questionnaire](image2)

**Employment rates of the sample**

Figure (9) shows that around 40% of the respondents revealed that they were not employed in any sectors while around 60% of them were employee and 25% are working in agriculture.

![Figure 9. Employment sectors of the local communities participated in the questionnaire](image3)

**Communities views about the impacts of the trucks movement:**

Respondents were asked about the anticipated impacts of trucks movement and if they suggest any mitigation measure to decrease the adverse impacts. Majority of the respondents said they will be affected by dust emissions and they suggest to restrict the movement of trucks without covering the subsoil to prevent dust emissions during transfer. Others suggests to spraying water especially in the unpaved part of the route and this should be in regular and frequent times. However, most of respondents do not think a traffic jam will be occurred in their regions and they have a previous similar experience with soil transfer from WWTP.
located east of Khan Younis. None of them know the source of soil and the client name, but only 20% know the contractor company name. Respondents were asked if they know how to submit a complaint, and it was found that 55% of respondents do not know how to submit a complaint and where, whereas the remaining 45% said they are aware that they can submit complaint to the Municipality of Khan Younis.

The total quantity of top soil resulted from construction of Al Fukhary landfill is about 20,000 m³. A consultation meeting was held with farmers in September 2017 in order to ask them if they are interested to transfer the top soil to their lands. Most of farmers were interested but they requested that the solid is transferred to their places.

Image 3. Questionnaire to the local communities at the project areas 12. October. 2017
5. Summary ESMP table

Table (1) provides the summary ESMP table for the stockpiling process. It includes measures that are currently applied during construction of the sanitary landfill) as well as measures specific to the stockpiling operation.

5.1 Monitoring of Effectiveness of Mitigation Measures

Implementation of the mitigation measures will be monitored during the stockpiling process by PDSU and TOU. Hardening of the top layer by levelling, light compaction, seeding and water spraying will be visually monitored on a daily basis during the works. The Environmental and Social Management Plan is considered a flexible and dynamic document which can be updated every time according to the situation and the new unforeseen impacts. New additional mitigation measures will be implemented and monitored when needed.
Table 1. Summary of Environmental and Social Management Plan for Permanent Disposal of Subsoil.

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</thead>
<tbody>
<tr>
<td>1. Spoil erosion and Flooding</td>
<td>Storage of spoil away from the drainage pattern.</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Once a week, Monthly for Same point vantage photographs</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td></td>
<td>Ditches around the access road of stockpile site directing drainage during rainy season away from Access road.</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td></td>
<td>Creating maximum1:2 side slopes of stockpile</td>
<td>Contractor</td>
<td>Measurements</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td></td>
<td>Seeding and maintaining alfa alfa after completion of disposal, levelling and light compaction of the spoil body.</td>
<td>Contractor, Khan Younis Municipality</td>
<td>Visual observations</td>
<td>Monthly</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td>2. Noise produced due to trucks operation</td>
<td>Limiting the stockpiling work to daytime only</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
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<td></td>
<td>Regular maintenance of trucks</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Twice a month</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td>3. Air quality contamination due to the stockpiling and trucks movement</td>
<td>Wetting of cover during windy or rainy conditions</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>In dry, windy days</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td></td>
<td>Covering the spoil transfer spoil in all days.</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>In dry and windy days</td>
<td>MDLF, JSC-KRM</td>
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<tr>
<td></td>
<td>Spraying water of stockpile during windy conditions.</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>In dry and windy days</td>
<td>MDLF, JSC-KRM</td>
</tr>
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<td></td>
<td>Spraying water in the unpaved sections of truck route.</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>In dry and windy days</td>
<td>MDLF, JSC-KRM</td>
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<tr>
<td></td>
<td>Planting Alfalfa plants over the subsoil body once finishing the disposal process.</td>
<td>Contractor</td>
<td>Visual inspection, photographic evidence</td>
<td>After disposal process</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td>4. Workers Safety and Health</td>
<td>Complying with wearing the protective clothes especially masks and helmets.</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
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<td></td>
<td>Provide first aid kits in each vehicle</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
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<td></td>
<td>Conducting induction OHS training for workers</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>once</td>
<td>MDLF, JSC-KRM</td>
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<td></td>
<td>Installing safety signs around the site</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
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<tr>
<td></td>
<td>Restriction the access of unauthorized people</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td>5. Vehicles safety</td>
<td>Using appropriate vehicles, loader should be available in the stockpiling site</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
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3 Source of water: The water to be transferred by a tanker vehicle (5 cubic meter) from the nearest water reservoir (500 m distance) or other water wells around the permanent stockpiling site.
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<tr>
<td>Maintain safe clearance from steep slopes</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
<td></td>
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<td>6. Contamination by Hazardous materials (oil, fuel ...etc)</td>
<td>Regular maintenance/filling fuel of the used vehicles outside the stockpiling place</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td></td>
<td>Define accessible and convenient complaint channels and raising community’s awareness of it.</td>
<td>JSC-KRM, Khan Younis Municipality, Al-Fukhary Municipality</td>
<td>Logbook</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
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<td></td>
<td>Reduce the number truck trips during rush hours</td>
<td>Contractor</td>
<td>Visual observation</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
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<td></td>
<td>Information sharing with the community including indicative banner at stockpiling site with full of communication details</td>
<td>JSC-KRM, Khan Younis Municipality, Al-Fukhary Municipality</td>
<td>Logbook</td>
<td>monthly</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td></td>
<td>Sort, process, and communicate complains to respective parties (contractor) and follow up action.</td>
<td>JSC-KRM</td>
<td>Monthly Report</td>
<td>Daily</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td>7. Inconvenience of residents/farmers</td>
<td>Indicative signs around the site and access road</td>
<td>Contractor</td>
<td>Visual observations</td>
<td>monthly</td>
<td>MDLF, JSC-KRM</td>
</tr>
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<td></td>
<td>Manage movement of incoming/outgoing SW Municipal trucks into landfill and avoid conflict with earth work / outgoing earth material haulers within Sofa Access Road</td>
<td>Rafah Municipality Contractor</td>
<td>Visual observations</td>
<td>Daily</td>
<td>MDLF, JSC-KRM</td>
</tr>
<tr>
<td></td>
<td>Manage movement of incoming/outgoing transfer trucks in all the route, and avoid conflict with any traffic jam</td>
<td>Contractor</td>
<td>Visual observations</td>
<td>Weekly</td>
<td>MDLF, JSC-KRM</td>
</tr>
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<td></td>
<td>Insurance to cover drivers and manual workers.</td>
<td>Contractor</td>
<td>Visual inspection</td>
<td>Periodically</td>
<td>MDLF, JSC-KRM</td>
</tr>
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ANNEX I: Questionnaire to measure views of surrounding population

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<thead>
<tr>
<th>رقم الاستبيان</th>
<th>التسجيل</th>
<th>الاسم الحقيقي على الاستبيان</th>
<th>الجنس</th>
<th>المهنة</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| هل تعتقد أن التغييرات التي تواجهك في المنطقة؟  
|                |         |                            |       |        |
| 1.1           |         |                            |       |        |
| في حال الإجابة في سؤال رقم (1) ينتمي، ما هو مصدر التغيير؟  
|                |         |                            |       |        |
| 2             |         |                            |       |        |
| هل تعتقد أن الشعبي في المنطقة؟  
|                |         |                            |       |        |
| 2.1           |         |                            |       |        |
| في حال كانت الإجابة في سؤال رقم (3) ينتمي، ما هو مصدر الشعبي؟  
|                |         |                            |       |        |
| 3             |         |                            |       |        |
| هل تعتقد أن وجود إدماج موري في المنطقة؟  
|                |         |                            |       |        |
| 3.1           |         |                            |       |        |
| في حال كانت الإجابة في سؤال رقم (5) ينتمي، ما هو مصدر الإدماج؟  
|                |         |                            |       |        |
| 7             |         |                            |       |        |
| هل هناك نقص في الماء (النفاذية من مشروع محطة معالجة المياه العامة)؟  
|                |         |                            |       |        |
| 8             |         |                            |       |        |
| هل تعتقد أن خطايا المنتجات تقلل من الأثر التغيير؟  
|                |         |                            |       |        |
| 9             |         |                            |       |        |
| هل تعتقد أن أسعار البترول تقلل من السير السريع؟  
|                |         |                            |       |        |
| 10            |         |                            |       |        |
| ما هي الأضرار الأخرى التي واجهتمها بسبب تقلل الرمال؟  
|                |         |                            |       |        |
| 11            |         |                            |       |        |
| ما هي توصياتكم لتفريق أثر الشعبيات الناشئة للرمال؟  
|                |         |                            |       |        |
| 12            |         |                            |       |        |
| هل تعرفون ما هي الخطوة التي تقوم بقطع الرمال؟ مع ذكر اسمها؟  
|                |         |                            |       |        |
| 13            |         |                            |       |        |
| هل تعرفون كيفية تقديم شكوى في حال تضررت من أعمال تقطيع الرمال؟ مع ذكر اسم الشكو؟  
|                |         |                            |       |        |