# *EXECUTIVE SUMMARY*

This report presents the findings of the Environmental Impact Assessment study conducted by Pro Green Environmental Services on behalf of M/S Asghar Ali Traders., located at 17-Km Ferozpur Road, Awan Market, Lahore.

**Coordinates: 31.6187714, 74.3339156**

The proposed project is hazardous Battery Waste/ Hazardous Substances Handling, storage and non-hazardous waste scrapyard by M/s Asghar Ali Traders. which will be involved in the collection, transportation, handling, segregation, storage and sale of lithium/lead batteries, Printed Circuit Boards (PCBs), cables, used Engine / Generators Oil, silver copper, iron, Plastic Waste, paper waste/ board waste, wood waste generated from telecommunication towers and different industries. The waste will be categorized into hazardous and non-hazardous materials, including lead-acid and lithium batteries, PCBs, cables, used oil, metals, plastics, paper/cardboard, and wood. Hazardous materials such as batteries and used oil will be stored separately on impermeable surfaces with appropriate containment, while recyclable materials will be sorted and stored according to type. Damaged or leaking hazardous materials will be isolated and handled safely, and open burning of cables or wood will not be permitted. All incoming and outgoing materials will be properly weighed, recorded, and tracked, and once sufficient quantities are accumulated, the segregated materials will be packed and dispatched to authorized recyclers, recovery facilities, buyers, or other approved downstream users using suitable transportation and safety arrangements. The total area of project is 2 Kanal. Total covered area will be 3734 sqft. The estimated cost of the project is 50 million.

The proposed project fall in the **Schedule-II of EIA & IEE Regulation 2022 under Category G(3)**

**TITLE AND LOCATION OF PROJECT**

"Asghar Ali Traders., located at 17-Km Ferozpur Road, Awan Market, Lahore"

**NAME OF PROPONENT**

The proponent of this unit is Asghar Ali S/o Miraj Din.

**AME OF ORGANIZATION PREPARING THE REPORT**

This Environmental Impact Assessment report has been prepared by Firm Pro Green Environmental Services.

**OUTLINE OF PROPOSAL**

| | | |
|---|---|---|
| **1.** | **Project Title** | Asghar Ali Traders. |
| **2.** | **Proponent** | Asghar Ali S/o Miraj Din |
| **3.** | **Project Location** | 17-Km Ferozpur Road, Awan Market, Lahore. |
| **4.** | **Coordinates** | **31.6187714, 74.3339156** |
| **5.** | **Land Use in Surrounding of Proposed area**<br><br>**North:**<br>**South:**<br>**East**<br>**West:** | Surrounding area of the project is<br><br>Industrial Unit<br>Industrial Unit<br>Industrial Unit<br>Access Road |
| **6.** | **Consultant** | Pro Green Environmental Services |
| **7.** | **Cost of Project** | 50 million |
| **8.** | **Total Area** | 2 Kanal |
| **9.** | **Water Source** | Ground Water |
| **10.** | **Nature of Area** | Industrial |
| **11.** | **Source of Power** | WAPDA |
| **WAPDA= Water and Power Development Authority** | | |

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**MAJOR IMPACTS**

The proposed project of Asghar Ali Traders. was reviewed with the aim to determine the likely impacts of the project on the environmental and socio-economic conditions of the area. All the necessary elements of the project were reviewed and compared with the existing conditions in the vicinity of the Project Area. The EIA report identifies the adverse environmental impacts due to the construction and operational activities of the project and also suggests proper measures for their mitigation, as described in Environmental Management Plan (EMP).

The impacts by this unit on the surrounding environment are as follows:

| **Aspects** | **Potential Impacts/ Risks** |
|---|---|
| **Construction Phase** | |
| **Traffic Congestion due to construction phase** | Movement of vehicles may result in traffic disruption if proper parking facilities are not provided. |
| **Air Quality degradation due to construction phase** | Dust produced due to construction activity can affect the health of employees and resident in the surrounding areas. |
| **Disposal of Construction Waste/Excavated Material produced in construction phase** | Dumping of construction wastes / excavated material in the surrounding area may limit use of land |
| **Noise and Vibration due to machinery being used for construction** | Noise pollution due to increased construction machinery operation |
| **Sanitation and Waste disposal facilities At Project site** | Health risks to construction workers |
| **Workers' Safety and Hygienic conditions** | Health risks in case of unsafe and/or unfavorable work conditions |
| **Operational Phase** | |
| **Solid waste produced in the** | The produced solid waste can become harmful for |

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| | |
|---|---|
| **shape of remaining of Metals pieces and waste packaging material** | environment if not managed properly. |
| **Domestic and process waste water** | It can impact surface water and underground water. If wastewater is not properly treated, then the environment, flora, fauna and human health can be negatively impacted. |
| **Solid waste** | A significant impact will be interpreted if the waste management is not carried out properly; which may affect health of workers and can be a source of pollution of soil, surface or groundwater. |
| **Groundwater Depletion** | Prolonged water consumption may in the long run lower/deplete the underground water table. |
| **Air Quality** | It comes from Vehicles and generators with excessive smoke can pollute the air quality. |
| **Noise & Vibration** | Noise will be generated from transportation, generator and operation of the project. It may affect the health of the workers. |
| **Workers' Safety and Hygienic conditions** | Health risks in case of Unsafe and/or unfavorable work conditions |
| **Emergency Response** | There are always chances of earthquakes and manmade disasters, fire, road accidents etc. |
| **Traffic Congestion** | Movement of vehicles may result in traffic disruption if proper parking facilities are not provided. |

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**RECOMMENDATIONS FOR MITIGATION MEASURES**

The potential negative impacts during construction and operational stage of the project will be mitigated to an acceptable level. Necessary mitigation measures are recommended in the report to make the proposed project Environment Friendly. Environmental Management Plan

identifies monitoring needs and implementation on Environmental Management Plan is also recommended.

The following measures are recommended for the project:

| Aspects | Proposed Mitigation Measures |
|---|---|
| ***CONSTRUCTION PHASE*** | |
| **Traffic Congestion due to construction phase** | Adequate parking facilities will be provided for the construction machinery and tractor-trolleys bringing the material into the Project Area |
| **Air Quality degradation due to construction phase** | Use of dust suppression techniques like water sprinkling etc. will be made to minimize the effect of dust. Construction workers will be provided with masks for protection against the inhalation of dust.<br>Regular monitoring of all vehicles, equipment, and machinery used for construction. All vehicles, machinery, equipment and generators used during construction activities will be kept in good working condition and properly tuned and maintained in order to minimize the exhaust emissions. |
| **Disposal of Construction Waste/Excavated Material produced in construction phase** | Management of Construction activities in a way to ensure minimum degradation to the soil around the Project area and dumping of excavated waste will be done at a designated site approved by LWMC. |
| **Noise and Vibration due to machinery being used for construction** | Selection of up-to-date equipment and machinery with reduced noise levels ensured by suitable in-built damping techniques; Regular checkups and maintenance of the construction equipment; and use of appropriate muffling devices. |
| **Sanitation and Waste disposal facilities at Project site** | All the solid waste will be properly collected and disposed of in accordance with the procedures of LWMC. |
| **Workers' Safety and Hygienic conditions** | Enforcement of work safety measures such as wearing safety goggles, helmets, protective masks and boots and fixing of cautionary signs at designated sites. First aid box should be at the site in case of any injury or |

| | |
|---|---|
| | mishap. |
| **Damage to Flora due to construction** | Plantation of different trees will make project area environment friendly |
| **OPERATIONAL PHASE** | |
| **Packaging Material, and metal Waste Pieces.** | All the waste material will be collected into the specified placed inside the project site. After the short interval of time the waste material from that place will be collected and sold out to contractor. |
| **Domestic as well as process waste water** | The domestic waste water will be treated through septic tank than will be drained into sewerage system of estate |
| **Degradation of Air Quality** | The vehicles will be maintained time to time to reduce the air emissions and vehicles with excessive smoke emissions will not be allowed to enter. Plantation will be provided which will generate fresh oxygen.<br>An air quality monitoring and improvement plan will be developed to reduce air pollution and to remain it within the limits of Punjab Environmental Quality Standards (PEQS);<br>Level of air pollution will be monitored on regular basis. |
| **Noise** | Plantation around the gate and entrance and at the specified areas in this site will reduce the noise level at much extent. |
| **Groundwater** | Labor of this unit will be trained in water conservation measures such as use of water efficient/ economy appurtenances and reuse of wastewater for gardening. |
| **Workers' Safety and Hygienic conditions** | Enforcement of work safety measures such as wearing safety goggles, protective masks, helmets and boots and fixing of cautionary signs at designated sites. First aid box should be at the site in case of any |

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| | |
|---|---|
| | injury or mishap. |
| **Emergency Response** | • Emergency evacuation plan will be developed to evacuate the area in case of accidental fire<br>• Emergency response and plan along with safety charts showing symbols and other necessary information will be displayed at various places for the awareness of workers<br>• An Emergency Response Plan for earthquakes and manmade disasters will be developed by the Management.<br>• Emergency Response Plan will be implemented in close consultation with the Fire Fighting Department, Bomb Disposal Squad and Paramedics<br>• Firefighting equipment's should be installed in the unit. |
| **Traffic Congestion** | Adequate parking facilities will be provided for the vehicles bringing the material into and out of the Project Area. |

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**PROPOSED MONITORING**

Environmental impact of a project is worked out using various factors and parameters, so that an Environmental Management Plan can be evolved to take mitigation measures, wherever these might be considered necessary in order of appropriateness of elimination, reduction and compensation as the goals. The development of the EMP is to make some person responsible for implementing the mitigation measures as identified so that smooth implementation of the mitigation measures can be assured. Monitoring plans have also been included to ensure the compliance of the EMP by contractors and other responsible authorities.

Regular monitoring will be required to check that the construction and operation is not going to cause any adverse environmental impacts; hence monitoring visit will be done once in a month during construction phase. During these visits samples will also be taken to check the quality of air, water and soil etc.

## Environmental Monitoring Program

| Parameter/ Receptor | Location | Monitoring | Mechanism Monitoring and Reporting Frequency |
|---|---|---|---|
| Water Quality | • Ground Water | Discrete grab | • Sampling and laboratory testing should be done on monthly basis during the |

| | | | |
|---|---|---|---|
| | • Surface Water | sampling and laboratory testing of water samples. | construction and annually during the operational stage.<br>• Discharges from the construction sites should be tested for temperature, PH and turbidity.<br>• Treated effluent discharges from the worker's camp to be tested for PH, TSS and BOD. |
| Dust Emissions | • Tracks along the roads during construction period. | Ambient particulate matter monitoring. | • Sampling and laboratory testing should be done on monthly basis during the construction |
| Noise Levels | • Camp sites,<br>• Selected Locations alon the access. | Noise meter | Monthly during the construction Stage. |
| Air Quality | Silencers of heavy machinery, trucks and other vehicles. | Emissions monitoring system. Monitoring of ambient air quality. | • Monthly monitoring of air pollution parameters including $PM_{10}$,$NO_X$, $SO_X$; CO. Hydrocarbons during tfhe construction period, and quarterly monitoring of $PM_{10}$,$NO_X$, $SO_X$; CO $VOC_S$ during the operation stage, |
| Cutting of trees | In all project area during the construction stageand operation stage. | Periodic visits Site to ensure that trees cutting is prohibited. | Reported on monthly basis during the construction period, and once in a year monitoring and reporting during the operation period. |
| | | | |

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| Socio-cultural Environment | | | |
|---|---|---|---|
| Inconvenience community | All around the project area | Consultations with community to get feedback about inconvenience due to the construction activities to perform their daily routine chores. | Monthly monitoring and reporting during the construction period. |

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# Structure of the Report

This report comprises the following chapters in order stated:

**Chapter 1: (**Executive Summery**)** Title and location of project, Name of proponent, Name of organization, outline of proposal, major impacts, recommendation of mitigation measures, proposed monitoring

**Chapter 2:** (Screening) whether the project required IEE/EIA as per regulations

**Chapter 3: (**Scoping**)**Spatial and temporal boundaries of Environmental Assessment, important issues raised during consultation, significant impacts and factors to be determined

**Chapter 4: (**Consideration of Alternatives**)** Site alternatives**,** design/ technology alternatives, environmental alternatives, economic alternatives

**Chapter 5:** (Description of project) objectives of projects, location and site layout, land use on site, road access, vegetation features, cost and magnitude, schedule of implementation, description of project, restoration and rehabilitation

**Chapter 6:**(Description of Environment) states and specifies the present environmental settings and socio-economic values of the project area and the surroundings

**Chapter 7: (**Impact Assessment**)** Methodologies for impact identification, checklist, matrices, network, overlays, GIS and computer expert system

**Chapter 8:** (Screening of Potential Environmental Impacts and Mitigation Measures) project location, design, construction phase, operational phase, potential environmental enhancement measures

**Chapter 9:** (Environmental Management and Monitoring Plan) throws a light on the authorities or individuals responsible to implement mitigation measures and monitor the environmental parameters against the environmental impacts

**Chapter 10:** (Stakeholders and Public Consultation)Public consultation plays a vital role in studying the effects of any development project on stakeholders and in its successful implementation and execution

**Chapter12:** (Appendices) list of abbreviation, list of individual, source of data, terms of references of environmental reports, list of name of consulted team, approvals from other departments

# SCREENING

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# Whether the project requires IEE/EIA as per regulation:

According to the section of the Punjab Environmental Protection Act 2012, no proponent of a project shall commence construction or operation unless he has filed an initial environmental examination or where the project is likely to cause adverse environmental effects, an environmental impact assessment, and has obtained NOC from the EPA Punjab. The proposed project fall in the Schedule-II and category G(3) of EIA&IEE Regulation 2022.

Subject to provision of this Act, proponent must get a NOC for Construction under section 12 of PEPA-2012 from provisional Agency in order to start Construction. This project requires an Environmental Impact Assessment (EIA) the project fall in Schedule-II, Category G(3) of EIA and IEE Regulations 2022. An Environmental Impact Assessment (EIA) study report has been prepared to identify and assess the significant environmental impacts likely to occur due to proposed project along with environmental impact statement followed by appropriate Environmental Management Plan. The proponent will also conform to the other applicable environmental laws, rules and regulations during both construction and operation of the proposed project.

The Director General, EPA Punjab is the authority to issue the requisite Environmental Approval after proper review of the project. The IEE report has been prepared under the format of guidelines issued by EPA. The applicable laws for the environmental study of the project are briefly given below

- Punjab Environmental Protection Act, 2012
- National Environmental Policy, 2005
- Review of EIA & IEE Regulations, 2022
- Guidelines for Preparation and Review of Environmental Report, 1997
- Solid Waste Management Rules , 2005
- National Environmental Quality Standards 2000
- Punjab Land use Rules 2009

# SCOPING

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## 1- Spatial and Temporal Boundaries of Environmental Assessment:

The Natural Environmental setting, present industrial status and its future trends around the project site covering fairly large distance have been taken into consideration while taking

stock of existing and expected conditions. Socio-economic condition, availability of basic infrastructure, availability of water, labor, raw materials, transport and means of communication, electricity and approach to the project site were the major considerations and spatial and temporal boundaries considered during this study.

## 2-Important Issues and Concerns rose during the Consultation:

Following issues were discussed during the stakeholder's consultation:

- Overall activities of the project and their possible impacts.
- Possible impacts on natural vegetation, flora and fauna
- Possible mitigation measures;
- Beneficial factors and involvement opportunities of the local people in the set of activities of project.

**General:**

Majority of stakeholders appreciated the project and taken it as a necessary steps towards the current situation of food.

**Socio-Economic:**

Expectations about employment opportunities and community development were extremely high among all stakeholders

Strict traffic plan will be implemented. If the mitigation measures mentioned in later section of construction and operation phase are properly implemented, the proposed project with respect to location will be environment friendly and will not be involved in the deterioration of environment.

## 3-Significant impacts and factors to be determined:

Following factors have been taken in the account to assess the Environmental Impacts of the:

- Environmental impacts due to land use, location, waste generation, utility services consumption and emergency spillage etc.
- Environmental impacts physical resources i.e. soil topography, geology, climate, air quality etc. ecological resources i.e. flora as well as health and safety of workers

# Consideration of Alternatives

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## Alternative considerations and reasons for their rejection:

### Location Alternatives

The proponent also considered other sites but those sites don't have easy access to roads. Furthermore those sites were the environmentally degraded and polluted lands, and lack of

aesthetic beauty is the major factor which urges the proponent to find an alternative. The project area is devoid of any tree cover, so it doesn't involve cutting of trees for carrying out project activities. No species of plants and animals having significance ecological importance present on the proposed project site. Availability of land at the best convenient place and at reasonable price was yet the other considerations for the site selection. So, this is the best economically viable option for the proponent. Because of the availability of access roads, communication facilities, electricity, gas, basic infrastructure, sewer etc. was yet the other necessary requirements. Of course neat and clean environment was also the consideration. The project will also facilitate the people of area with increasing the opportunities of the employment, and other related facilities .Keeping these requirements and other feasibility and other basic infrastructural requirements, now the proponent considered other alternative site but the selected site is ideally suited for the said unit.

## Reasons of rejection

- Cost of alternatives lands was very high.
- There are thick fields/vegetation at the site of project.
- Populated areas were present near the project site.
- Basic infrastructure was not there.
- There was no easy access to roads

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## Site Selection

The proponent has selected this site due to the following reasons:

- Located on accessible road
- No settlements at a safe distance
- No watercourse within a safe distance
- There was no need of tree clearance for the said project
- No ecologically sensitive or declared protected area within 10 km of the selected site

  In the light of above mentioned points Asghar Ali Traders. considered the subject site as most suitable for this project.

### 2.3.2 TECHNOLOGY OPTIONS:

The machinery/technology which will be installed in Asghar Ali Traders. is considered to be 'state of the art' in terms of being environment friendly, energy efficiency and modern plant & process design for similar units.

### 2.3.3 Environmental Alternatives:

The unit site is located in an area which is devoid of any biodiversity including forestry, wildlife, migratory birds, game reserves (flora and fauna), or protected species of fauna & flora; fishery or aquatic biology; watershed. There is no cultural or any other heritage in the project area.

Summarily, there is no environmental sensitivity in the project area. These factors are also strongly supportive of the proposed project site.

This location was determined to be the most convenient location in proximity to the market and domestic supply chain. This site has least environmental & social impacts.

Keeping these requirements and their availability, the present site is the best suited for the project. All the other basic infrastructural requirements are available at the selected site.
The site is ideal for this unit and this EIA report has also been prepared for getting the environmental approval for at this site. Availability of land at the best convenient place and at reasonable price was yet the other considerations for the site selection. Availability of access roads, communication facilities, electricity, gas, basic infrastructure, sewer etc. was yet the other necessary requirements. Of course neat and clean environment was also the consideration.

### Economic Alternatives their selection and rejection criteria:

The proponent also considered other site which economically undesired to proponent. Furthermore those sites were the environmentally degraded and polluted lands, and lack of aesthetic beauty is the major factor. The project area is devoid of any tree cover, so it doesn't involve cutting of trees for carrying out project activities. Availability of land at the best convenient place and at reasonable price was yet the other considerations for the site selection. So, this is the best economically viable option for the proponent

### Reasons of rejection

- Cost of alternatives lands was very high.
- There are thick fields/vegetation at the site of project.
- Populated areas were present near the project site.

- Basic infrastructure was not there.

## Site Selection

The proponent has selected this site due to the following reasons:

- Located on accessible road
- No settlements at a safe distance
- No watercourse within a safe distance
- There was no need of tree clearance for the said project

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# DESCRIPTION OF PROJECT

This section of the study concentrates on details of the project and its salient features; such as location, site layout, objectives, selection of alternatives, cost and magnitude of operation and various phases. Inputs and discharges relevant to different phases of the project, such as electricity & materials, etc. have also been examined as a response to possible environmental concerns.

## 1-Type and category of project

As per Review of Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) Regulations, 2022 the proposed project falls in the category B (19) mentioned in Schedule II.

## 2-Objectives of project

The proposed project shall yield following benefits:

- To establish a modern and efficient copper Recovery Unit
- To promote sustainable manufacturing practices.
- To increase the availability of products to local people
- To create job opportunities for locals
- To elevate the socio-economic status of the area

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## 3-Alternative considerations and reasons for their rejection:

## Location Alternatives

The proponent also considered other sites but those sites don't have easy access to roads. Furthermore those sites were the environmentally degraded and polluted lands, and lack of aesthetic beauty is the major factor which urges the proponent to find an alternative. The project area is devoid of any tree cover, so it doesn't involve cutting of trees for carrying out project activities. No species of plants and animals having significance ecological importance present on the proposed project site. Availability of land at the best convenient place and at reasonable price was yet the other considerations for the site selection. So, this is the best economically viable option for the proponent. Because of the availability of access roads, communication facilities, electricity, gas, basic infrastructure, sewer etc. was yet the other necessary requirements. Of course neat and clean environment was also the consideration. The project will also facilitate the people of area with increasing the opportunities of the employment, and other related facilities .Keeping these requirements and other feasibility and other basic infrastructural requirements, now the proponent considered other alternative site but the selected site is ideally suited for the said unit.

### Reasons of rejection

- Cost of alternatives lands was very high.
- There are thick fields/vegetation at the site of project.
- Populated areas were present near the project site.
- Basic infrastructure was not there.
- There was no easy access to roads.

### Site Selection

The proponent has selected this site due to the following reasons:

- Located on accessible road
- Located in the Industrial area.
- No settlements at a safe distance
- No watercourse within a safe distance
- There was no need of tree clearance for the said project
- No ecologically sensitive or declared protected area within 10 km of the selected site

  In the light of above mentioned points by M/S Asghar Ali Traders considered the subject site as most suitable for this project.

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## 4-Location and layout of project

"M/S Asghar Ali Traders Located at 17-Km Ferozpur Road, Awan Market, Lahore.

The surrounding area detail of this project is given below

| | |
|---|---|
| ***North*** | Industrial Unit |
| ***South*** | Industrial Unit |
| ***East*** | Industrial Unit |
| ***West*** | Access Road |

### Layout of the Project

Layout map of the project site is attached with the report.

## 5-Picture of project site and surroundings

The surroundings of the project is open land visible in the Google Image Below.

## 6-Google Earth map with coordinates

Google earth map is attached

## 7-Land use on site

The site is located in the industrial area.

## 8-Road access

Main roads and markets are in easy and close access of the project site.

## 9-Vegetation features of site

Land is clear and there are no plants or vegetation on site. Significant or well-shaped trees and shrubs are not present on the project site. There is neither the biologically important or endangered species of plant were present and nor the plant or vegetation of any significance stands at the site to be dismantled. However, various local plants will be grown at the project site in the open areas and grounds.

## 10-Cost and magnitude of operation

The estimated cost of the proposed project will be 50 million.

a. Demarcation of Land for various required facilities
b. Construction/Installation of Machinery
c. Plantation

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## 11-Schedule of Implementation

**a- Phase-I (Start-up Phase)**

Phase -1 is the start-up phase, which involves construction of boundary wall around the entire site. Most of the NOC's of construction from various departments has been approved, and this report has been prepared to obtain NOC of operational phase from EPA Punjab. It can take 1 to 3 months.

**b- Phase-II (Main implementation Phase)**

In phase II, required machinery will be purchased, firefighting system, etc. During this phase, machinery will be brought on site and installed. It can take 1 to 3 months.

**c- Phase-III (Wrap-up Phase)**

Phase-III is the wrap-up phase. In this phase, all outstanding activities will be completed, required staff will be recruited, and contracts with suppliers and purchasers will also be signed after which the operational phase finally commenced. It can take 1 to 3 months.

# 12-Description of Project

The proposed project is Smelting Resource by M/S Asghar Ali Traders which will be involved in the recovery of copper from circuit waste through the following process:

**Collection of Waste Materials:** M/s Asghar Ali Traders will collect recyclable and hazardous waste materials generated from telecommunication towers, industrial units, generators, workshops, commercial activities, and other approved sources. The materials will include lead-acid and lithium batteries, Printed Circuit Boards (PCBs), electrical cables, used engine/generator oil, copper, silver-containing materials, iron, plastics, paper/cardboard, and wood waste. The collected materials will be transported to the proposed facility for inspection, segregation, storage, and onward sale or transfer.

**Receiving and Inspection:** Upon arrival, the waste will be received at the designated area and visually inspected. The material will be weighed, identified, and recorded before being transferred for further segregation. Any damaged, leaking, or improperly packaged hazardous material will be isolated for safe handling.

**Initial Segregation:** The received waste will be segregated into hazardous and non-hazardous categories. Further sorting will be carried out to separate batteries, PCBs, cables, used oil, metals, plastics, paper/cardboard, wood, and other recyclable materials.

**Handling of Lead-Acid Batteries:** Lead-acid batteries will be stored separately on a suitable impermeable surface to prevent leakage and contamination. Damaged or leaking batteries will be isolated and placed under suitable containment. The batteries will subsequently be transferred to authorized recycling or recovery facilities.

**Handling of Lithium Batteries:** Lithium batteries will be separately inspected and stored in a designated area. Batteries showing signs of swelling, leakage, overheating, or physical damage will be isolated and handled with appropriate safety precautions. The batteries will be transferred to suitable authorized recycling or recovery facilities.

**Segregation of PCBs:** Printed Circuit Boards (PCBs) will be separated from mixed electronic scrap and stored in designated containers or areas under covered conditions. The segregated PCBs will be transferred to appropriate recycling or metal-recovery facilities.

**Segregation of Cables:** Electrical cables will be separated according to their type and material composition. Where applicable, mechanical stripping may be carried out to separate metallic and insulation components. Open burning of cables will not be permitted. The recovered materials will be stored separately for recycling.

**Handling of Used Engine/Generator Oil:** Used oil will be collected in suitable leak-proof containers and stored in a designated area with an impermeable floor and secondary containment. The oil will be protected from accidental discharge and subsequently transferred to an authorized recycling or recovery facility.

**Segregation of Metals:** Ferrous and nonferrous metals will be separated according to their type and composition. Iron, copper, aluminium, silver containing materials, and other metals will be stored separately and subsequently sold or transferred for recycling and recovery.

**Handling of Plastic Waste:** Plastic waste will be separated from other materials and stored in designated areas or containers. The material will be protected from uncontrolled scattering and will subsequently be transferred to appropriate recycling facilities.

**Handling of Paper and Cardboard Waste:** Paper, cardboard, and board waste will be segregated and stored in a dry and covered area. The material may be bundled or baled, where required, and will be transferred to paper recycling facilities.

**Handling of Wood Waste:** Wood waste will be separated and stored in a designated area. Reusable wood will be kept separately for potential reuse, while non-reusable material will be transferred to an appropriate recovery or disposal facility. Open burning will not be carried out.

**Temporary Storage:** After segregation, each waste category will be placed in its designated storage area. Hazardous materials will be kept separately from general recyclable materials. Storage areas will be properly identified and maintained with appropriate safety and environmental controls.

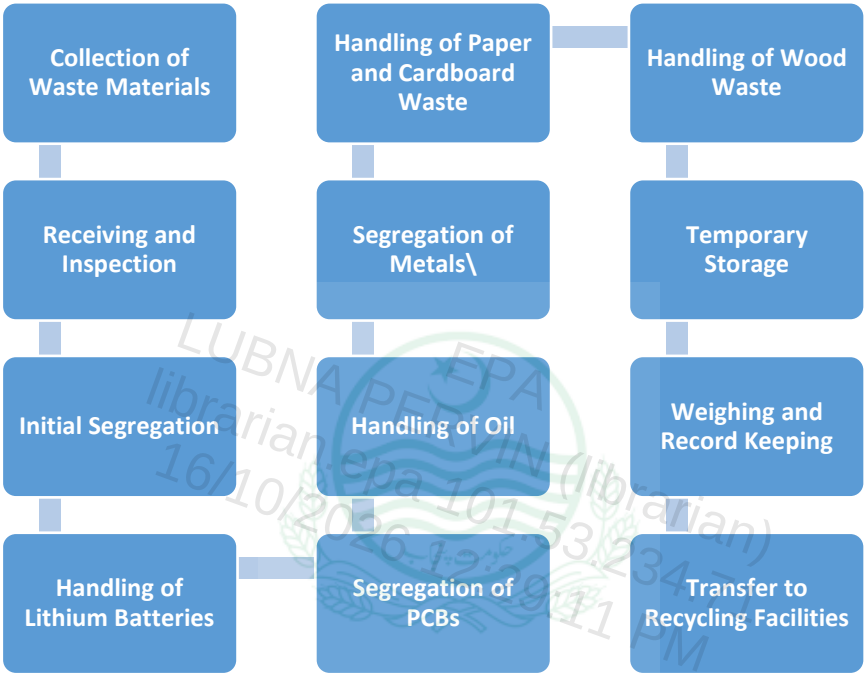
**Weighing and Record Keeping:** Incoming and outgoing materials will be weighed and recorded. Records will include the type and quantity of waste received, date of receipt, quantity stored, quantity dispatched, and destination. This will ensure proper tracking and inventory management.

**Preparation and Dispatch:** When sufficient quantities are accumulated, the segregated materials will be sorted, bundled, packed, weighed, and prepared for dispatch as required.

Materials will be loaded carefully to minimize spillage, leakage, or damage during transportation.

**Transfer to Recycling Facilities:** The segregated materials will be transported to relevant buyers, recyclers, recovery facilities, or other authorized downstream users. Hazardous materials will be transferred using appropriate containment and transportation arrangements.

## Process Flow Diagram of Process:




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## Summary of process /operation involved indicating the source of pollution

The proposed project is hazardous Battery Waste/ Hazardous Substances Handling, storage and non-hazardous waste scrapyard by M/s Asghar Ali Traders. which will be involved in the collection, transportation, handling, segregation, storage and sale of lithium/lead batteries, Printed Circuit Boards (PCBs), cables, used Engine / Generators Oil, silver copper, iron, Plastic Waste, paper waste/ board waste, wood waste generated from telecommunication towers and different industries. The waste will be categorized into hazardous and non-hazardous materials, including lead-acid and lithium batteries, PCBs, cables, used oil, metals, plastics, paper/cardboard, and wood. Hazardous materials such as batteries and used oil will be stored separately on impermeable surfaces with appropriate containment, while recyclable materials will be sorted and stored according to type. Damaged or leaking hazardous materials will be isolated and handled safely, and open burning of cables or wood will not be permitted. All incoming and outgoing materials will be properly weighed, recorded, and tracked, and once sufficient quantities are accumulated, the segregated materials will be packed and dispatched to authorized recyclers, recovery facilities, buyers, or other approved downstream users using suitable transportation and safety arrangements.

## Source and quantity of raw material

The raw material will be purchased from market. The quantity of raw material varies with the demand.

## Collection, storage and transport of raw material

The raw material for the proposed project will be sourced from suppliers and transported to the project site. Upon arrival at the facility, it will be unloaded and received into the designated storage area.

The raw material will be stored in dedicated storage area at the facility. Storage will be managed to ensure continuous availability of raw material for meeting operational demand.

## Operational equipment and machinery to be used

Following major machinery/equipments will be used in the proposed project:

- Weighing scale/platform scale
- Forklift or pallet trolley
- Hand trolleys and material handling equipment
- Battery storage racks and leak proof containment trays
- Leak-proof drums/containers for used oil
- Covered storage bins and containers for PCBs and electronic waste
- Cable cutting/stripping machine, where applicable
- Sorting tables and segregation racks
- Metal storage bins/containers
- Plastic, paper/cardboard, and wood storage containers
- Baling/compaction machine for paper, cardboard, or suitable recyclable materials
- Spill kits and absorbent materials
- Fire extinguishers and basic fire-safety equipment
- PPE, including gloves, safety shoes, goggles, masks/respirators, and protective clothing
- Loading/unloading equipment and suitable transport vehicles for dispatch of waste material

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## Capacity of the unit for each product

The material stored at the facility may varies with supply.

## 13-Water usage and source

The proposed unit will require water primarily for domestic purposes such as drinking, sanitation, and general housekeeping activities. Water will be used in the process, as the operations involve water based activities. The required water for the project will be sourced from the TMA water supply. Adequate provisions will be made to ensure uninterrupted availability of water for domestic and process use during plant operation. The limited and controlled use of water makes the project environmentally sustainable and does not exert significant pressure on local water resources.

## 14- Waste water generation and disposal methods

The proposed unit will generate domestic waste water. The domestic waste water will be treated through septic tank before its final disposal.

## 15- Air emissions and control measures

During the construction phase of the proposed unit, air emissions will be mainly in the form of dust generated from site preparation activities, movement of construction materials, and operation of construction machinery. To minimize the impact of dust, dust suppression techniques such as regular water sprinkling will be adopted at the site. Construction workers will be provided with appropriate personal protective equipment, including masks, to protect them from inhalation of dust.

Exhaust emissions during construction will arise from vehicles, and generators used at the site. Regular monitoring and maintenance of all construction related vehicles and machinery will be carried out to ensure they remain in good working condition. Proper tuning and maintenance will help minimize exhaust emissions and ensure compliance with applicable emission standards.

During the operation phase, air emissions will be generated from the generator (if any). Air emissions during this phase will also be generated from vehicular emissions due to the movement of transport vehicles and staff traffic. To mitigate these impacts, proper traffic management practices will be implemented, including maintaining vehicles in good condition and avoiding unnecessary idling. Emissions from furnaces and generator will be controlled by Emission control system. As a result, the overall impact on ambient air quality during operation will be minimal and localized.

## 16-Solid waste generation and disposal methods

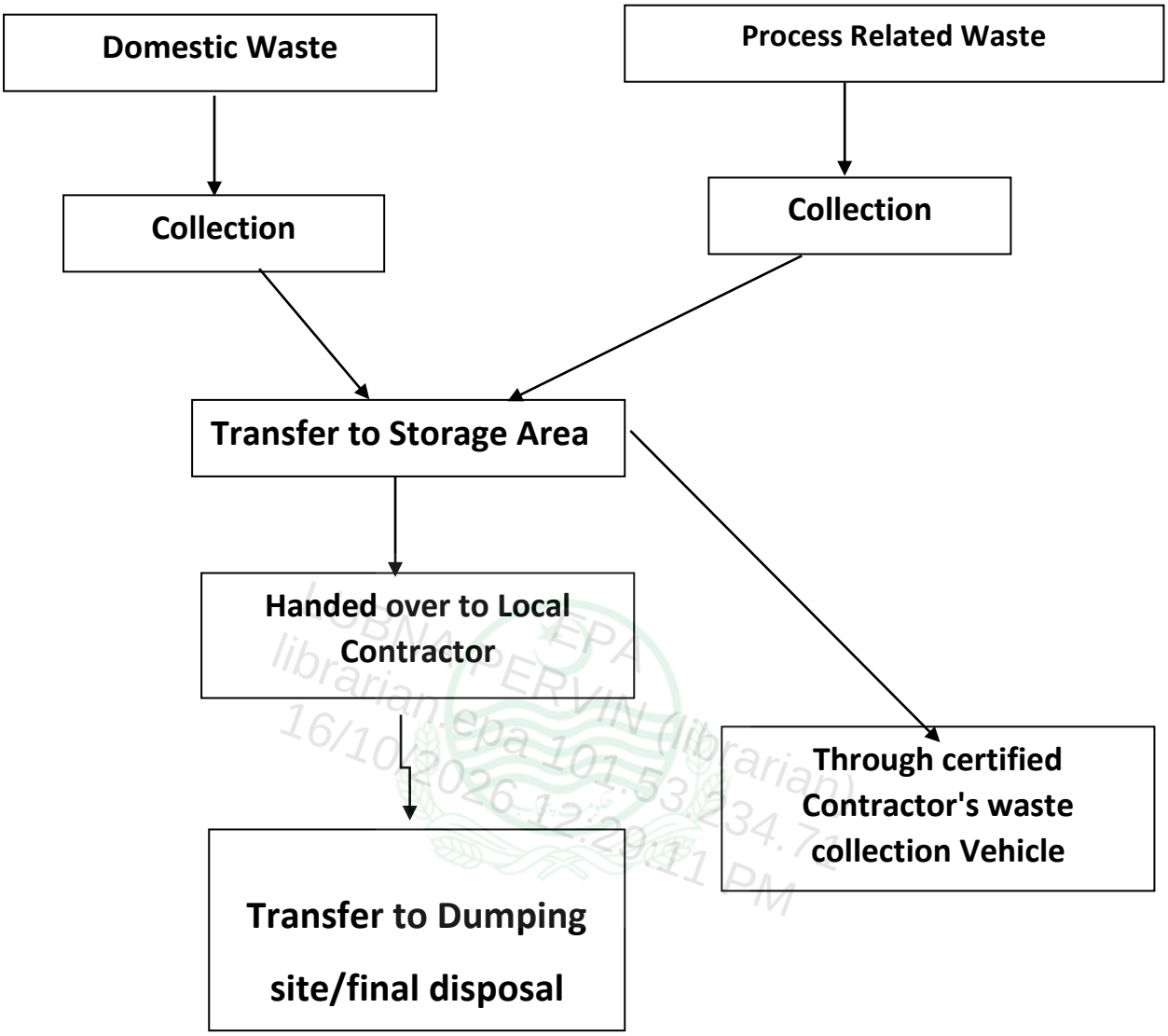
The solid waste generated during the construction and operational phase of Project can pose a health hazard, pollute soil, surface and ground water if not managed properly. A significant impact will be interpreted if the waste management is not carried out properly; witch may effect to health of workers, pollution of soil, surface or groundwater.

The Potential sources of solid waste from activities include excavated material, construction waste, food waste, plastics, and paper. Dumping of excavated waste will be done at a designated site approved by TMA, and it will be ensured minimum degradation to the soil around the Project area. Construction waste will also be disposed off as per local waste management procedures. Other generated solid waste comprise of a domestic waste. Waste storage bins will be installed. The waste from these bins will be collected by the sanitary workers. The waste will be disposed off in accordance with the procedures of the TMA. No significant impact on the environment is anticipated from solid waste generation at the project site as the solid waste is managed efficiently.

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## Solid Waste Management Mechanism

### Flow chart of solid waste management plan:




## 17-Operational hours of the facility

The proposed unit will operate during standard working hours, which are generally followed by similar industrial and service facilities. The facility is proposed to operate for continuous operation, depending upon operational requirements and demand. These operational hours are considered adequate for smooth functioning of the proposed unit.

However, in case of increased demand, emergency supply requirements, or logistical considerations, the facility may operate for extended hours or in additional shifts as per need. The operational schedule will be managed in compliance with applicable labor laws and safety regulations. Since the facility does not involve continuous manufacturing processes, the operational hours will remain limited and controlled, ensuring minimal impact on the surrounding environment.

## 18- Energy Requirements and sources

The proposed unit will require energy mainly for lighting, operation, safety systems, and other auxiliary facilities within the project premises.

The primary source of energy for the facility will be electricity supplied by WAPDA. In order to ensure uninterrupted power supply during grid failures, a standby power generator equipped with emission control system provided for emergency use only. Energy efficient lighting and equipment will be used wherever feasible to optimize energy consumption. The energy requirement of the project will be managed efficiently without exerting significant load on local energy infrastructure.

## 19- Fuel Storage and Handling

Fuel storage and handling activities associated with the proposed project will be carried out in accordance with applicable safety, environmental, and regulatory standards.

## 20- Emergency response and safety features

The Project shall incorporate adequate emergency response mechanisms and safety features to prevent, control, and mitigate any unforeseen incidents during construction and operational phases. Standard operating procedures (SOPs) will be developed and implemented to address potential emergencies such as fire, leakage, equipment failure, or natural hazards. Safety infrastructure including fire-fighting systems, emergency shut off arrangements, alarm systems, and clearly marked evacuation routes shall be provided as per applicable standards. Regular safety drills, inspections, and maintenance programs will be conducted to ensure preparedness of personnel. Adequate training and awareness programs shall be arranged to ensure that all workers are familiar with emergency response protocols, thereby minimizing risks to life, property, and the environment

- **Emergency Response**

Incidents and accidents may take place unexpectedly during project operations no matter how effective, strong and efficient the mitigation measures for all adverse impacts; especially the safety issues may be adopted.

Emergency response plan along with safety charts showing symbols and other necessary information will be displayed at various places for the awareness of workers. First Aid Boxes will be available and given immediately in case of any accidental events. Comprehensive firefighter system will be developed which includes all type of fire extinguishers, fire hydrants, sand buckets, and firefighter vehicles. Emergency evacuation plan will be developed to evacuate the area in case of accidental fire which refers to the designation of safe areas in such conditions. Furthermore, the gas storage area will be protected by the secondary containment. The concrete walls will be built around the gas storage area to avoid the negative impact on the environment. It will help to overcome & mitigate any accident.

- **Fire Hazard**

During operational phase of the project, fire hazard poses a serious threat.

For firefighting different types of fire extinguishers, sand buckets, fire hydrant etc. are recommended to be installe. The unit will be equipped with facilities like firefighting system. The 6 fire hydrants of 700USGPM will be present in this proposed project. The number of Fire Blankets present in the proposed project is 5. Two trolleys mounted fire Extinguishers will also be installed in the project. The 12 sand buckets is also present in this proposed project. The following firefighting equipment will be present in the project for overcoming the hazard of fire having detail is given blow in the table.

| ***EQUIPMENT*** | ***QTY:*** ***(No's):;*** |
|---|---|
| ***Fire Hydrant*** | **3** |
| ***Hose Cabinet*** | **4** |
| ***Portable fire Extinguishers*** ***CARBON DIOXIDE*** ***5 Kg,*** | **9** |
| ***Sand Buckets*** | **12** |

| | |
|---|---|
| ***Fire Blankets*** | **3** |

## 21- Expected project life span

The Project is designed to have a long operational life, subject to regular maintenance, timely upgrades, and compliance with applicable regulatory requirements. With proper operational practices and periodic inspection of infrastructure and equipment, the Project is expected to function efficiently over several decades. The life span may be extended through technological improvements, refurbishment, and replacement of components as required.

## 22- Restoration and rehabilitation plans

There exists no human settlement on the selected project site to be displaced owing to the commencement of the Project. No structure of any significance stands at the site to be relocated or dismantled. Land is already under proponent's ownership, and no fresh land is to be occupied; hence, no relocation is required.

## 23- Green and sustainable features plans

The Project proposes to incorporate green and features aimed at minimizing environmental impacts and promoting efficient use of resources. Energy efficient equipment and systems shall be adopted to reduce energy consumption. Water conservation measures, waste minimization practices, and proper handling of hazardous and non-hazardous materials shall be ensured. Wherever feasible, eco friendly materials and best environmental management practices will be employed. The Project will comply with applicable environmental standards and promote sustainable operations through continuous monitoring, improvement, and adoption of cleaner technologies.

## Rain Water Harvesting

Rainwater harvesting will be implemented at the project site to efficiently collect and utilize rainwater. Rainwater from building rooftops, storage areas, and paved surfaces will be conveyed through properly designed drainage channels. The collected rainwater will be filtered to remove debris and sediments. After filtration, the water will be stored in dedicated storage tanks or underground reservoirs. This stored water will be utilized for non-potable purposes such as washing, landscaping, and general utility needs. Excess rainwater will be directed to recharge pits to enhance groundwater replenishment. The system will help reduce

surface runoff and prevent waterlogging. Rainwater harvesting will also minimize reliance on external water sources. Regular maintenance of the system will ensure efficient operation

## Renewable Energy Production

Renewable energy production has been planned by the proponent to promote sustainable development and reduce reliance on conventional power sources. Solar photovoltaic panels will be installed within the project premises to utilize clean solar energy. These panels will be suitably oriented to receive maximum sunlight and will contribute to meeting part of the project's electricity requirement. The use of solar energy will help in reducing carbon emissions, conserving natural resources, and improving overall environmental performance of the project.

## Tree Plantation

Tree plantation and cropping within and outside the premises has been planned by the proponent for environmental enhancement. Among plants native flora like Peepal and Amaltas will be involved which have maximum capacity to reduce noise pollution and tolerance index of these species are more than 10. Some floral species like rose will also be introduced in the lawn for aesthetic beauty and trees like sufaida will be planted as boundary wall inside the lawn which will look like green wall

Excavation for planting shall include plant pits and planting beds. The minimum depths of plant pits or beds shall be measured from finished the grade. Plants beds and pits shall be tested for drainage before planting by filling with water twice in succession. Conditions permitting the retention of water in planting the beds or pits for more than 24 hours shell be brought to the attention of the Architect. If rock, underground construction, .obstructions, tree roots or other obstructions are encountered in the excavation of plant pits, alternate locations may be select by the architect. The contractor shall be responsible for all damages resulting from any neglect and failure to comply with this requirement.

Following excavation planting pits, the pits shall be back filled with the sweet soil mixture as specified. Three day prior to planting, the pits shall then be filled with water for consolidation of soil. The dimensions of the panting pits are as follows:

A. Trees: 3x3x3

B. Shrubs: 2x2x2

C. Hedges: trenching 2wide x'2 deep of required length.

D. Creepers and vines: 2wide x 2 deep of required length.

E. Edges and flowers beds: 'fill flower box with sweet soil as per the Architect's drawings. For seasonal flowers, the beds are to have the minimum of 12" sweet soil and 4" 'manure.

Planting areas and plants shall be protected all times against trespassing and damage of all kinds for the duration of maintenance period. If any plants become damage or injured, they shall be treated or replaced. Protection shall also include all temporary protections fences and barriers. all signs and all other work incidental to proper maintenance.

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# DESCRIPTION OF THE ENVIRONMENT

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This chapter contains a brief description of the prevailing environmental state of the area. The main components of the environment include physical resources, ecological resources, cultural resources and socio-economic conditions of the area. A comprehensive detail of each is given below:

- **Physical Environment**

An account of different components of the physical environment of the area is given hereunder:

- **Physical resources topography, soils, climate, surface water, ground water, geology;**

This chapter contains a brief description of the prevailing environmental state of the area. The main components of the environment include physical resources, ecological resources, cultural resources and socio-economic conditions of the area. A comprehensive detail of each is given below:

## 1. Physical Environment

An account of different components of the physical environment of the area is given hereunder:

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### Topography

Lahore city is lying between 31°15′—31°45′ N and 74°01′—74°39′ E, Lahore is bounded on the north and west by the Sheikhupura District, on the east by Wagah, and on the south by Kasur District. The Ravi River flows on the northern side of Lahore. Lahore city covers a total land area of 1014 km² and is still growing. Lahore is generally flat and slopes towards south and south-west at an average gradient of 1:3000. It can be divided into two parts i.e. the low lying area along River Ravi and the comparatively upland area in the east away from Ravi. The low lands are generally inundated by the river water during monsoon floods. River Ravi flows in the west of Lahore District forming a boundary with Sheikhupura District. The original physiographic features like channels remnants and levees have been destroyed or changed by the construction of urban infrastructure. Flood plains have been confined by construction of embankments (bunds) and spurs. Sub-recent flood plain is 4 to 8 meters higher than the recent flood plain and can be identified at number of places i.e. Shalimar Garden, Mughalpura and Multan Road. Lahore city is situated at an average elevation of 210 meters above mean sea level.

**Soil**

The soil is different in color and generally inclined to be dry.The alluvial complex consists principally of fine to medium sand, silt and clay. Beds of gravel or coarse sand are uncommon. However pebbles of siltstone or mudstone may be found embedded in silty or clayey sand in many places. Except for a few local lenses, few feet thick beds of hard compacted clay are rare in the area. However it is rich in potential plant nutrients. The soil is of alluvial type and deposited by Ravi River. Alluvium is soil or sediments deposited by a river or other running water. A river is continually picking up and dropping solid particles of rock and soil from its bed throughout its length. Where the river flow is fast, more particles are picked up than dropped. Where the river flow is slow, more particles are dropped than picked up. Areas where more particles are dropped are called alluvial or flood plains and the dropped particles are called alluvium.

**Climate**

Lahore features a five season semi-arid climate and the seasons are winter, summer, spring, autumn and monsoon. The hottest month of the year is June when temperatures routinely exceed $40^0$C. The wettest month is July, with heavy rain falls and evening thunderstorms with the possibility of cloudbursts. The coolest month is January with dense fog.

A short description is given hereunder to present the climatic conditions of the area.

| Month | Mean Temperature | | Precipitation (mm) | Relative Humidity AT 0500 HRS (%) | Relative Humidity AT 2000 HRS (%) |
|---|---|---|---|---|---|
| | Maximum | Minimum | | | |
| January | 19.8 | 5.9 | 28.92 | 80.4 | 51.9 |
| February | 22.0 | 8.9 | 37.14 | 79.0 | 52.4 |
| March | 27.1 | 14.0 | 34.3 | 68.6 | 42.2 |
| April | 33.9 | 19.6 | 44.32 | 50.2 | 25.3 |
| May | 38.6 | 23.7 | 24.38 | 45.7 | 27.2 |
| June | 40.4 | 27.3 | 91.62 | 59.1 | 40.9 |
| July | 36.1 | 26.8 | 150.52 | 76.7 | 60 |
| August | 35.0 | 26.4 | 161.42 | 78.8 | 65.9 |
| September | 35.0 | 24.4 | 67.28 | 74.4 | 56.4 |
| October | 32.9 | 18.2 | 11.7 | 70.6 | 44.2 |

| | | | | | |
|---|---|---|---|---|---|
| | | | 4 | | |
| November | 27.4 | 11.6 | 4.44 | 77.1 | 48.8 |
| December | 21.6 | 6.8 | 9.94 | 82.9 | 53.73 |
| **Annual** | **30.8** | **17.8** | **666** | **70.34** | **47.4** |

**Temperature**

The climate of the project area is hot in summer and cold in winter. May and June are the hottest months with maximum temperature reaching 40.4°C. January is the coldest month with minimum temperature falling to 5.9°C.The summer season starts towards the end of April and continues till September. The winter begins in November and lasts till February. The spring season exists during March and April and is pleasant.

**Humidity**

Annually relative humidity for this area has been worked out as 70.34%. The maximum recorded humidity for the district is 82.9% in December while the minimum humidity is 45.7% in May.

**Precipitation**

The average annual rainfall is 666 mm. Most of the rain occurs during monsoon in summer which often results in flooding of the nearby water drain and canal. The groundwater level is improved toward the end of the season in September and October.

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**Ambient Air Quality**

In the project area, Particulate Matter (SPM & PM10) and Oxides of Nitrogen (NOx), Sulphur Dioxide (SO2) and Carbon Monoxide (CO) are the major air pollutants. Traffic on road is the main source of air pollutants including NOx, SO2, CO, PM, HCs, smoke, etc. Factories and industries are also contributing to the pollution in the district

**Ambient Noise**

A common form of noise pollution is from transportation, principally motor vehicles. Other sources are car alarms, office equipment, factory machinery, construction work, audio entertainment systems, loudspeaker etc.

**Ground Water**

The water table depth in the central part of the city has fallen below 130 feet (40 metres) approximately and is projected to drop below 230 feet (70 metres) in most areas by 2025. The total surface water diverted to Lahore is 6.02 million cubic metre per day (MCM/day) and is mainly used for agricultural purposes. The Bambawala-Ravi-Badian-Deplapur (BRBD)

Canal mainly feeds the command area of Upper Bari Doab Canal on the Pakistan side of the Pak-India border. The Upper Bari Doab Canal irrigates command areas of Lahore Branch, Khaira distributary, Butcher Khana distributary, Main Branch Lower and other smaller channels. The remaining flow of the BRBD Canal supplements Depalpur Canal. The Lahore aquifer is broadly viewed as a single contiguous, unconfined aquifer. Groundwater for drinking purposes is extracted from a depth of 120-200 meters (m). It is pumped for Lahore'sdomestic, industrial and commercial purposes. In order to deal with the vagaries of surface water supplies, more than 10,000 tube wells have been installed for agricultural purposes. The average annual rainfall of Lahore is 715 mm. However, its recharge to groundwater in urban areas is minimal due to urbanization. In general, groundwater discharge is higher than recharge, which is the main reason for the rapid depletion of groundwater in the city.

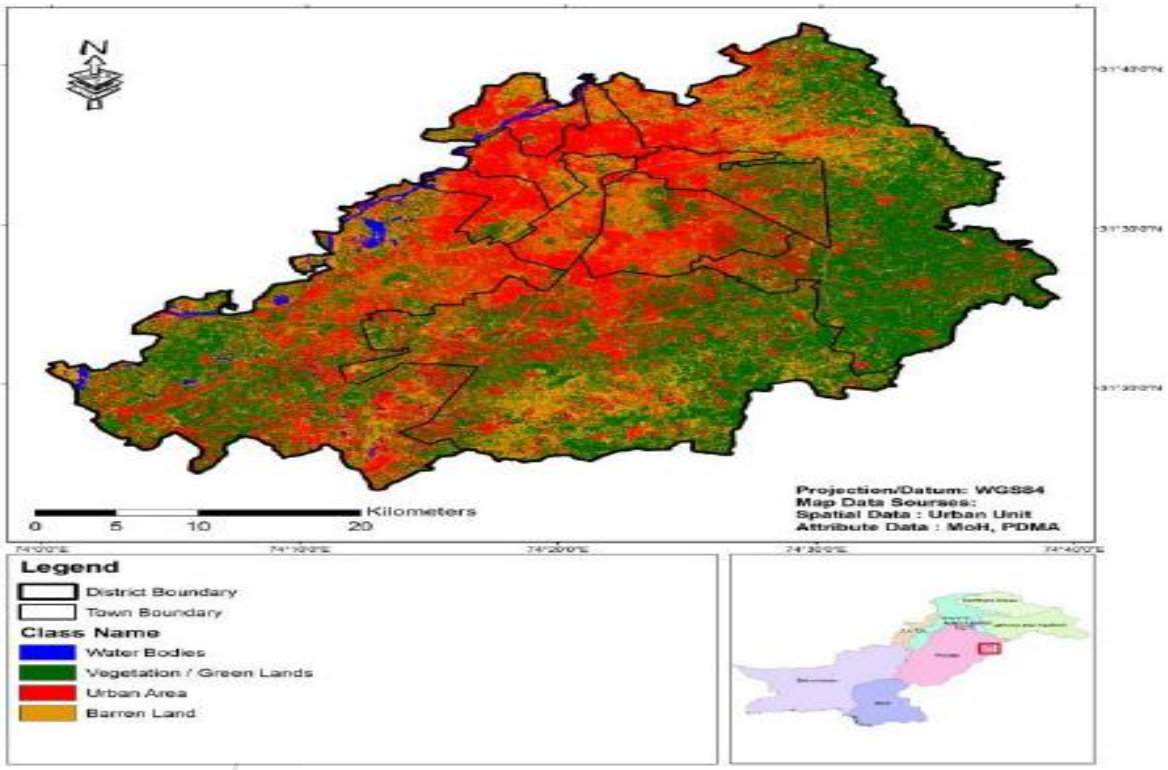
**Geology**

Lahore city is situated at an average elevation of 210 meters above mean sea level. Lahore city lies on the alluvial plain called Bari Doab. Doab is a local word for area between rivers. Bari Doab is a part of the Indo-Gangatic alluvial plain formed by the Indus River and its tributaries. It is bounded by Ravi and Chanab rivers in the northwest and west and by Sutlej River in the southeast. Northeastern boundaries of Doab lie near the foothills of the Himalayan Ranges. The Bari Doab is covered by Quaternary alluvium which overlies semi-consolidated Tertiary rocks or Metamorphic and igneous rocks of Precambrian age. Except for a small area in the northeastern part of Doab where basement rock was encountered no information is available at present regarding the distribution of Tertiary and Precambrian rocks in the Doab.Probabilistic seismic hazard assessment recently carried out for Lahore area as part of the revision of Seismic Provisions of the Building Code of Pakistan shows that the Project area falls in Zone 2A.

**Land Use**

Limited and its surrounding area fall in industrial area. The growth and spread of the city is seen towards south-west direction. The reason is that the availability of well-constructed and connected roads provides means to residents for having residences far away from the main city center. This condition will have adverse repercussions in the area because of the allied difficulties connected to the urban sprawling, environmental issues, and transportation problems, lack of civic amenities, crime and associated social issues.

***Land Use Map Lahore***:




## 2. Ecological Environment

A detail of ecological account of the Project and Study Area is given below:

### Flora

The area in which the project site is located was once covered with native vegetation, mostly consisting of trees like Kikar (Acacia nilotica) and Shisham (Dalbergiasissoo). With the onslaught of civilization and industrialization, this vegetation was cleared for agricultural, commercial or industrial land use purposes. The current ecological details of the area in general and study area in particular are given below:

**Trees**

A field study related to the identification of tree species in the study area was also conducted. A vast majority of trees were observed in the localities visited as well as open fields. These are Tali/Sheeshum (Dalbergiasissoo), Kikar (Acacia nilotica), Safeda (Eucalyptus cinerea), Neem (Azadirachtaindica), Papaya (Carica papaya), Bottle Brush (Callistemonecitrinus) and Borh (Ficusbengalensis).

A tabular comparison is given hereunder to explicit frequency of each species in three zones of study area:

**List of Trees Identified in the Project Area**

| Serial Number | Common Name | Scientific Name |
|---|---|---|
| 1 | Tali/Sheshum | Dalbergiasissoo |
| 2 | Kikar | Acacianilotica |
| 3 | Safeda | Eucalyptus cinerea |
| 4 | Neem | Azadirachtaindica |
| 5 | Piple | Ficusreligiosa |
| 6 | Papaya | Caricapapaya |
| 7 | Shree | Acaciagreggii |

**Grasses**

A number of grass species were identified. These are Crow Foot Grass (Dactylocteniumaegyptium), Dabri Grass (Dichanthiumannulatum) and Indian Dab (Cynadonedactylone).

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**Grasses in Study Area**

Different types of grass species were also identified outside the project site during our visits to the nearer localities, these species include Dabri Grass (Dichanthiumannulatum), Lesser Bulrush (Typhaangustifolia) and Indian Dab (Cynadonedactylone).

Frequency (of occurrence) of these species in different zones of the study area is as under:

**List of Grasses Identified in the Project Area**

| Common Name | Scientific Name |
|---|---|
| IndianDab | Cynadonedactylone |
| Dabri Grass | Dichanthiumannulatum |
| LesserBulrush | Typhaangustifolia |

**Herbs and Shrubs**

A large number of herbs and shrubs species were identified in the area. Among these species, the most dominant were JangliBooti (Partheniumhysterophorus), Bathu (Chenopodium album) and Ak (Calotropisprocera). Frequency of these species in different zones of the study area is as under:

**List of Herbs and Shrubs Identified in and Around the Project Area**

| Common Name | Scientific Name |
|---|---|
| JangliButi | Partheniumhysterophorus |
| Puthcanda | Achyranthesaspera |
| Bathu | Chenopodiumalbum |
| Ak | CalotropisProcera |
| Bhang | Canibus sativa |

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**Medicinal Plants**

**Medicinal Plants within project site**

A number of medicinal plants in the area were identified which are AK (Calotropisprocera), Amaltas (Cassia fistula), Pilak, Janglikashni and Itsit (Boerhaviadiffusa).

**List of Medicinal Plants Identified in the Project Area**

| Sr # | Study Area | |
|---|---|---|
| | Common Name | Scientific Name |
| | AK | Calotropisprocera |
| | Amaltas | Cassia fistula |
| | Itesit | Boerhaviadiffusa |
| | Ajwain | Hyoscyamusniger |

**Ornamental Plants**

**Ornamental Plants Project Site**

During our ecological survey to the nearby localities, a number of ornamental plants were identified at some houses and Deras, which are listed in table below.

**List of Ornamental Plants Identified in and Around the Project Area**

| Sr # | StudyArea | |
|---|---|---|
| | Common Name | ScientificName |
| 1 | Bottle Brush | Callistemonecitrinus |
| 2 | Araucaria | Araucariaheterophylla |
| 3 | Bouginvillea | Bougainvilleaspectabilis |
| 4 | Milkwood pine | Alostoniascholaris |

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**Vegetables**

**Vegetables in around and Project Site**

No vegetables are grown in or around proposed project site.

**Vegetables in Study Area**

Some important of these are PhoolGobhi/cauliflower (Brassica oleracea Ver. botrytis), Band Gobhi (Brassica oleracea Ver. capitate) Turnip, Raddish (Raphanussativus), Carrot (Daucuscarota), Bhindi, Tomato (Lycopersicumesculentum), Vegetable Marrow (Cucurbitapepo), Baingan, etc.

**List of vegetables Identified in and Around the Project Area**

| Sr # | Study Area |
|---|---|

| | Common Name | Scientific |
|---|---|---|
| 1 | Bangun | Solanummelongena |
| 2 | Bhendi | Abelmoschusesculentus |
| 3 | Karela | Momordicacharantia |
| 4 | PhoolGobhi | BrassicaoleraceaVer. Botrytis |
| 5 | Raddish | Raphanussativus |
| 6 | Tomato | Lycopersicumesculentum |
| 7 | Marrow | Cucurbitapepo |

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**Agriculture**

The soil of the area is quite suitable for all kinds of vegetation including fodder, orchards, vegetables and other seasonal crops. The pattern mainly consists of wheat-rice system, while other agriculture practices include the cultivation of sugarcane, Maize, etc.

**Farm Traction Power**

Tractor is the sole source of farm traction power. No farmer was found using animal traction power. There was significant variation in tractor ownership across farm size groups. However, more than half of the farmers owned tractor while rest were hiring the services for land preparation.

**Irrigation**

The tube-wells and canal water are the main source of irrigation water for wheat, rice and other crops and fodder. Also, many farmers irrigate their fields with contaminated water of drain and also many studies have been conducted to assess the level of toxic heavy metals in the soil and vegetables irrigated by drain water and their ultimate impacts on human health. It has been highly recommended during these studies not to use the contaminated water of drains for agricultural practices. On the other hand plenty of ground water is easily accessible for agriculture use.

# Fauna

The area provides healthy environment for the growth and reproduction of a diverse nature of fauna. A short description is given in the following paragraphs

**Mammals**

**Mammals within project site**

During our survey to the proposed project site, some mammals were identified evidently while some were reported by the workers like Cats (Feliscatus), Rats (Rattusrattus) and Squirrel (Sciuruscarolinensis).

**Mammals in Study Area**

The wild and common or domesticated mammals found in the study area are Dogs (Canisfamiliaris), Cats, House Rats (Rattusrattus), Bats, Horses (Equuscaballos), Donkeys (Equusafricanusasinus), Mules, Buffaloes, Cows (Heracleumlanatum), Goats (Copra hircus) and Sheep.

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**List of Mammals Present in and Around the Project Area**

| **Project Site** | | **Study Area** | |
|---|---|---|---|
| Common Name | Scientific | Common Name | Scientific |
| Cat | Feliscatus | Cats | Feliscatus |
| | | | |
| Rat | Rattusrattus | Dogs | Canisfamiliaris |
| Squirrel | Sciuruscarolinensis | Cows | Heracleumlanatum |
| | | Goats | Copra hircus |
| | | Horses | Equuscaballos |
| | | Donkeys | Equusafricanusasinus |

| | | | |
|---|---|---|---|
| | | Sheep | |

## Reptiles

**Reptiles within Project Site**

No reptiles were identified within the project site

**Reptiles in Study Area**

Above reptiles were also seen in study area in localities and field. The most common reptiles include Snakes, Pakistani Cobra (Najanajakarachiensis), Lizards, Varanis (Goh/large lizard), Spiders and Scorpions, etc.

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**List of Reptiles Present in and Around the Project Area**

| Common Name | Scientific Name |
|---|---|
| Lizards | |
| Spiders | |
| Scorpions | |
| Pakistani cobra | Najanajakarachiensis |
| Goh/large lizard | Varanis |

## Amphibians

A number of Amphibians found in the tract include Common Frog (Ranatigrina), Common Toad (Bufobufo) and Tortoise (Chitraindica).

**List of Amphibians Present in and Around the Project Area**

| Project Site | Study Area |
|---|---|
| | |

| Common Name | ScientificName | Common Name | ScientificName |
|---|---|---|---|
| Common Frog | Ranatigrina | Common Frog | Ranatigrina |
| Common Toad | Bufobufo | Common Toad | Bufobufo |
| | | Tortoise | Chitraindica |

## Birds

Different types of birds' species were identified within the project site. The bird's species identified in these areas include House Sparrow (Passer domesticus), House Crow (Corvussplendens), Common Mynah (Acredotherestristis), Tatiri (Vanellusindicus),Cheel, Bagle, Bulbul (Pycnontuscafer), Parrots (Psittaculakrameri), Pigeons (Columbia livia), Dove (Stigmetopeliasenegalensis), Surkhab, Ullu, etc. are also seen in the area.

**List of Birds Present in and Around the Project Area**

| Sr # | Project Site | | Study Area | |
|---|---|---|---|---|
| | Common Name | ScientificName | Common Name | ScientificName |
| 1 | House Sparrow | Passerdomesticus | Parrots | Psittaculakrameri |
| 2 | HouseCrow | Corvussplendens | HouseSparrow | Passerdomesticus |
| 3 | Common Mynah | Acredotheres Tristis | HouseCrow | Corvussplendens |
| 4 | Tatiri | Vanellusindicus | Common Mynah | Acredotherestristis |
| 5 | Pigeons | Columbia livia | Tatiri | Vanellusindicus |
| 6 | | | Pigeons | Columbia livia |
| 7 | | | Dove | Stigmetopelia Senegalensis |
| 8 | | | Bulbul | Pycnontuscafer |

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| | | | | |
|---|---|---|---|---|
| 9 | | | Cheel | |

## Wildlife Sanctuaries and Game Reservoirs

The Safari Zoo Park & Wildlife Park Lahore is present in the Lahore for the conservation of endangered species. However, no wild life sanctuary or game reservoir is located in the vicinity of the project area or in the project influenced area.

## Rare or Endangered Species

There are no rare or endangered species in the study area.

# 3. Socioeconomic Environment

Human settlements are symbol of typical haphazard rural growth based on ill planned developmental procedures showing common indicators of all the unorganized procedure of rural settlement of the province. These localities were developed on need oriented basis. No bye-laws, rules and obligations necessary for human settlement, construction or expansion and infrastructure development were considered. These localities are also the picture of stereotype rural residential areas which lack basic amenities, improper roads, and poor drainage system, deteriorating hygienic and sanitary conditions causing bad effects on human health.

**Objectives of the Study**

The main objectives of socio- economic study of the project area were:

- To furnish appropriate information about the baseline socio-economic conditions
- To identify and assess significant social impacts of the Project activities on the surrounding area and people
- To propose suitable means for probable mitigation of the significant adverse social impacts

**An Overview of Socio-economic Conditions**

This section describes the status of overall socio-economic baseline conditions prevailing in the study area. It deals with various socio-economic and cultural aspects of the community including income, employment, professions, basic facilities, education and health, social structure, culture, women's status, traditions, ethnics, sectarian status and residential needs of the local people.

Area represents lacking some basic amenities of an urban area. Improper social structure, deprived status of youth and aged are common social factors in the area.

**Analysis of Socio-economic Conditions**

This section presents a locality-wise analysis of existing status of various socioeconomic parameters such as income, employment, basic facilities, education, health, recreation, migration, conflicts, ethnic status, role of women, professions, residential conditions, etc.

**A) Sources of Income**

The economy of Lahore has a diversified base spanning from telecommunication, information technology, manufacturing industry, engineering, pharmaceuticals, steel, chemicals and construction material. As a major urban center, the economy of Lahore has relatively prospered. Lahore is hailed as the industrial belt of Pakistan and is home to the largest IT Park in Pakistan. It is the country's second largest economic hub and the commercial capital of Punjab. In 2008, the city was ranked with high efficiency to be classified as a gamma world city. Majority of the people are working as labors in industries, and many do their own common business (shopkeepers).

**B) Basic Facilities**

Basic facilities like electricity, roads, transport etc. are present in almost every area of the Lahore but are disorganized and mismanaged. Civic amenities like markets are not available in some of the slum areas.

**C) Educational Facilities**

Educational facilities up to master level are available in almost all the localities and are easily approachable. Lahore is Pakistan’s largest producer of professionals in the fields of science, technology, IT, engineering, medicine, nuclear sciences, pharmacology, telecommunication, biotechnology and microelectronics. Most of the reputable universities are public, but in

recent years there has also been an upsurge in the number of private universities. The current literacy rate of Lahore is 64%.

The system is divided into five levels: primary (grades one through five); middle (grades six through eight); high (grades nine and ten, leading to the Secondary School Certificate); intermediate (grades eleven and twelve, leading to a Higher Secondary School Certificate); and university programs leading to graduate and advanced degrees.

**D) Medical Facilities**

The proper health care facilities are present in the area for both male and female population.

**E) Recreational Facilities**

Lahore is the hub of cultural & religious recreational places. Many famous recreational places such as Badshahi Masjid, Shahi Qila, Tomb of Jahangir, Shalimar Garden, Minar-e-Pakistan, Lahore Zoo, Lahore Museum, Safari Park, Jallo Park, etc. are present for recreational activities. Urs and Melas are playing a vital role to provide some recreational opportunities to the locals. Religious, ethnic, political and tribal conflicts do not exist among the people of the study area.

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**G) Types of Community**

The main religion in Lahore is Muslim – mostly Sunni or Shia- which makes up 94% of the population. The remaining 6% are nearly all Christians. There are also a small number of minority religions such as Sikh and Hindu. The Lahoris are a cultural bunch of people celebrating many festivals around in the year – some religious, some historical and some are combinations of ancient and modern- even western – celebrations.

**H) Types of Family**

The joint/extended family system is generally prevailing among people of the whole area; however, nuclear family system is also observable in the area.

**I) Ethnic Status**

The main castes and groups of the Lahore district are Arain, Jat, Rajput, Malik, Pathan, Mughal, Sheikh, Komboh and Gujjar. Besides, there are also village artisans, which include Lohars(blacksmiths), Tarkhan (carpenter), Kumhars (potters), Mochis (cobblers), Machhis (water-carries), barbers and weavers etc.

**J) Status of Women Literacy**

A vast majority of the females of the Study Area are illiterate which shows very low educational trend among females; however, young females have high literacy rate showing positive trend in female education.

**K) Decision Making Authority**

Majority of the females have no authority in decision-making process regarding their life. This shows non-participation of the females in decision-making process regarding the females and other issues.

**L) Role of Women**

Role of female is conventional and traditional. Most of the females are engaged in housekeeping. However, females also perform outdoor activities and duties. Females are supposed to be responsible to perform all the family activities and are involved in all types of family functions.

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# 4. Quality of Life Values

If we specifically talk about the project area then majority of the people has to adopt seasonal occupation to supplement their income due to low-income level and inconsistent income opportunities. People are educated and doing jobs as per their profession and many are industrialists as well. Majority of the people are working as labors and many do their own common business (shopkeepers).The locals of this are provided with basic facilities like electricity, roads, transport etc. but are disorganized and mismanaged. If we talk about educational facilities then education up to master level are available in almost all the localities and are easily approachable. The proper health care facilities are present in the area for both male and female population. Open and level fields of the localities are used as playgrounds by the youth. Urs and Melas are playing a vital role to provide some recreational opportunities to the locals.

It was observed that being the members of a typical/traditional blend of rural and urban community, almost all the old people are very conservative in their life style. People practice their traditional, social and cultural values strictly in all walks of life.The joint/extended family system is generally prevailing among people of the whole area; however, nuclear family system is also observable in the area.

# 1. Lab Reports of Environmental Analysis

Testing of different parameters has been done by proponents. The copies of lab reports of different environmental parameters are given in annexure.

## Site suitability

- The proponent selected this site because it an open area where no human settlement
- This site which is selected for proposed extension is devoid of any tree cover and has no environmental sensitivity.
- The proponent selected the site because the site has the availability of basic human necessities such as roads and easy access to markets.
- The proposed site is best suited and economically viable option for the proponent. The proponent has no other land for carrying out his project.

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# Impact Assessment

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## 8.1; Identification of Impacts:

For the identification of all the possible impacts such as social, economic and biological checklist are used.

### 8:1.1 Methodologies for Impact Assessment:

## ***Checklist:***

All types of impacts associated with the project of Asghar Ali Traders. are covered in this checklist. All kind of impacts are organized to ensure that no potential impact is overlooked.

| *Activities* | *Adverse effect* | *No Effect* | *Beneficial Effect* | *Minor Effect* |
|---|---|---|---|---|
| ***Land Use*** | | | ✓ | |
| ***Ground Water Resources*** | | | ✓ | |
| ***Air Quality*** | | | | ✓ |
| ***Noise & Vibration*** | | | | ✓ |
| ***Transportation System*** | | ✓ | | |
| ***Socio-economic*** | | | ✓ | |
| ***Surface Water Quality*** | | | ✓ | |
| ***Vegetation*** | | | ✓ | |
| ***Flora and Fauna*** | | ✓ | | |

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This section discusses the potential environmental impact for the establishment of Asghar Ali Traders. The impacts may include; soil contamination, water resources damage, air pollution, biological resources disturbance and socio-economic impacts and, where applicable, identifies mitigation measures that will reduce significantly, if not eliminate its adverse impact. The assessment carried out in this Section is based on potential impacts on overall environmental receptors within the project area.

### 5.1 Impact Assessment Methodology

The impact assessment methodology for the installation of unit is given below:

#### 5.1.1 Screening of Potential Impacts

Based on site visit, observations, brain storming, provided information, studying related projects and social interviews, significant impacts were anticipated and evaluated. Then qualitative and quantitative (where possible) assessment of these anticipated impacts is to be carried out.

#### 5.1.2 Identification of Mitigation Measures

After anticipation and screening of significant impacts, certain mitigation measures are to be provided in order to enhance benefits of said project and reducing the adverse environmental and social impacts. These measures can be classified as:

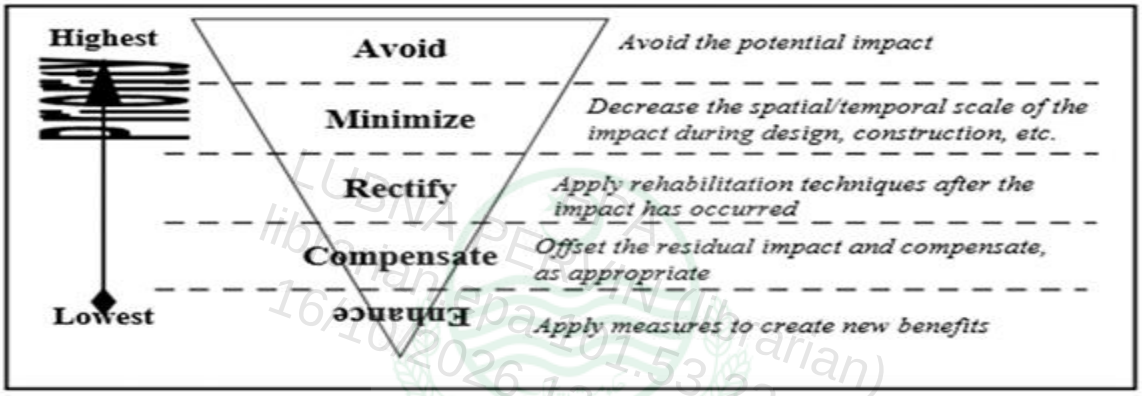



*Figure 1: Hierarchy of Mitigations*

#### 5.6.3 Evaluation of the Residual Impacts

Incorporation of suggested mitigation measures may reduce the magnitude of the environmental impacts of aforesaid project but sometimes, it may fail in bringing them within the acceptable limits. This step refers to the identification of the anticipated remaining impacts after mitigation measures have been applied.

It can be concluded in view of these reasons that the selected site is best suited for project and the technology adopted for production of medicinal drugs & personal hygiene products is the most suitable and sustainable option. The aforesaid project will not pose any adverse impact or threat on any component of environment. The impact assessment criteria are given below along with their impacts:

**Table 1: Impact Significance Criteria**

| Impact | |
|---|---|
| No Impact | When the proposed activity will have no impact |

| | |
|---|---|
| Long Term | When the impact is of high intensity with high spread and high duration or of high intensity with medium spread and medium duration |
| Moderate Term | When the impact is of moderate intensity with high spread and high duration or of high intensity with low/ moderate spread and low duration |
| Short Term | When the impact is of low intensity but with moderate spread and moderate duration or of moderate intensity |
| Insignificant | When the impact is of low intensity, low spread and low duration |
| Adverse | When the impact is of large intensity, spread easily and long-term |
| Beneficial | When the impacts are positive and improve the environmental conditions |

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**Table 2: Impact Matrix Checklist for Designing Phase**

| Environmental Sensitivities | Intensity of Impact | | | | | | Impact Nature | | ImpactSignificance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Low Intensity | Moderate Intensity | High Intensity | Local | National | Regional | Beneficial | Adverse | Insignificant | No Impact | Short Term | Moderate | Long Term |
| ***Physical Parameters*** | | | | | | | | | | | | | |
| Topography | ✓ | | | ✓ | | | | | | | | | |
| Land Acquisitions | ✓ | | | ✓ | | | | | | | | | |
| Seismicity | | | | | | | | | | | | | |
| ***Biological Parameters*** | | | | | | | | | | | | | |
| Land Environment | ✓ | | | ✓ | | | | | | | | | |
| Flora | ✓ | | | ✓ | | | | | | | | | |
| Fauna | ✓ | | | ✓ | | | | | | | | | |
| ***Social Parameters*** | | | | | | | | | | | | | |
| Local Economy | ✓ | | | ✓ | | | | | | | | | |
| Social Impacts | ✓ | | | ✓ | | | | | | | | | |

**Table 3: Impact Matrix Checklist for Construction Phase**

| EnvironmentalSensitivities | Intensity of Impact | | | | | | Impact Nature | | ImpactSignificance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LowIntensity | ModerateIntensity | HighIntensity | Local | Moderate | Regional | Beneficial | Adverse | Insignificant | No Impact | ShortTerm | Moderate | LongTerm |
| ***Physical Parameters*** | | | | | | | | | | | | | |
| **AirQuality** | ✓ | | | ✓ | | | | | | | | | |
| **Noise** | ✓ | | | ✓ | | | | | | | | | |
| **WaterQuality** | ✓ | | | ✓ | | | | | | | | | |
| ***Biological Parameters*** | | | | | | | | | | | | | |
| **LandEnvironment** | ✓ | | | ✓ | | | | | | | | | |
| **Flora** | ✓ | | | ✓ | | | | | | | | | |
| **Fauna** | ✓ | | | ✓ | | | | | | | | | |
| ***Physical Parameters*** | | | | | | | | | | | | | |
| **LocalEconomy** | ✓ | | | ✓ | | | | | | | | | |
| **Social Impacts** | ✓ | | | ✓ | | | | | | | | | |
| **Health & Safety** | ✓ | | | ✓ | | | | | | | | | |

**Table 4: Impact Matrix Checklist for Operational Phase**

| Environmental Sensitivities | Intensity of Impact | | | | | | Impact Nature | | ImpactSignificance | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LowIntensity | ModerateIntensity | HighIntensity | Local | Moderate | Regional | Beneficial | Adverse | Insignificant | No Impact | ShortTerm | Moderate | LongTerm |
| ***Physical Parameters*** | | | | | | | | | | | | | |
| **AirQuality** | ✓ | | | ✓ | | | | | | | | | |
| **Noise** | ✓ | | | ✓ | | | | | | | | | |
| **WaterQuality** | ✓ | | | ✓ | | | | | | | | | |
| ***Biological Parameters*** | | | | | | | | | | | | | |
| **LandEnvironment** | ✓ | | | ✓ | | | | | | | | | |
| **Flora** | ✓ | | | ✓ | | | | | | | | | |
| **Fauna** | ✓ | | | ✓ | | | | | | | | | |
| ***Physical Parameters*** | | | | | | | | | | | | | |
| **LocalEconomy** | ✓ | | | ✓ | | | | | | | | | |
| **Social Impacts** | ✓ | | | ✓ | | | | | | | | | |
| **Health & Safety** | ✓ | | | ✓ | | | | | | | | | |

## 5.2 Identification of Monitoring Requirements

The last step in the assessment process is the identification of minimum monitoring requirements. The scope and frequency of monitoring depends on the residual impacts. The purpose of the monitoring is to confirm that the impact is within the prescribed limits and to provide timely information if acceptable limits are being breached.

# SCREENING OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This section discusses the project's potential environmental impact on the area's geomorphology, soil, water resources, air, biological resources and socioeconomic condition and, where applicable, identifies mitigation measures that will reduce, if not eliminate, its adverse impact. The assessment carried out in this section is based on potential impacts on overall environmental receptors within the project area.

Objectives of screening out all possible impacts and then providing their mitigation measures are:

- To find different alternatives and ways of carrying out the project activities.
- To enhance the Environmental and Social benefits of proposal.
- To avoid, minimize and remediate adverse impacts.
- To ensure that residual adverse impacts are kept in acceptable limits

## 2- Impacts Associated with Project Location

The proposed project is located at Industrial area . The project area is open area. However it could affect the people around the project area if proper mitigation measures will not be taken. The transportation of material can cause traffic problems in the area. Otherwise, there is no as such impacts are associated with project location.

**Mitigation**

Strict traffic plan will be implemented. If the mitigation measures mentioned in later section of construction and operation phase are properly implemented, the proposed project with respect to location will be environment friendly and will not be involved in the deterioration of environment.

- The site is undisputed and under the ownership of the proponent
- There is no need of relocation of utilities.
- There is no community or human settlement on the site.
- There is no fauna flora (particularly belonging to an endangered species) on the site
- Main road network runs in front

- There is no ecologically sensitive or declared protected area (PA) like forest, fish hatcheries, Territorial Waters, wildlife or game reserves, any structure of socio-cultural significance (historical or archaeological site or religious structures; Masjid, temples, etc.) within 10 km of the selected site

It can be concluded in view of these reasons that the selected site is best suited for the project, and will not pose any adverse impact or threat on any component of the environment.

# 3- Impacts Associated with Design Phase

At the design phase, considerable impact can occur on land, soil, ground water, and on people of the area.

**Mitigation Measures at Design Phase**

The design has sought to minimize any environmental potential impacts by ensuring that the project should be in according to the environmental standards. The design of this unit is state-of-art and environmentally friendly. At design phase special attention should be given to the design of the project in the sense that it has been designed in such a way as to cause minimum disruption and deterioration of environment and surroundings. However in pre-construction phase a management system should be provided at design level so impacts can be reduced. Design of the unit will adhere to all standard technical requirements in order to avoid adverse impacts on environment and human health. There will not be any environmental problems at any stage from design stage to its operational stage. The project is to be designed in a way that it guarantees all out compliance with the Punjab Environmental Quality Standards (PEQS).At the design phase, no considerable impact will

Occur on land, soil, topography, ground water, and on people of the area. The Proponent intends to construct the unit on modern lines, meeting International Standards, with incorporation of new Technology. The design, if maintained and operated in an environment-friendly manner, is expected to cast positive impact on the Environment and will not pose any adverse impact or threat on any component of the Environment.

# *4- IMPACT DURING CONSTRUCTION PHASE*

It is as follow:-

- **Impact on Soil**

During construction phase the soil quality may be affected due to very small amount of discharges during vehicle and equipment maintenance and leakage from equipment's and vehicles. The impact is not significant.

**Mitigation**

Any spill if occur will be immediately clean up. If the problem of water logging occurs during development phase the area will be immediately reclaimed. The impact is not significant.

Depending on the nature of the material, location of spill and quality of spill, soil can get contaminated. Low permeable membrane should be present at the bottom of vehicles. Proper tuning of vehicles is also necessary. Due to mitigation measures, the overall impact on soil during construction phase is minor.

- **Impact on Geology**

The geology of the area is flat. No hills, mountains and slopes are present so during construction phase there will be no impact on geology of area.

## Mitigation

No impact

- **Ecological Impacts**

There would be a considerable impact on flora and fauna if present in area and it could be a cause of their elimination from the area.

## Mitigation

There is no impact. No flora and fauna present around the proposed project site. The project area is devoid of any trees cover or any endangered or threatened animal species.Plantation will be done to improve the ecological conditions of the area. The impact will be Nil.

- **Impacts on Air Quality**

Following potential impacts on air quality may occur during construction phase.

### *Emission of Dust and Particulate Matter*

During the development / construction vehicles and machinery will be employed. These will generate some dust and smoke temporarily. During construction phase due to continuous operation of machinery and movement of heavy trucks and vehicles can generate gaseous emissions and can have a slight adverse effect on the surrounding environment. Combustion

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exhaust from vehicles and construction equipment's during construction phase can affect ambient air quality of project area.

### Mitigation

All vehicles, machineries, equipment and generators used during construction activities should be in good working condition, properly and be properly maintained in order to minimize exhaust emissions. This impact is classified to be short term, reversible and limited, as it will only occur during the excavation activities. Also these impacts are expected to be contained within the site boundaries. For dust sprinkling of water is done to avoid dust.

- ## Solid Waste

The solid waste generated during the construction phase of Project can pose a health hazard, pollute soil, surface and ground water if not managed properly. A significant impact will be interpreted if the waste management is not carried out properly; witch may effect to health of workers, pollution of soil, surface or groundwater.

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**Mitigation**

The Potential sources of solid waste from operational activities include excavated material, construction waste, food waste, plastics, and paper. Dumping of excavated waste will be done at a designated site approved by LWMC. and it will be ensured minimum degradation to the soil around the Project area. Construction waste will also be disposed off as per LWMC procedures. Other generated solid waste comprise of a domestic waste. Waste storage bins will be installed. The waste from these bins will be collected by the sanitary workers. The waste will be disposed off in accordance with the procedures of LWMC. No significant impact on the environment is anticipated from solid waste generation at the project site as the solid waste is managed efficiently.

- ## Noise and Vibration

When the construction work is undertaken, constant rattle of heavy machinery will raise the noise level in the Project Area. This noise and vibration will affect directly the residents of nearby areas. Noise due to the construction will be a minor negative impact.

**Mitigation**

Mitigation measures mentioned below will be adopted to minimize the noise pollution. Those measures include, but are not limited to the following:

- Selection of up-to-date and well maintained plant or equipment with reduced noise levels ensured by suitable in-built dampening techniques or appropriate muffling devices.

- Confining of excessively noisy areas and limiting the work to normal working hours in the day;

- Providing the construction workers with suitable hearing protection like ear cap, or earmuffs and training them in their use; and

- Regular checkups and maintenance of the construction equipment, and oiling and greasing of the noise making mechanical parts.

- **Traffic Congestion and Disturbance to People**

During the construction phase, the movement of heavy machinery and transportation of raw material and equipment may cause traffic congestions. As a result the daily activities of the people of nearby localities as well as of the visitors may be disturbed, which will require proper mitigation measures. This will be a moderate negative impact.

**Mitigation**

During construction, following mitigation measures will be followed:

- Observation of timing by the vehicles carrying construction material of infrastructure to cause minimum disturbance to traffic on existing road. The construction equipment and machinery must be stationed in the boundary premises to avoid the traffic congestion on the main Road.

- Transportation of raw material and heavy machinery will be done early in the morning; and

- There will be coordinated planning of traffic movement by the Traffic Police and the Transport Department in accordance with the construction program with advance warnings to the affected residents and road users.

- All the machinery will stay inside the periphery of project so it will not cause disturbance in the traffic.

- **Workers' Safety and Hygienic Conditions**

During construction phase minor and severe injuries to workers due to operation activities may occur. The construction activities impose certain negative impacts on health and safety

of the workers and public in case of unsafe and/or unfavorable working conditions. Mitigation measures will be required to minimize health and safety related negative impacts of the project. This will be a minor negative impact.

## Mitigation

Mitigation measures will be required to minimize health and safety related negative impacts of the project. This will be a minor negative impact.

Implementation of the following measures will ensure health and safety of the workers and the public during the construction phase:

- The Administrator will ensure that the construction workers/labours are trained in safety procedures for all relevant aspects of construction;
- Construction workers will be provided with proper safety equipment such as helmets, goggles, masks, etc.;
- Formal emergency procedures will be developed for construction site in case of an accident. First aid kits and other necessary equipment will be kept available at site along with the list of emergency phone numbers to be contacted in case of any emergency/accident;
- The safety of the public at all stages of the construction will be ensured through appropriate public education and safety measures such as use of sign boards, barriers and flags; and Proper illumination will be provided at night.

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## Proposed Mitigation Measures during Construction / Development Phase

The potential negative impacts during construction and operational stage of the project should be mitigated to an acceptable level. Following environmental protection measures are adopted to eliminate adverse environmental impacts or to reduce them to an acceptable level within the legislative and regulatory framework. The proposed mitigation measures are listed below:

- Appropriate waste disposal mechanism should be followed during the construction phase. The construction waste would be disposed in a manner that does not contaminate surface or groundwater.
- The construction waste generated will be used for earth filling within the project site premises.

- The Contractor needs to make sure that their machinery and equipment's are properly tuned and serviced and there is no leakage of oil from construction equipment's and machineries.

- Contractor should give assurance of quality of machineries and equipment's which will be used during excavation and construction process.

- All vehicles, machineries, equipment and generators used during construction activities should be in good working condition and be properly maintained in order to minimize exhaust emissions.
- Construction labor must be trained in safety procedures for all relevant aspects of construction
- Helmets or hard hats should be worn by workers at all time of work and everywhere on the Project Site.
- Regular checks should be carried out to ensure that the contractor is following safe working procedures and practices.
- Workers should be provided with personal protective equipment's (PPE's) such as safety jackets, ear plugs or ear muffs, special boots and dust masks.
- Use of up-to-date and well maintained machineries or equipment with reduced noise level.
- Confining excessively noisy work to normal working hours in the day, as much as possible.
- Providing construction workers with suitable hearing protection like ear cap, or ear muffs and training them in their use.
- Ear muffs or ear caps should also be provided to those people living in nearby area.

## 5- *IMPACTS OF OPERATIONAL PHASE*

The Environmental and Socio-Economic impacts associated with the operation phase of the unit are following:

### Mitigation Measures

Both are collected and properly stored in the unit. Both will be recycled in next process.

- **Waste Water**

The domestic waste water will be generated during the operational phase of the project. The domestic waste water will be produced from sanitary uses. It would deteriorate the surface and ground water quality if not treated properly. Waste water will be domestic waste water in nature. It could affect the underground water table, which in turn affects the health of the people. The effects of untreated sewage on the environment are largely negative. If

wastewater is not properly treated, then the environment and human health can be negatively impacted.

## Mitigation

There is a proper management of wastewater generated from the unit so it has no considerable impact on environment.

- **Solid Waste Management**

The solid waste generated during the operational phase of proposed project comprises of, packing material, Waste Pieces of metal.

**Mitigation Measures**

Small storage waste bins will be installed for the collection and proper management of waste. The solid waste produced during the operation will be sold out to contractor.

**Residual Impacts**

Proper implementation of the mitigation measures will ensure that the residual impact from waste is minimum. Monitoring and inspection will be undertaken to ensure compliance and minimize any residual impact.

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- **Air Quality**

During operational stage, the continuous operation of air conditioners and generators etc. may deteriorate the quality of air if not managed properly. However emissions from vehicles can also cause impact on environment.

## Mitigation

In order to minimize air pollution, following mitigation measures are recommended:

- Plantation will generate fresh oxygen;
- Generators, air conditioners will be properly tuned and maintained.
- Vehicles will be properly tuned and maintained.
- Vehicles with excessive smoke emissions will not be allowed to enter the proposed unit.
- An air quality monitoring and improvement plan will be developed to keep the air pollution levels from generators, air conditioners etc. within the limits of Punjab Environmental Quality Standards (PEQS);
- PPEs will also be provided to workers.

- **Noise and Vibration**

Noise will be generated from transportation, generator and operation of the project. It may affect the health of the workers.

**Mitigation**

- Workers will be provided with PPE's such as ear plugs.
- There will be a sound proof roof room for generator.
- There will be a selection of up-to-date generator (if any) with reduced noise levels ensured by suitable in-built damping techniques
- Vehicles and generator will be properly tuned and maintained to control noise.
- Only those vehicles will be used that are properly tuned and maintained and are equipped with silencers.
- Also excessive use of horns will be avoided. Further tree plantation will be done as it acts as noise absorbers.
- Oiling and greasing of the mechanical parts of the machinery will be done to control noise.
- Maintenance of the machinery should be done on regular intervals.

**Residual Impacts**

Implementation of the mitigation measures proposed above will result in negligible / no residual impact due to noise on surrounding environment.

**Monitoring Requirements**

During project operation, it should be ensured that the noise level at the project site does not exceed the prescribed limits.

- **Water Consumption**

Water will be required for the domestic use and for colling purpose during process. The increased withdrawal of surface water for the proposed project may affect the water availability for the other users of the Project Area.

**Mitigation Measures**

- Water conservation program will be initiated in plant to prevent wastage of water.

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- **Safety of Workers**

Operation of the project may cause some concerns for safety, public health and nuisances within the project area

**Mitigation:**

- Personal Protection Equipment (PPEs) such as ear plugs, safety Helmets, Gloves, Goggles and Masks will be provided to the employees to ensure their safety at work place.
- While dealing withdraws material, the workers will be wear gloves and shoes. In short worker's body will be completely covered.
- Workers' awareness and safety wall chart showing safety symbols and other necessary information will be displayed at various places.
- First Aid Box will be kept in every department which will be within the approach in case of any injury or mishap.
- To avoid any chance of fire, a comprehensive firefighting system will be developed that includes all types of fire Extinguishers, fire hydrants, sand Buckets and firefighting Vehicles.
- Basic medical and safety training will be held from time to time to minimize the risk of health and safety issues which can result from ignorance (ergonomic hazards in particular) in the industry premises.

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**Residual Impacts**

Implementation of the suggested mitigation measures may leave behind some residual impacts of safety incidents.

**Monitoring requirements**

Visual monitoring of hazards and accidents will be done

# 6- Emergency Response Plan

**GUIDELINE EMERGENCY PREPAREDNESS AND RESPONSE PLAN**

**PURPOSE**

The purpose of this Emergency Response Procedure is to provide measures and guidance for the establishment and implementation of emergency preparedness plans for the project. The aim of the Emergency Response Procedure is to:

- Ensure all personnel and visitors to the office/job sites are given the maximum protection from unforeseen events.
- Ensure all personnel are aware of the importance of this procedure to protection of life and property.

## EMERGENCY PREPARATION AND RESPONSE MEASURE SCOPE

The emergency management program is applied to all Project elements and intended for use throughout the Project life cycle. The following are some emergencies that may require coordinated response.

- Construction Accident
- Road & Traffic Accident
- Hazardous material spills
- Structure collapse or failure
- Trauma or serious illness
- Sabotage
- Fire
- Environmental Pollution
- Loss of person
- Community Accident

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## RESPONSIBILITIES

The detailed roles and responsibilities of certain key members of the Emergency Response team available to assist in emergency are provided in **Table** below.

**Table: Emergency Response Team**

| Action Group | Responsibility |
|---|---|

| | |
|---|---|
| Emergency Coordinator | ▪ Overall control of personnel and resources.<br>▪ The Emergency Coordinator will support and advise the Site Safety Supervision as necessary.<br>▪ Serves as public relations spokes persons, or delegates to some staff member the responsibility for working with news media regarding any disaster or emergency. Also assure proper coordination of news release with appropriate corporate staff or other designated people. |
| Site Safety Supervision (Emergency Commander) | ▪ Overall responsibility for activating emergency plan and for terminating emergency actions.<br>▪ Be alternative of emergency response chairpersons.<br>▪ Disseminates warnings and information as required to ensure all people in the immediate area have been warned and evacuated either by alarms or by word of mouth.<br>▪ Supervise the actions of the Emergency Response Team to ensure all persons are safe from the danger.<br>▪ Notify outside authorities if assistance is required.<br>▪ Carries the responsibility for coordinating actions including other organizations in accordance with the needs of the situation.<br>▪ Ensure maximum co-operation and assistance is provided to any outside groups called to respond to an emergency.<br>▪ Establish and appoint all emergency organization structure and team.<br>▪ Assures adequate delegation of responsibilities for all key positions of assistants on the Project to assist with any foreseeable emergency.<br>▪ Ensure resources available to purchase needed emergency response equipment and supplies.<br>▪ Assures that all persons on the Emergency Response Team aware and fully understand their individual responsibilities for implementing and supporting the emergency plan.<br>▪ Establish the emergency drill schedule of all identified |

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| | emergency scenarios, track the status and evaluate the emergency.<br>▪ The Emergency Commander shall ensure that senior management personnel have been reported of the emergency as soon as practical after the event. |
| Security Team | ▪ Ensure that the exit route is regularly tested and maintained in good working order.<br>▪ Maintain station at the security gate or most suitable location to secure the area during any emergency such that only authorized personnel and equipment may enter, prevent access to the site of unauthorized personnel.<br>▪ Assist with strong/activation of services during an emergency.<br>▪ Ensure vehicles and obstructions are moved to give incoming emergency vehicles access to the scene, if ambulance or emergency services are attending the site, ensure clear access and personnel are located to direct any incoming emergency service to the site of emergency. |
| Rescue & Medical Team | ▪ Protect the injured from further danger and weather.<br>▪ Provide treatment to the victim(s) to the best of their ability by first aid and then transfer to hospital.<br>▪ Remain familiar with the rescue activities and rescue apparatus.<br>▪ Assist outside medical services personnel when they arrive |
| General Administration Team | Response to support any requested general facilities for assisting Emergency Response Team in their work. |
| Government Relation Team | ▪ Coordinate with local government on a matter of concerned in the emergency response plan to liaise with local officers in their affair for support Emergency Response Team. |

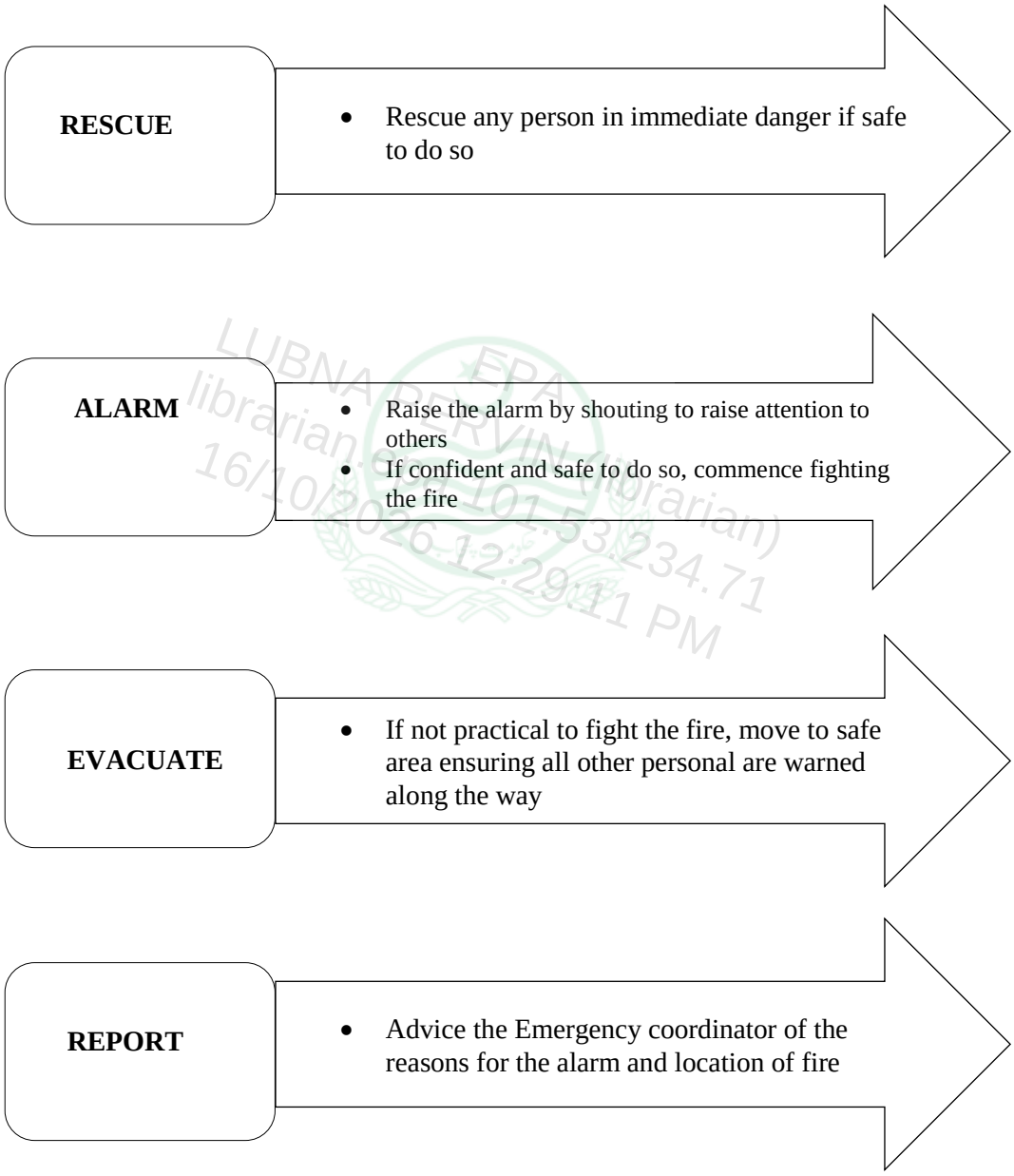
| | |
|---|---|
| | ▪ Coordinate emergency plan with the government authorities, local Community. |
| Environment Team | In case of emergency related to the environmental pollution such as the chemical spill, oil spill into the ambient, the environment team will support the technical advice to control and mitigate the pollution until return to the normal situation. |
| Department Heads | ▪ Call up of personnel into the safe location for protective life and property.<br>▪ Take immediate and appropriate action while Emergency Response Team is being mobilized.<br>▪ Keep in touch with the Emergency Commander<br>▪ Control and supervise operators and contractors on the implementation of this procedure, with consultation with Safety Team as necessary.<br>▪ Provide and maintain emergency equipment of their responsible areas. |
| Other Staff and Employees | ▪ All other staff and employees will remain at their workstations or assembly point unless directed otherwise from Emergency Response Team.<br>▪ Each supervisor will ensure that all members of his work group are accounted for and keep in touch with each of their Department Head. |

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## PROCEDURE

Emergency situation and injuries to person can occur at any time or place either on Project site or elsewhere. The most two common types of emergencies on site are fire and serious accident.

**Figure: Emergency Procedures for Fire**




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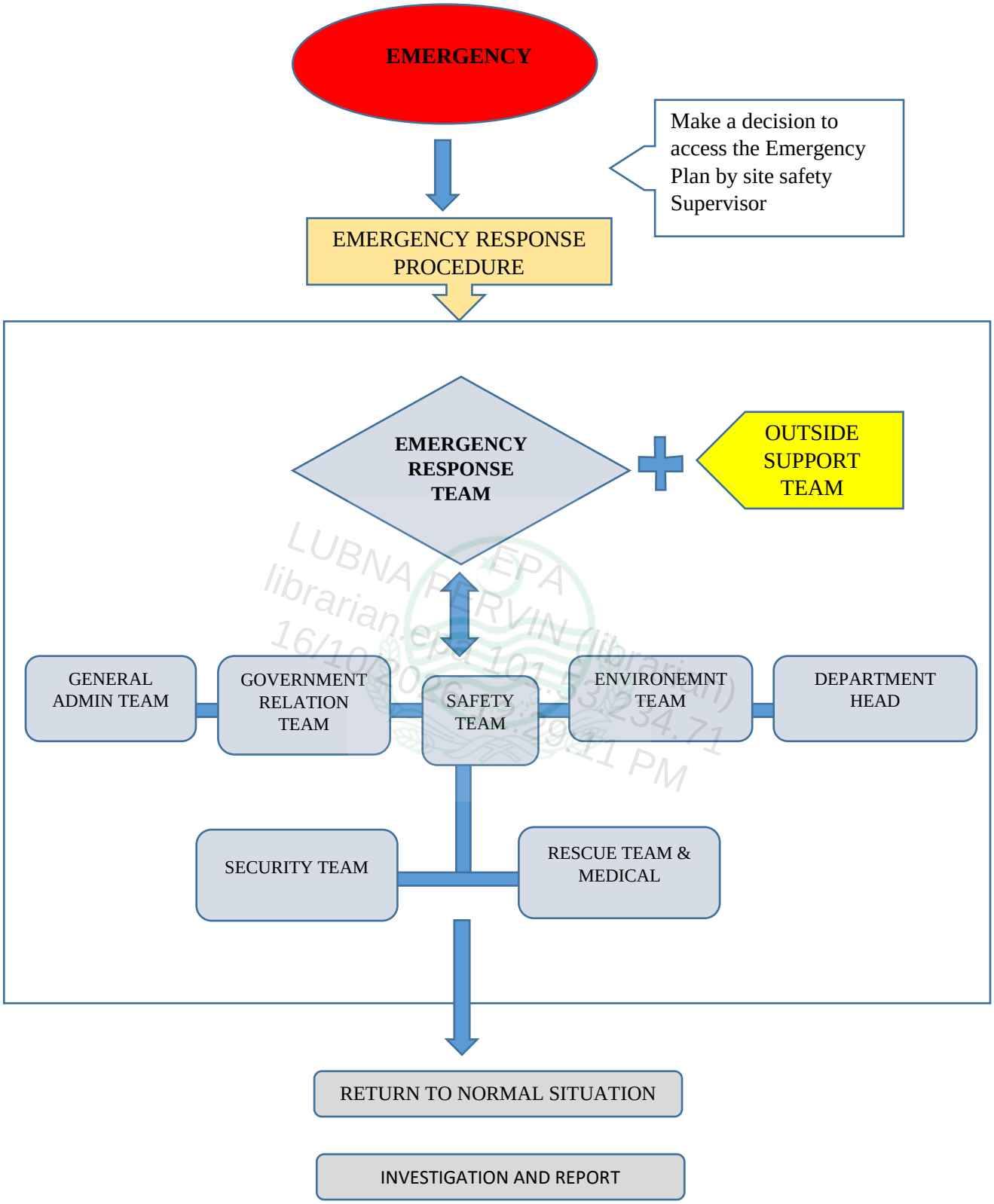
**Emergency Procedures for Serious Accident**

**ACCIDENT**

In the event of Injuries of persons, the first person on the scene should take the following action:

- If a hazard exists consider your own safety then if possible remove the hazard or the injured person
- Assess the patient by checking for airways, Breathing pulse and obvious
- Report directly to first Aid or Security Centers, when raising the alarm you must clearly give the following information:
    - Your name and the detail of accident
    - The location of the injured person (s)
    - The number of persons injured
    - The extent of the injuries if known
    - What known hazards are in the area
- Make the injured person as comfortable as possible
- Treat obvious injuries
- Reassure the injured person

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EMERGENCY
Make a decision to access the Emergency Plan by site safety Supervisor
EMERGENCY RESPONSE PROCEDURE
EMERGENCY RESPONSE TEAM
OUTSIDE SUPPORT TEAM
GENERAL ADMIN TEAM
GOVERNMENT RELATION TEAM
SAFETY TEAM
ENVIRONEMNT TEAM
DEPARTMENT HEAD
SECURITY TEAM
RESCUE TEAM & MEDICAL
RETURN TO NORMAL SITUATION
INVESTIGATION AND REPORT

# 7- Potential Environmental Enhancement Measures

Tree plantation and cropping within and outside the premises has been planned by the proponent for environmental enhancement. Among plants native flora like Peepal and Amaltas will be involved which have maximum capacity to reduce noise pollution and tolerance index of these species are more than 10. Some floral species like rose will also be introduced in the lawn for aesthetic beauty and trees like Sufaida will be planted as boundary wall inside the lawn which will look like green wall

Excavation for planting shall include plant pits and planting beds. The minimum depths of plant pits or beds shall be measured from finished the grade. Plants beds and pits shall be tested for drainage before planting by filling with water twice in succession. Conditions permitting the retention of water in planting the beds or pits for more than 24 hours shell be brought to the attention of the Architect. If rock, underground construction, .obstructions, tree roots or other obstructions are encountered in the excavation of plant pits, alternate locations may be select by the architect. The contractor shall be responsible for all damages resulting from any neglect and failure to comply with this requirement.

Following excavation planting pits, the pits shall be back filled with the sweet soil mixture as specified. Three day prior to planting, the pits shall then be filled with water for consolidation of soil. The dimensions of the panting pits are as follows:

F. Trees: 3x3x3

G. Shrubs: 2x2x2

H. Hedges: trenching 2wide x'2 deep of required length.

I. Creepers and vines: 2wide x 2 deep of required length.

J. Edges and flowers beds: 'fill flower box with sweet soil as per the Architect's drawings. For seasonal flowers, the beds are to have the minimum of 12" sweet soil and 4" 'manure.

Planting areas and plants shall be protected all times against trespassing and damage of all kinds for the duration of maintenance period. If any plants become damage or injured, they shall be treated or replaced. Protection shall also include all temporary protections fences and barriers. all signs and all other work incidental to proper maintenance.

# ENVIRONMENTAL MANAGEMENT& MONITORING PLAN

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## I. Description of proposed mitigation action:

Proposing the mitigation measures for the negative environmental (physical, biological and socio-economic) impacts arising from the various project activities is not the only responsibility of the proponent; rather the proponent is liable to provide a complete plan showing in-depth details of how the activities will be managed in a way to keep environment undisturbed or in a state receiving least burden from the project construction and operation. This plan; called as the "environmental management plan" not only states the mitigation measures of the negative environmental impacts but also makes some person or authority responsible for carrying out that mitigation measure. Having an EMP in an EIA binds the specified people for taking the indicated mitigation measure.

An environmental management plan is a project or site specific plan developed to ensure that all the necessary measures are identified and implemented in order to protect the environment and to meet the environmental legislations.

| Aspects | Potential Impacts/ Risks | Proposed Mitigation Action |
|---|---|---|
| *CONSTRUCTION PHASE* | | |
| **Traffic Congestion due to construction phase of** | Movement of vehicles may result in traffic disruption if proper parking facilities are not provided. | Adequate parking facilities will be provided for the construction machinery and tractor-trolleys bringing the material into the Project Area. |
| **Air Quality degradation due to construction phase** | Dust produced due to construction activity can affect the health of employees and residents in the surrounding areas | Use of dust suppression Techniques like water sprinkling etc. will be made to minimize the effect of dust. Construction workers will be provided with masks for protection against the inhalation of dust.<br>Regular monitoring of all vehicles, equipment, and machinery used for construction. All vehicles, machinery, equipment and generators |

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| | | used during construction activities will be kept in good working condition and properly tuned and maintained in order to minimize the exhaust emissions. |
| **Disposal of Construction Waste/Excavated Material produced in construction phase** | Dumping of construction wastes / excavated material in the surrounding area may limit use of land | Management of Construction activities in a way to ensure minimum degradation to the soil around the Project area and dumping of excavated waste will be done at a designated site approved by LWMC. |
| **Noise and Vibration due to machinery being used for construction** | Noise pollution due to increased construction machinery operation | Selection of up-to-date equipment and machinery with reduced noise levels ensured by suitable in-built damping techniques; Regular checkups and maintenance of the construction equipment; and use of appropriate muffling devices |
| **Sanitation and Waste disposal facilities at Project site** | Health risks to construction workers | All the solid waste will be properly collected and disposed off in accordance with the procedures of LWMC. |
| **Workers' Safety and Hygienic conditions** | Health risks in case of unsafe and/or unfavorable work conditions | Enforcement of work safety measures such as wearing safety goggles, protective masks and boots and fixing of cautionary signs at designated sites. First aid box should be at the site in case of any injury or mishap. |
| ***OPERATIONAL PHASE*** | | |

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| | | |
|---|---|---|
| **Packing Material waste metal pieces will be produced as waste** | Packing material may be affecting the environment. | After the completion of each batch, the whole waste will be collected and will be sold out to the contractor. |
| **Waste water Generation** | Domestic will be generated while during operation from washroom. | To get rid from domestic wastewater septic tank will be present before its disposal.. |
| **Production of Sanitary Solid Waste in operational phase** | There will be mostly domestic waste like, plastics, and food waste. | Small waste storage bins will be installed and solid waste will be hand over to the sanitary workers of the LWMC. |
| **Groundwater Depletion** | Prolonged water consumption may in the long run lower/deplete the underground water table. | Workers will be trained in water conservation measures such as use of water efficient/ economy appurtenances. |
| **Air Quality** | Air quality may deteriorate due to the continuous movement of vehicles and generator etc. | • Vehicles causing heavy smoke/emissions will not enter the premises.<br>• Vehicles and generators (if any) will be properly maintained and tuned<br>• Plantation will be provided which will generate fresh oxygen.<br>• An air quality monitoring and improvement plan will be developed to reduce air pollution and to remain it within the limits of Punjab Environmental Quality Standards (PEQS)<br>• Level of air pollution will be monitored on regular basis; and vehicles with excessive smoke emissions will not be allowed to |

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| | | enter.<br>• Raw material Storage will be done properly and will be properly covered after using it |
| **Noise & Vibration** | Noise will be generated from transportation, generator. It may affect the health of the workers. | • Workers will be provided with PPE's such as ear plugs.<br>• There will be a sound proof roof room for generator.<br>• There will be a selection of up-to-date generator (if any) with reduced noise levels ensured by suitable in-built damping techniques<br>• Vehicles and generator will be properly tuned and maintained to control noise.<br>• Only those vehicles will be used that are properly tuned and maintained and are equipped with silencers.<br>• Also excessive use of horns will be avoided. Further tree plantation will be done as it acts as noise absorbers.<br>• Oiling and greasing of the mechanical parts of the machinery should be done to control noise.<br>• Maintenance of the machinery should be done on regular intervals. |
| **Workers' Safety and Hygienic conditions** | Health risks in case of Unsafe and/or unfavorable work conditions | Enforcement of work safety Measures such as wearing safety goggles, protective masks and boots and fixing of cautionary signs at designated sites. First aid box should be at the site in case of any injury or mishap. |
| **Emergency Response** | There are always chances of earthquakes and | • Emergency evacuation plan will be developed to evacuate the area in case of accidental fire |

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| | manmade disasters, fire, road accidents etc. | • Emergency response and plan along with safety charts showing symbols and other necessary information will be displayed at various places for the awareness of workers<br>• An Emergency Response Plan for earth quakes and manmade disasters will be developed by the Management.<br>• Emergency Response Plan will be implemented in close consultation with the Fire Fighting Department, Bomb Disposal Squad and Paramedics<br>• Firefighting equipment's should be installed or present in the unit. |
| **Traffic Congestion** | Movement of vehicles may result in traffic disruption if proper parking facilities are not provided. | Adequate parking facilities will be provided for the vehicles bringing the material into and out the Project Area |

## II. Schedule of Implementation & Environmental Budget:

The schedule of implementation for the commencement of the civil work involved for the construction is approximately 06 month and the detail timeline of the construction period is given in **Table 14:**

**Table 5: Timeline for Project Development**

| Sr# | Activities | 1.5 Months | | | 1.5 Months | | | 1.5 Months | | | 1.5 Months | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2W | 2W | 2W | 2W | 2W | 2W | 2W | 2W | 2W | 2W | 2W | 2 W |
| 1 | Detailed Designing | | | | | | | | | | | | |
| 2 | Mobilization of Contractors | | | | | | | | | | | | |
| 3 | Lean Development Period | | | | | | | | | | | | |
| 4 | Peak installation Period | | | | | | | | | | | | |
| 5 | Plantation at Site | | | | | | | | | | | | |
| 6 | Commissioning | | | | | | | | | | | | * |
| *W=Weeks* | | | | | | | | | | | | | |

- **Environmental Budget**

A total of 350,000 rupees approximately will be assigned for environmental budget. Tree plantation will be done from this budget. This budget can be increased in case of any Sr. No.

| Sr. No. | Environmental Management / Safety Measure | Allocated Budget (PKR) |
|---|---|---|
| 1 | Water sprinkling and dust suppression | 50,000 |
| 2 | Personal Protective Equipment (PPEs) | 150,000 |
| 3 | Environmental, safety and awareness boards/signage | 50,000 |
| 4 | Sanitation, waste disposal facilities and solid waste bins | 100,000 |
| 5 | Tree plantation and greenbelt development | 100,000 |
| 6 | Fire-fighting equipment (fire extinguishers, fire buckets, hose/reel, etc.) | 200,000 |
| 7 | Spill prevention and emergency response equipment/spill kits | 100,000 |
| 8 | Impermeable/contained storage arrangements for hazardous waste and used oil | 100,000 |
| 9 | Environmental monitoring, inspection and record keeping | 50,000 |
| 10 | General housekeeping and environmental management measures | 100,000 |
| **Total** | **Environmental Management & Safety Budget** | **1,000,000** |

# III. Environmental Management Team along with their Roles and Responsibilities:

It is the responsibility of the management of the project to ensure that monitoring of air, water, soil and noise are being carried out efficiently and properly maintain the records of monitoring in order to access the environment quality. There should be precise recording and maintenance of all information generated during the monitoring. The management must hire a person to look over the monitoring. It is also the responsibility of management to ensure that all mitigation measures are being implemented to eradicate the possible adverse

environmental impacts. For capacity building, all the employs should be given awareness about the environment and what should be their roles to protect the environment. Hired workers should be aware of the safety procedures and what to be done in emergency situations. Lectures should be given on environment safety twice a year. Training should be conducted yearly or twice a year to cope with emergency situations. The management must ensure that environment management plan is properly carried out. The EMP aims to ensure that

- Site activities are well managed
- All environmental safeguards are carried out correctly
- Coordination is made with other trades
- Adverse impacts on environment are minimized
- The biodiversity of the site is conserved or enhanced
- All relevant legislation is complied with
- The project is monitored for environmental impacts

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Local workers will be hired during operation phase and one person from management should be there in order to implement EMP for construction phase. There will be 25-30 workers during construction phase and 30 workers will be hired during operational phase of the project. There will be a contractor who will head the workers in construction phase and supervisor will head the workers during operational phase. It is the responsibility of management that contractor and supervisor should implement safety procedures of health and environmental safety.

The environment management and monitoring plan will be implemented by the following;-

- **Project Manager**
- **Supervisor**
- **Contractor**

The proponent will also manage EMP during operational phase and at least one person (supervisor) should be given the task to work on EMP and check and monitor that all the

activities are going in compliance. Furthermore, monitoring of different parameters will also be done on regular intervals to check the quality parameters related to environment.

The duty of that person (supervisor) from management side would be to:

- Describe how it fits into the overall planning process for the project
- Detail the activities that are to be carried out
- Identify the impacts those activities may have on environment
- Propose environmental control methods to be used to prevent or minimize those environmental impacts
- Assign responsibility for each control measure to specific staff members
- Identify key monitoring parameters and schedule of monitoring of these parameters
- Identify training requirements at various stages of the development of the project
- Identify the resources required to implement the EMP and outline relevant expenses arrangements

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## Organizational structure & Responsibilities

The organizational structure for the Environment Management Plan is outlined below:

### Primary Responsibilities

The administration is primary responsible for implementing EMP within this project construction and operational phase

### Operational Management and Control

Conducting the operational activities in the environmentally sound manner will be the responsibility of the administration.

### Supervision and Monitoring

Senior Supervisor will be responsible for all environmental issues and for the implementation of EMP.

## IV. Proposed Monitoring program to assess Performance or output of EMP:

The proposed monitoring program to access the performance of suggested mitigation measures and the output of EMP along with the role & responsibility of Environmental Management Team is discussed in detail.

| Category | Impact | Project Activity | Monitoring Mechanism | Frequency | Monitoring Agency |
|---|---|---|---|---|---|
| Development and Operation Phases | | | | | |
| Land Resource | Solid Waste and By-Products | Implementation of SW* Management System | • Record keeping and timely transfer of SW from bins and its ultimate disposal<br>• Incineration of chemical residues | Weekly and Annually | Contractor |
| | Soil Contamination | Implementation of Management Plans | Visual monitoring and regular site inspection<br>Incineration chemical residues | Daily, Monthly and Annually | Project Manager |
| Air Resource | Air Emission | Air quality will deteriorate due to transportation related activities and during the production of the final goods | Monitor of the air exhaust emissions as per SMART parameters | Monthly Monitoring | Project Manager/Self-Monitoring |
| Ecological Resource | Flora | Uprooting of trees during construction phase and maintenance of photographic record of the removed vegetation | Inventory of uprooted trees and re-vegetation plan during operation phase | During Baseline Survey, once in a year and after the completion of the project | Project Manager/Self-Monitoring |

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| | | | | |
|---|---|---|---|---|
| Wastewater | Wastewater will be generated mainly from domestic use | parameters on regular basis before finally discharging | Monthly basis | Project Manager/Self-Monitoring |
| Noise | The noise will be produce during constructional and operational | Noise will be monitored through Digital Sound Meter | Monthly | Project Manager/Self-Monitoring |
| *SW= Solid Waste, **EA= Executive Agency* | | | | |

## V. Proposed EMP Reporting and Reviewing procedures:

Environmental impact of a project is worked out using various factors and parameters, so that an Environmental Management Plan can be evolved to take mitigation measures, wherever these might be considered necessary in order of appropriateness of elimination, reduction and compensation as the goals. The development of the EMP is to make some person responsible for implementing the mitigation measures as identified so that smooth implementation of the mitigation measures can be assured. Monitoring plans have also been included to ensure the compliance of the EMP by contractors and other responsible authorities.

Regular monitoring will be required to check that the construction and operation is not going to cause any adverse environmental impacts; hence monitoring visit will be done once in a month during construction phase. During these visits samples will also be taken to check the quality of air, water and soil etc

| **Parameter/ Receptor** | **Location** | **Monitoring** | **Mechanism Monitoring and Reporting Frequency** |
|---|---|---|---|
| Water Quality | • Ground Water<br>• Surface Water | Discrete grab sampling and laboratory testing of water samples. | • Sampling and laboratory testing should be done on monthly basis during the construction and annually during the operational stage.<br>• Discharges from the construction sites should be tested for temperature, PH and turbidity.<br>• Treated effluent discharges from the worker's camp to be tested for PH |

| | | | |
|---|---|---|---|
| | | | TSS and BOD. |
| Dust Emissions | • Tracks along the roads during construction period. | Ambient particulate matter monitoring. | • Sampling and laboratory testing should be done on monthly basis during the construction |
| Noise Levels | • Camp sites,<br>• Selected Locations alon the access. | Noise meter | Monthly during the construction Stage. |
| Air Quality | Silencers of heavy machinery, trucks and other vehicles. | Emissions monitoring system. Monitoring of ambient air quality. | • Monthly monitoring of air pollution parameters including $PM_{10}$,$NO_X$, $SO_{X;}$ CO. Hydrocarbons during the construction period, and quarterly monitoring of$PM_{10}$,$NO_X$, $SO_{X;}$ CO $VOC_S$ during the operation stage, |
| Cutting of trees | In all project area during the construction stage and operation stage. | Periodic visits Site to ensure that trees cutting is prohibited. | Reported on monthly basis during the construction period, and once in a year monitoring and reporting during the operation period. |
| **Socio-cultural Environment** | | | |
| Inconvenience community | All around the project area | Consultations with community to get feedback about inconvenience | Monthly monitoring and reporting during the construction period. |

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| | | | |
|---|---|---|---|
| | | due to the construction activities t o perform their daily routine chores. | |

- **Training Schedules**

The whole staff will be given training on different things like:

***1- Health Safety & Environment Awareness Session***

This training would be for whole unit staff and it would be done once in every 6 months.

***2- Emergency Preparedness Training***

This training would be arranged once in a quarter of every year by hiring consultant firm. This training would be helpful to ready the employees to handle any kind of emergency situation.

***3- Fire Safety***

This training would be for whole staff and it would be done once in every 6 months.

- **Equipment's Maintenance Plan**

The said unit maintains the records for Health Safety & Environment and will hire HSE manager to check and deal with the HSE issues. The unit shall maintained PPEs, medical facilities, firefighting Equipment's, SOPs, conduct trainings, design for proper fencing and records for their periodic fillings or replacement. All machines require routine cleaning and maintenance after every three months and an annual service which costs around 1% to 5% of the total cost depending upon the use of the machine and operator's skill. The inspection should be done because inspection process will highlight any kind of disorder in them prior to its occurrence. All the mechanical equipment will be cleaned on regular intervals of time, like on a very seventh day, and necessary maintenance will be done.

# Involvement of Stakeholders/Public Consultation

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# 7. INVOLVEMENT OF STAKEHOLDERS/PUBLIC CONSULTATION

## 7.1 GENERAL

This section describes the regulatory policy, planning and current practices of project proponent pertaining to the stakeholder engagements and outcomes of stakeholder consultation process initially done as part of the EIA report. The feedback from communities and other stakeholders directly or indirectly affected by the project is collected so that it may be used to adjust and improve the project's design, planning, implementation and help the implementation structure ensuring that the project is both environmentally and socially sound. The consultation process was carried out in accordance with the requirements of the Punjab Environmental Protection Act and Government of Pakistan on public consultation.

The objectives of this process were;

- To disseminate information on the project and its expected impact, long-term as well as short-term, among primary and secondary stakeholders,
- To gather information on relevant issues so that the feedback received could be used to address these issues at an early stage of the project,
- To determine the extent of the negative impacts of different project activities and suggest appropriate mitigation measures.

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## 7.2 IDENTIFICATION OF STAKEHOLDERS

There are two types of stakeholders, i.e.

a. Primary stakeholders
b. Secondary stakeholders

### 7.2.1 Primary Stakeholders

The primary stakeholders are the initial stakeholders, such as affected persons, general public and women residing in the project area. Accordingly, the consultations / focus group discussions were made with all primary stakeholders for sharing of information about the proposed project and Secondary Stakeholders

The secondary stakeholders are the representatives of Government Departments/Agencies involved in the planning, design, implementation and operation of the project, including various government departments such as District Administration, EPA, WAPDA, and Agriculture including the Horticulture wing, Irrigation, Forest, and other relevant departments.

## 7.3 STAKEHOLDER ENGAGEMENTS PLANNING

A twofold stakeholder engagement is planned and carried out for the proposed project as following:

### 7.3.1 Stakeholder Consultation during the Preparation of EIA Report:

The consultation with the primary and secondary stakeholders has been conducted initially during the preparation of the EIA report.

### 7.3.2Stakeholder Consultation / Public Hearing during the Approval of the project:

The proponent is bound to complete as a regulatory obligation by the Environment Protection Agency (EPA), Punjab to conduct such Consultative Event known as "Public Hearing" under Section 12(4) of Punjab Environment Protection Act, 2012. This process shall be carried out during the review of the project to get the Environmental approval from the EPA, Punjab, Pakistan.

During this process following activities shall be carried out.

i. The proponent shall cause to be published, in any English or Urdu national newspaper, a public notice mentioning therein the type of project, its exact location,

ii. The public notice issued shall fix a date, time and place for public hearing of any comments on the project or its EIA. The date fixed for public hearing shall not be earlier than 30 days from the date of publication of the notice.

iii. The EPA shall also ensure the circulation of the EIA to the concerned Government Agencies and solicit their comments thereon.

iv. All comments received by the EPA from the public or any Government Agency shall be collated, tabulated and duly considered by it before its decision for approval

## 7.4 STAKEHOLDER CONSULTATION PROCESS

The overall strategy for stakeholder's consultation is as follows:

**Table - 7.1: Process of Stakeholder Consultation**

| Stakeholders | Purpose of Consultations | Methodology | Stage |
|---|---|---|---|
| **Primary Stakeholder** | • Information gathering and data collection.<br>• Information sharing about the project (disclosure)<br>• Opinion seeking (concerns and expectations)<br>• Grievance redress | • Focus Group Discussions<br>• Household surveys<br>• Formal and informal Community meetings | • Base line Study Impact Assessment |
| **Secondary Stakeholder** | • Participation in the development process<br>• Information gathering<br>• Authentication and validation of the development processes<br>• Verification of the record | • One on one meetings<br>• In-depth interviews | • During the EIA preparation<br>• On need basis during the project implementation and |

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Stakeholder consultation for this project was planned during the preparation of EIA report. In first step during the scoping, which has already taken place, consisted of meetings with individuals, groups, relevant organizations and government departments, which are in some way linked to the project and therefore considered stakeholders. The meetings were conducted to inform stakeholders about the project and how it may affect their lives/activities, and to record their concerns, whether real or perceived. Through the use of various tools the study team tried to involve the stakeholders in active decision-making. The results of this exercise are described below, where mitigation measures have been developed addressing the pertinent stakeholder concerns.

## 7.5 PRIMARY STAKEHOLDERS CONSULTATION

Apart from gathering of quantitative data through household survey of the area of influence of the project and survey of local community to share the information about the project and record their concerns/ feedback associated with this project. In this context, nearest

community shared their view point regarding the assessment especially procedure for entering their concerns/ grievances, employment opportunities, and implementation of the project.

**Topics for Discussion**

The topics discussed in the consultations were:

- Employment and livelihoods of communities.
- Gender and women issues
- Contractor's camp and access
- Environmental issues during construction and operation of project
- Company responsibility for employment, etc.

## 7.6. PROPONENT ENVIRONMENT MANAGEMENT TEAM:

All possible impacts and mitigation measure related to the project were discussed with the proponent and management. They assured to take all suggested mitigation measures to control any discrepancy arose by the project and to make the project environment friendly.

## 7.7. THE RESPONSIBLE AUTHORITY

The Stellar Packaging Pvt. Limited shall be the responsible authority to take all measures prior to start the project and during operation.

## 7.8. OTHER DEPARTMENTS AND AGENCIES

For the impact analysis detailed with the management, local community, educational institutes, health institutes, hospitals and NGOs. All issues were discussed related to implementation of the project. Scoping sessions, focused group discussion and way side consultations were held with the relevant stakeholders in the area.

## 7.9. ENVIRONMENTAL PRACTITIONERS AND EXPERTS

Team of Pro Green Environmental Consultants visited the project site, had discussion with stakeholders and consulted with the local people of nearby and other villages to evaluate the project socio-economic impacts. People of the area belong to different professions like mostly belong to employment, own businesses, doctors, some of them communicated but according to social value of the area they mostly hesitate to communicate comfortably and

get pictured. People provide the massive information about the project and have positive remarks regarding the project development.

### 7.10. Affected and Wider Community

There is no affected community present in the area of proposed project. Consultant's team has consulted with the inhabitants of different villages. The remarks of people are positive regarding the project and people foresee positive impacts like employment opportunities, business, development of the area etc.

### 7.11. COMMUNITY CONCERNS

#### 7.11.1. Project Approval

The community consultations demonstrated that goodwill towards the project proponents indeed exists; approval for project activities by the communities was evident. The consultations were considered a good gesture and appreciated, especially by the men and women. This project will provide employments to the local as well as non-local poor community in its construction as well as in operational stages.

#### 7.11.2. Resettlement/ Relocation

The proposed site is located on the land already owned by proponents of the project. Therefore, no issue of the resettlements is there.

#### 7.11.3. Local Employment

Communities in the project area emphasized that local poor community should be given priority when employing people for various project-related works and activities according to their skills

#### 7.11.4. Interaction with Local Community

Non-Local work force coming in the project area that will not be aware of the local customs and norms, may result in conflicts with the local community, keeping in mind the sensitive law and order situation and culture of the area.

### 7.12 MEETINGS WITH SECONDARY STAKEHOLDERS

The following stakeholders were consulted on different occasions during the preparation of EIA to seek their inputs, feedback and opinion on the design and scope of the project. The offices and Individuals who were consulted are as follows:

- Office of District Officer, Environment Protection Agency, Lahore
- Chamber Of Commerce & Industry
- Department of Social Welfare, Lahore
- Department of Wild Life and Fisheries
- Sui Northern Gas Pipe Line (SNGPL),
- Human Federation Organization (Local NGO)

**STATISTICAL ANALYSIS**

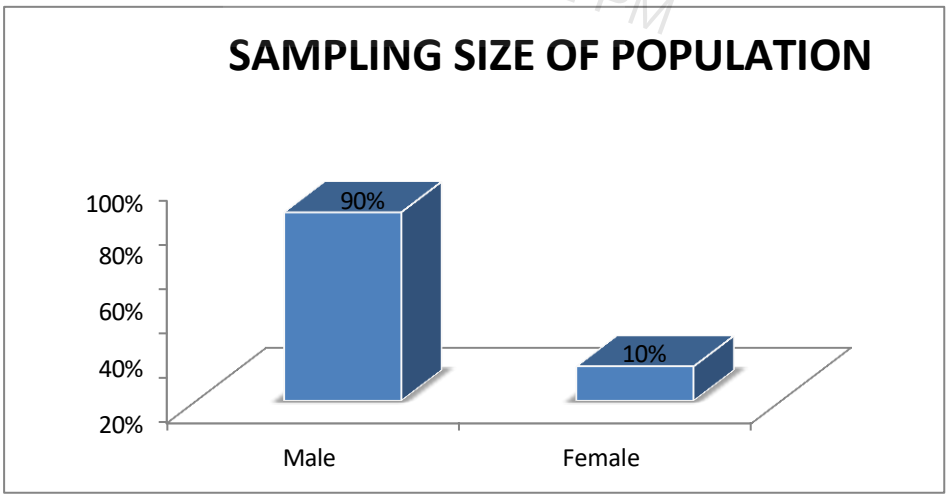
**SAMPLE SIZE**

Sample size of 40 respondents was selected by the Team of consultants for conducting the socioeconomic survey. Women were also consulted for the said survey.

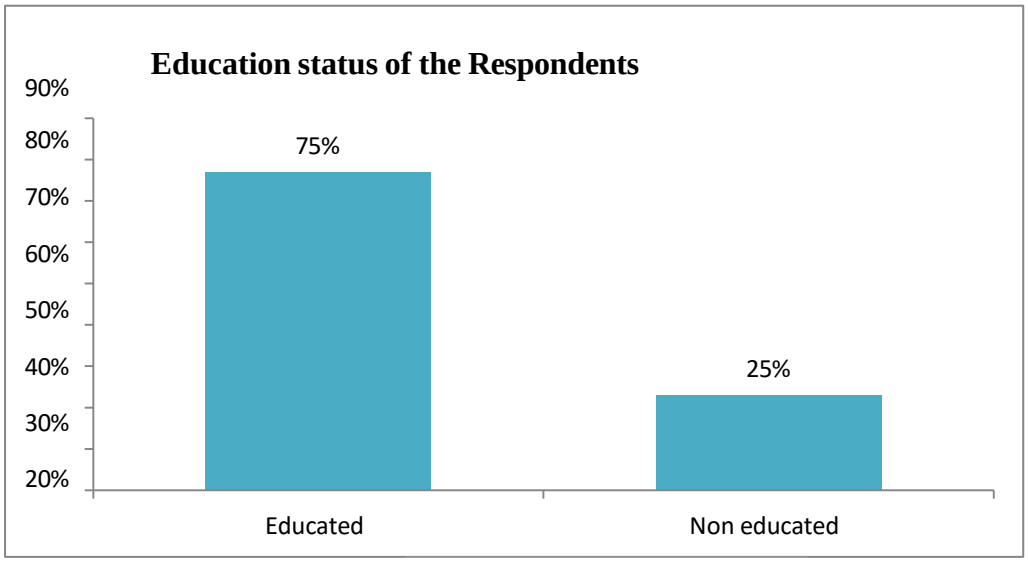
**STATISTICAL ANALYSIS**

SPSS 19.0 has been used for the statistical analysis of the data collected during the visit of study site area through questionnaires. Graphical Analysis of survey is given below.

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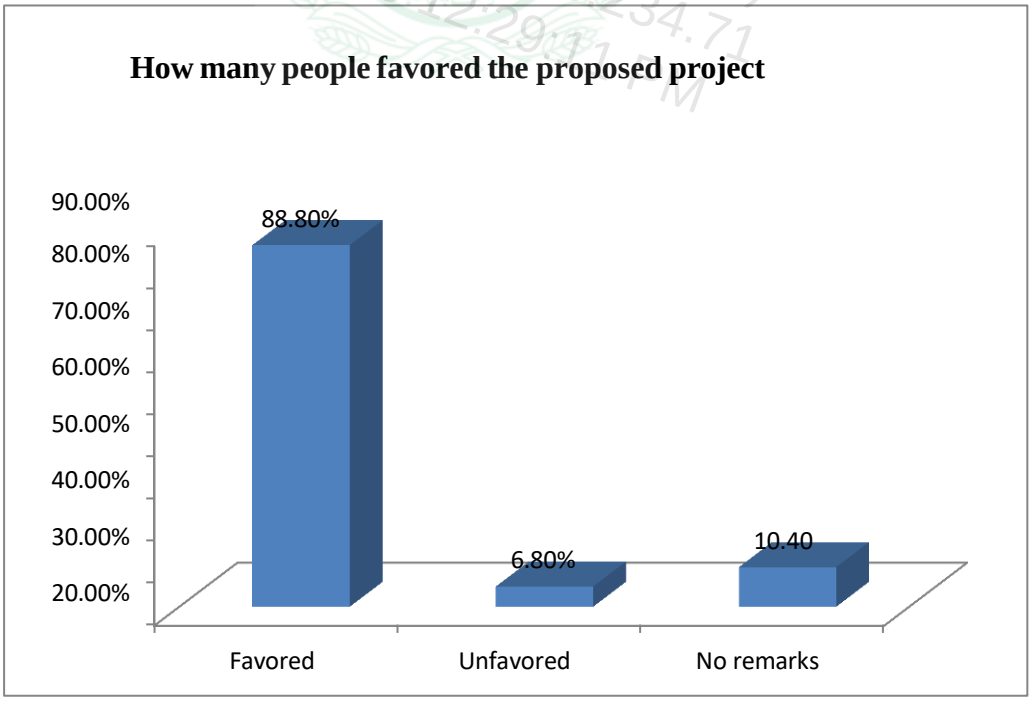


In the sampled population, 90% respondents were male while 10% respondents were female. The number of female respondents is less as compared to male respondents because according to the social binding female hesitates to respond or communicate comfortably.



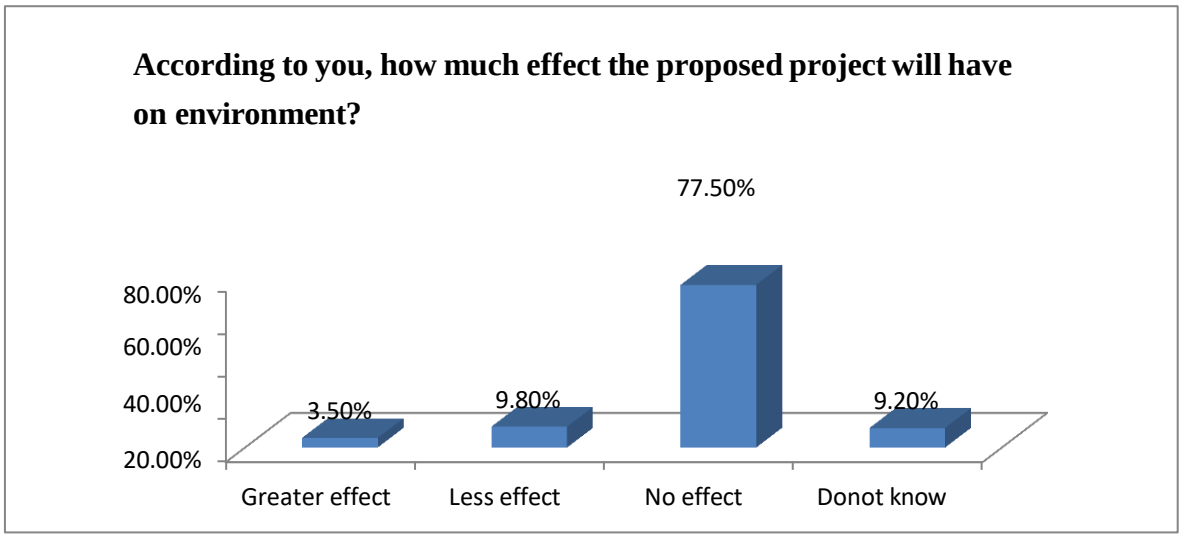

In the sampled population, 75% respondents were educated while 25% were uneducated. Overall education status of the area is good.

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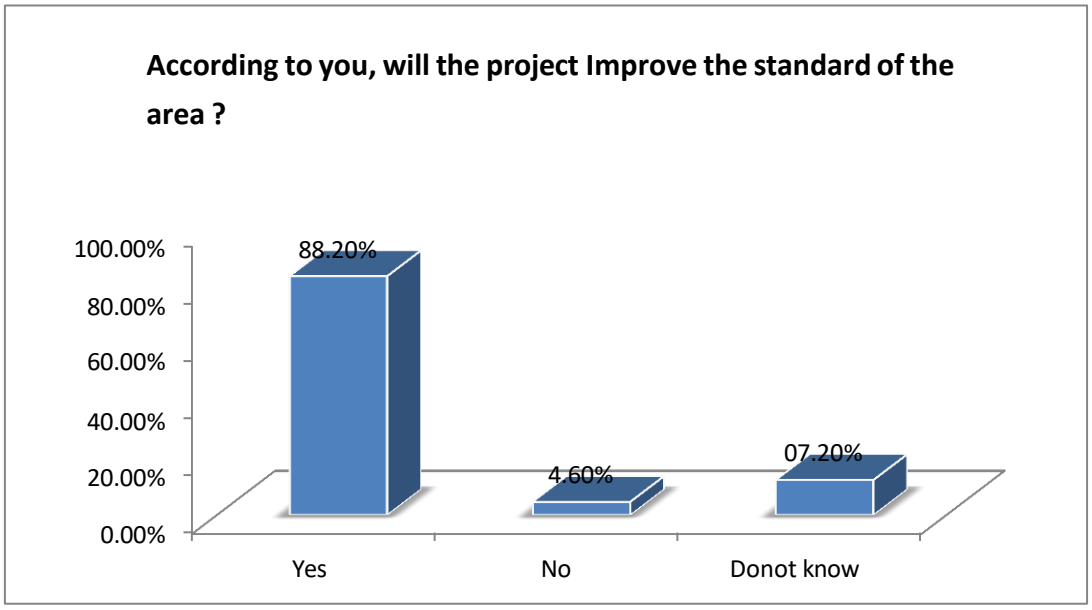



As per survey, 88.80 % people favored the proposed project and they gave positive remarks regarding the subject project. While 10.40% respondents had no opinion regarding the project

and 6.80% respondents were not satisfied with the proposed project because they think that development will affect the natural aesthetics of the area.




As per survey, 3.50% respondents said that subject project will affect the environment of the area, 9.8% said that there will be less effect on the environment, 77.50% respondents said that the project will not affect the environment and 9.20% said that they have no idea regarding the subject project. Most of the population was not aware about the environmental importance; they were giving their remarks according to their own knowledge



As per survey, 88.2 % people said that the project will improve the standard of the area, 4.60% said that it will have no impact on the area while 07.20 % respondents gave no remarks.

### 7.13. OUTCOMES OF CONSULTATIONS

The outcomes of the primary and secondary consultation are precisely briefed as below:

- All actions associated with the project should be taken through proper consultations.
- There should be a continuous community consultation program throughout the project implementation period.
- There should be employment opportunities for skilled and unskilled people, preference should be given to the local communities.
- To include local people wherever possible in jobs during the construction of project. Thus, income generating activity of the area should be enhanced.
- Reduce the chances of environmental effects like noise/ vibration and dust emissions caused to the nearby community.
- Overall the project is good for the surrounding villagers in specific and the country in general.
- No serious concerns with the project because this project will increase the employment and enhance the

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## Site suitability

- The proponent selected this site because it an open area where no human settlement
- This site which is selected for proposed extension is devoid of any tree cover and has no environmental sensitivity.
- The proponent selected the site because the site has the availability of basic human necessities such as roads and easy access to markets.
- The proposed site is best suited and economically viable option for the proponent. The proponent has no other land for carrying out his project.

# Appendices

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| | Appendices | Detail |
|---|---|---|
| | 1- Glossary | This is attached with this report. |
| | 2- List of Abbreviations | This is attached with this report. |
| | 3- List of individuals or organizations consulted along with their written feed back | This is attached with this report. |
| | 4- Sources of data and full list of all reference material used | This is attached with this report. |
| | 5- Terms of references for environmental reports and those given to individual specialists | This is attached with this report. |
| | 6- List of names, qualifications and roles of team members carrying out the IEE/EIA study | This information is given on page 20 of this report |
| | 7- Approvals from other concerned departments | |

# 1.GLOSSARY:

| Words | Dictionary |
|---|---|
| Anticipated Impacts | Expected Impacts |
| Low Permeable Membrane | Which resist the things to pass through |
| Magnitude of operation | Scale of carrying out project |
| Endangered species | Which will extinct in near future |
| Threatened species | Those in danger of extinction |
| Aesthetic Beauty | Scenic beauty of the area |
| Domestic wastewater | Wastewater from sanitary uses |
| Ambient | Surrounding of all sides |
| Topography | Physical features of the site |
| Yield | Productivity |
| Watercourse | Channel of water |
| Wildlife Sanctuary | A protected area within which wildlife is protected |
| Baseline | Conditions prevailing at the time of study or before initiation of any project |
| Environment Budget | Monetary assets reserve for Environmental activity |
| Evaluation | Assessment |
| Fauna | Variety of Animals found in an area |
| Flora | Variety of Plants found in an area |
| Million | 10,00,000 |
| Mitigation Measures | Measures aimed to curtail or entirely control an adverse impact or to compensate some loss or cause additional improvements |
| Nuisance | Annoyance |

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| | |
|---|---|
| pH | Negative log of hydrogen ion concentration |
| Potential Issue | Problems likely to arise |
| Proposed Project | Planned activity |
| Residual Impacts | Impacts left behind after implementation of the mitigation measures |
| Significant | Important |
| Statutory Requirements | Legal Requirements |

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## 2. LIST OF ABBRIVIATIONS:

| | |
|---|---|
| CO | Carbon monoxide |
| $CO_2$ | Carbon dioxide |
| °C | Degree Celsius |
| dB(A) | A weighted decibel scale |
| EIA | Environmental Impact Assessment |
| CSR | Cooperate Social Responsibility |
| CSR | Cooperate Social Responsibility |
| EMMP | Environment Management & Monitoring Plan |
| EMP | Environmental Management Plan |
| Engr. | Engineer |
| EPA | Environmental Protection Agency |
| EPD | Environment Protection Department |
| OGRA | Oil and Gas Regulatory Authority |
| HSD | High Speed Diesel |
| HSMS | Health Safety Management System |
| FM | Fire Monitor |
| FH | Fire Hydrant |
| HC | Hose Cabinet |
| GWT | Ground Water Table |
| $PM_{10}$ | Particulate Matter >10 |
| SPM | Suspended Particulate Matter |
| HC | Hydrocarbon |
| BOD | Biological Oxygen Demand |

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| | |
|---|---|
| TSS | Total Suspended Solid |
| VOC | Volatile Organic Compounds |
| ERP | Emergency Response Plan |
| BDS | Bomb Disposal Squad |
| HSE | Health Safety and Environment |
| SWM | Solid Waste Management |
| GDP | Gross Domestic Product |
| IEE | Initial Environmental Examination |
| Km | Kilometer |
| Ltd. | Limited |
| M/S | Masses |
| NEQS | National Environmental Quality Standards |
| No. | Number |
| NOC | No Objection Certificate |
| $NO_x$ | Oxides of Nitrogen |
| $O_3$ | Ozone |
| PA | Protected Area |
| PEPA, 1997 | Pakistan Environmental Protection Act, 1997 |
| PEPA, 2012 | Punjab Environmental Protection (Amendment) Act, 2012 |
| PEPO | Pakistan Environmental Protection Ordinance |
| PKR | Pakistani Rupees |
| PM | Particulate Matter |
| PPEs | Personal Protective Equipment's |
| SFT | Square Foot |

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| | |
|---|---|
| SOPs | Standard Operation Procedures |
| $SO_x$ | Oxides of Sulphur |
| TMA | Town Municipal Authority |
| WAPDA | Water and Power Development Authority |
| WASA | Water and Sanitation Agency |
| WHO | World Health Organization |

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## 4. REFERENCES


- Guidelines for Preparation and Review of Environmental Reports
- Guidelines for Public Consultation
- Labor Laws
- Pakistan oil (refining, blending, transportation, storage and marketing) rules, 2016
- Oil and Gas Regulatory Authority Ordinance, 2002
- Oil and Gas regulatory Authority ( amendment ) ordinance 2009
- Meteorology Department Data (from website)
- National Environmental Policy 2005
- National Environmental Quality Standards ( Self-Monitoring and Reporting by Industries) Rules, 2001
- Pakistan Biosafety Rules 2005
- Pakistan Environmental Protection Act, 1997
- Pakistan Environmental Protection Agency (Review of IEE/EIA) Regulations, 2000.
- The Land Acquisition Act, 1894
- The Punjab Local Government Ordinance, 2001
- Punjab Environmental Protection (Amendment) Act, 2012


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# Detail of Environmental Consulting Firm

This EIA study has been carried out by Pro Green Environmental Services. This Firm comprises environmental engineers, environmental lawyers etc.

| Name | Roles |
|---|---|
| Muhammad Ahmad Chughtai<br>Environmentalist | Team leader and Author |
| Gulzaib Afzal<br>Environmental Engineer | Monitoring Assistant and Author |
| Muhammad Hassan<br>Chemist | Monitoring and Author |
| Muhammad Masud Adil<br>Environmentalist | Author |

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