EXECUTIVE SUMMARY

This report presents the findings of the Environmental Impact Assessment study conducted by Pro Green Environmental Consultants on behalf of Petroleum Products Storage unit by Awan Sports Industries Pvt Limited which wants to install proposed Petroleum Products Storage unit by Awan Sports Industries Pvt Limited at the location of Mouza Glotian Kalan, Main Sialkot and Gujranwala Road, Tehsil Daska and District Sialkot. **Coordinates: 32.437472, 74.483694.**

The proposed project is Petroleum Products Storage unit by Awan Sports Industries Pvt Limited which will be involved in the storage of petroleum products like light diesel, Furnace oil, Kerosine oil, and Solvent oil through the following steps:

Receipt and Inspection: Upon arrival at the storage terminal, the petroleum products will be unloaded and received into storage tanks. Inspection and testing will be conducted to ensure the quality and specifications of the products. This may include checking for water content, impurities, and compliance with regulatory standards.

Storage Tanks: Petroleum products will be stored in large tanks specifically designed for various products like light diesel, Furnace oil, Kerosine oil, and Solvent oil. Tanks will be constructed to meet safety and environmental regulations, and they often have secondary containment systems to prevent spills.

Tank Monitoring and Control: Advanced monitoring systems will be employed to track the levels, temperature, and pressure inside storage tanks. Automated control systems help manage inventory and prevent issues such as overfilling or product contamination.

Safety Measures: Safety will be a top priority in petroleum storage. Tank farms will be equipped with fire suppression systems, emergency shutdown systems, and other safety measures. Regular inspections, maintenance, and testing of safety systems will be conducted to ensure compliance with industry standards and regulations.

Distribution from Storage Facilities: When there will be demand, petroleum products will be withdrawn from storage and transported to distribution points,

Regulatory Compliance: Storage facilities will be complying with local, national, and international regulations regarding safety, environmental protection, and product quality.

Regular audits and inspections will be conducted to ensure compliance with these regulations.

The total area of land will be 419265 sft.

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 construction along with environmental impact statement followed by appropriate Environmental Management Plan. According to the Punjab Environmental Protection Act (PEPA) 2012, Section 12 - I "No proponent of a project shall commence construction or operation unless he has filed with the Government Agency or, where the project is likely to cause an adverse environmental effects an environmental impact assessment, and has obtained from the Government Agency approval in respect thereof." The proposed project fall in the **Schedule-II and category A (5).** It is this legal requirement from the Government of Punjab that this Environment Impact Assessment (EIA) report has been prepared to get Environmental Approval (EA) from the Environmental Protection Agency (EPA), Government of Punjab, Lahore.

TITLE AND LOCATION OF PROJECT

"Petroleum Products Storage Unit by Awan Sports Industries Pvt Limited Located at Khasra No. 851, 852, Khatooni No. 438, Khewat No. 169, Mouza Adaah, Tehsil Daska, District Sialkot.

NAME AND ADDRESS OF PROPONENT

Nasir Mehmood S/O barkat Ali R/O House No. 48, Zafar Ali Road, Tehsil and district Sialkot.

NAME OF ORGANIZATION PREPARING THE REPORT

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

Office No.126, 1st Floor Memona Center Moj Darya Road, Lahore.

Phone: 03334041950 Progreen82@gmail.com

OUTLINE OF PROPOSAL

Salient Features of Project:

1	**Project Title**	Petroleum Products Storage unit by Awan Sports Industries Pvt Limited.
2	**Proponent**	Nasir Mehmood S/O barkat Ali
3	**Project Location**	Khasra No. 851, 852, Khatooni No. 438, Khewat No. 169, Mouza Adaah, Tehsil Daska, District Sialkot.
4	**Co-ordinates**	**32.437472, 74.483694.**
5	**Land Use in Surrounding of Proposed area** **North:** **South:** **East:** **West:**	Surrounding area of the project is industries. Open Land Constructed Building Daska Road Open Land
6	**Consultant**	Pro Green Environmental Services
7	**Total Area**	419265 sft.
8	**Cost of Project**	80 million
9	**Water Source**	Ground Water
10	**Product**	Light diesel, Furnace oil, Kerosine oil, and Solvent oil
11	**Nature of Area**	Open Area

12	**Source of Power**	WAPDA
WAPDA= Water and Power Development Authority		

MAJOR IMPACTS

The proposed project 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).

There are no significant or well-shaped trees and shrubs on the project site. During the construction vehicles and machinery will be employed. These machines generate some dust and smoke temporarily which would be stopped on completion of the construction work. Safety issues could also arise for workers during construction phase of the project but strict HSE plan will be enforced.

There will be no as such production of solid waste in this unit; however, sanitary solid waste produced by workers will be disposed off as per TMA procedures. Wastewater will be produced only by washrooms which would be passed through proper septic tanks to bring the wastewater parameters within PEQS and after passing though septic tanks it will be disposed off. There is no as such human population around the unit; hence, there is no direct indirect effect on the public.

There can be few negative impacts by this unit on the surrounding environment and these impacts will rise due to:

- Construction Solid Waste
- Dust

Impacts can also arise during due to large size vehicles movement. All these issues are focused in next chapters and these impacts will be minimized if all the work is done as per instructions given in next chapters of this report.

RECOMMENDATIONS FOR MITTIGATION MEASURES

The potential negative impacts during construction stage of the project have been mitigated, 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 operational phase of the project:

- Housekeeping process modification should be adopted to control impacts
- The construction waste should be disposed in provided bins
- Traffic movement plan should be formulated to avoid any issue for locals

Watchmen would be appointed on all the corners of this unit. For community safety, irrelevant persons will not be allowed inside and fence will be put in on surrounding the construction site and the gates will be guarded 24 hours a day. Safety of the workers will be ensured by developing SOPs for all jobs, training the workers to follow SOPs, discouraging any careless attitude of workers and providing the workers with, and encouraging them to use PPEs. Contractor is willing to hire local labor for construction activities to avoid employment conflicts.

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 is not going to cause any adverse environmental impact; 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.

MAJOR IMPACTS

The proposed project of Petroleum Products Storage unit by Awan Sports Industries Pvt Limited 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**	**Proposed Mitigation Measures**
CONSTRUCTION PHASE		
Traffic Congestion due to construction phase.	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
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 TMA,
Air Quality degradation due to construction phase of oil& fuel depot	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. 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.
Noise and Vibration due to machinery being used for Oil& fuel Depot 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	All the solid waste will be properly collected in the waste nin and disposed off in accordance with the regulations of TMA
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.
Traffic Congestion due to construction phase	Movement of vehicles may result in traffic disruption if proper parking facilities will be not provided.	Adequate parking facilities will be provided for the construction machinery and tractor-trolleys bringing the material into the Project Area
OPERATIONAL PHASE		
Petroleum Products leakage & Ignition Hazard	It could pose serious health problems & cause ignition	Proper ventilation will be provided to avoid the accumulation of Petroleum Products and to minimize the hazards associated with them. Petroleum Products storage tanks will be kept away from the sunlight, heat, sparks,

		and flame to avoid the chances of ignition. Tanks will be prevented from any physical damage by storing them in cages/racks securing the tanks with safety chains to avoid such incident. The Petroleum Products plant will be installed vide OGRA provisional.
Noise	Noise level may increase due to increased movement of vehicles.	The entire operation will be carried out in confined area. The workers will be provided with necessary protective devices e.g. ear plug ear-muffs etc. vehicles. Furthermore plantation at the specified areas in this unit will reduce the noise level at much extent
Air quality	Dust & emissions produced from incoming onsite vehicles may affect local air quality.	The project involves Petroleum Products storage not any industrial activity, so there will be no emissions. Dust will be controlled by water sprinkling. Further it will be ensure that vehicles coming are well tuned. PPEs will also be provided to workers.
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,
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 and reuse of wastewater for gardening.
		To get rid from domestic

Waste water Generation from Washrooms	There domestic wastewater will be which will be generated while during operation from washroom.	Waste water septic tank will construct. It will be treated before drainage.
Solid Waste Generation	There will be mostly Domestic waste like paper, plastics, and food waste.	Small waste storage bins will be Installed and solid waste will be disposed off in accordance with the procedures of TMA.
Emergency Response	There are always chances of accidental events and manmade disasters, fire, road accidents etc.	An Emergency Response Plan for earthquakes and manmade disasters will be developed by the Management. Emergency Response Plan will be implemented in close consultation with the Fire Fighting Department, Bomb Disposal Squad and Paramedics.

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. 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 TMA,
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 TMA.
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	
Wastewater treatment	The wastewater from proposed project of Petroleum Products Storage unit by Awan Sports Industries Pvt Limited will be treated through septic tank before disposal into the drain.
Solid waste	There will be no as such production of solid waste in this unit; however, sanitary solid waste produced by workers will be disposed off as per TMA procedures
Groundwater Depletion	Workers will be trained in water conservation measures such as use of water efficient/ economy appurtenances.
Air Quality	• PPE's such as masks should be given to workers. • Vehicles with excessive smoke should not be allowed to enter the premises of the unit. • Vehicles and generator should be properly tuned and maintained to control emissions. • Generator with modern technology to reduce emissions should be used. • Emissions inspection should be done on regular basis. • Regular checkups and maintenance of the machinery should be done. • Storage of raw materials should be done properly and should be

	properly covered after using it.
Noise & Vibration	• Workers should be provided with PPE's such as ear plugs. • There should be a sound proof roof room for generator. • There should be a selection of up-to-date generator (if any) with reduced noise levels ensured by suitable in-built damping techniques • Vehicles and generator should be properly tuned and maintained to control noise. • Only those vehicles should be used that are properly tuned and maintained and are equipped with silencers. • Also excessive use of horns should be avoided. Further tree plantation will be done as it acts as noise absorbers. • Oiling and greasing of the mechanical parts of the machinery should be done to control noise. • Maintenance of the machinery should be done on regular intervals.
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 injury or mishap.
Emergency Response	• Emergency evacuation plan will be developed to evacuate the area in case of accidental fire • 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 • An Emergency Response Plan for earthquakes and manmade disasters will be developed by the Management. • Emergency Response Plan will be implemented in close consultation with the Fire Fighting Department, Bomb Disposal Squad and Paramedics • 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 oftheProject Area

PROPOSED MONITORING PROGRAM:

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 • 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. • Discharges from the constructionsites shouldbe tested fortemperature, PH and turbidity. • Treated effluent dischargesfrom the worker's camp to be tested for PH,TSSand 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, • 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 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.
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 andreporting during the construction period.

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REPORTING 96

Structure of the Report

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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: (Introduction)purpose of report, identification of project, details of consultaants, brief description of nature, size, and location of project

Chapter 3: (Screening) whether the project required IEE/EIA as per regulations

Chapter 4: (Scoping**)**Spatial and temporal boundaries of Environmental Assessment, important issues raised during consultation, significant impacts and factors to be determined

Chapter 5: (Consideration of Alternatives**)** Site alternatives**,** design/ technology alternatives, environmental alternatives, economic alternatives

Chapter 6: (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 7:(Description of Environment) states and specifies the present environmental settings and socio-economic values of the project area and the surroundings

Chapter 8: (Impact Assessment**)** Methodologies for impact identification, checklist, matrices, network, overlays,GIS and computer expert system

Chapter 9: (Screening of Potential Environmental Impacts and Mitigation Measures) project location, design, construction phase, operational phase, potential environmental enhancement measures

Chapter 10: (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 11:(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

INTRODUCTION

This chapter describes briefly the purpose of study, proposed project in the context of its nature, size, location, objectives and the objectives and methodology used for conducting it.

1-Purpose of EIA Study and Report

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 construction along with environmental impact statement followed by appropriate Environmental Management Plan. According to the Punjab Environmental Protection Act (PEPA) 2012, Section 12 - I "No proponent of a project shall commence construction or operation unless he has filed with the Government Agency or, where the project is likely to cause an adverse environmental effects an environmental impact assessment, and has obtained from the Government Agency approval in respect thereof." The proposed project fall in the **Schedule-II and category A (5)** It is this legal requirement from the Government of Punjab that this Environment Impact Assessment (EIA) report has been prepared to get Environmental Approval (EA) from the Environmental Protection Agency (EPA), Government of Punjab, Lahore.

This report provides detailed basic site specific information and facts; including especially among others environmental, economic, social, etc., enabling its assessment and justification that the project will meet the requirements of environmentally sustainable practices; both during construction and regular production stages; as desired under the Punjab Environmental Protection Act, 1997 (amended 2012), the Punjab Environment Quality Standards and the rules and the regulations thereof.

2-Identification of the Project& Proponent

The proponent of this unit is Nasir Mehmood S/O barkat Ali.

This project requires an Environmental Impact Assessment (EIA) the project fall in Schedule-II, Category A (5) 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.

3-Detail of Environmental Consultants

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

Name	Roles
Shahid Iqbal Environmentalist	Team Leader
Muhammad Imran Environmental Engineer	Monitoring coordinator and Author
Muhammad Hassan Chemist	Monitoring and Author
Gulzaib Afzal Environmental Engineer	Monitoring Assistant and Author

Address:126, 1st Floor Memona Center, Moj Darya Road, Lahore

Contact No. 03334041950

4-Brief Description of Nature, Size and Location of Project

The proposed project is Petroleum Products Storage unit by Awan Sports Industries Pvt Limited which will be involved in the storage of petroleum products like light diesel, Furnace oil, Kerosine oil, and Solvent oil through the following steps:

Receipt and Inspection: Upon arrival at the storage terminal, the petroleum products will be unloaded and received into storage tanks. Inspection and testing will be conducted to ensure the quality and specifications of the products. This may include checking for water content, impurities, and compliance with regulatory standards.

Storage Tanks: Petroleum products will be stored in large tanks specifically designed for various products like light diesel, Furnace oil, Kerosine oil, and Solvent oil. Tanks will be constructed to meet safety and environmental regulations, and they often have secondary containment systems to prevent spills.

Tank Monitoring and Control: Advanced monitoring systems will be employed to track the levels, temperature, and pressure inside storage tanks. Automated control systems help manage inventory and prevent issues such as overfilling or product contamination.

Safety Measures: Safety will be a top priority in petroleum storage. Tank farms will be equipped with fire suppression systems, emergency shutdown systems, and other safety measures. Regular inspections, maintenance, and testing of safety systems will be conducted to ensure compliance with industry standards and regulations.

Distribution from Storage Facilities: When there will be demand, petroleum products will be withdrawn from storage and transported to distribution points,

Regulatory Compliance: Storage facilities will be complying with local, national, and international regulations regarding safety, environmental protection, and product quality.

Regular audits and inspections will be conducted to ensure compliance with these regulations.

The total area of land will be 419265 sft.

Screening

Whether the project requires IEE/EIA as per Regulations:

As per Review of Initial Environmental Examination (IEE) and Environmental Impact Assessment (EIA) Regulations, 2022 the said project falls in Schedule II category A(5).

This project requires an Environmental Impact Assessment (EIA) the project fall in Schedule-II, Category B-5 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 Regulations, 2022
- Guidelines for Preparation and Review of Environmental Report, 1997
- Solid Waste Management Rules , 2005
- National Environmental Quality Standards 2022
- Punjab Land use Rules 2009

Scooping

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 proposed waste water treatment plant:

- 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

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
- 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 Petroleum Products Storage unit by Awan Sports Industries Pvt Limited considered the subject site as most suitable for this project.

2.3.2 TECHNOLOGY OPTIONS:

The machinery/technology which will be installed in Petroleum Products Storage unit by Awan Sports Industries Pvt Limited 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

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 A (5) of schedule II of Regulation 2022.

2-Objectives of project

The proposed project shall yield following benefits:

- To maintain continuity in supply of Petroleum Products.
- To help to overcome the scarcity of Petroleum Products due to huge gap between demand and supply.
- To increase the availability of Petroleum Products to local people
- To create job opportunities for locals
- To elevate the socio-economic status of the area

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
- 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 5 km of the selected site

  In the light of above mentioned points Petroleum Products Storage unit by Awan Sports Industries Pvt Limited considered the subject site as most suitable for this project.

4-Location and layout of project

"Petroleum Products Storage unit by Awan Sports Industries Pvt Limited Located at Khasra No. 851, 852, Khatooni No. 438, Khewat No. 169, Mouza Adaah, Tehsil Daska, District Sialkot.

The surrounding area detail of this project is given below

North	Open Land
South	Constructed Building
East	Daska Road
West	Open Land

Layout of the Project

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

5-Land use on site

Land is currently open, and due to the Project, it will be brought to Petroleum Products storage use and also it will give employment opportunities, which is very positive.

6-Road access

Sialkot Road present In the front of the proposed project site.

7-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.

8-Cost and magnitude of operation

The estimated cost of this project is **80 million rupees**.

Activities include the following.

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

9-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.

10-Description of Project

The proposed project is Petroleum Products Storage unit by Awan Sports Industries Pvt Limited which will be involved in the storage of petroleum products like light diesel, Furnace oil, Kerosine oil, and Solvent oil through the following steps:

Receipt and Inspection: Upon arrival at the storage terminal, the petroleum products will be unloaded and received into storage tanks. Inspection and testing will be conducted to ensure the quality and specifications of the products. This may include checking for water content, impurities, and compliance with regulatory standards.

Storage Tanks: Petroleum products will be stored in large tanks specifically designed for various products like light diesel, Furnace oil, Kerosine oil, and Solvent oil. Tanks will be constructed to meet safety and environmental regulations, and they often have secondary containment systems to prevent spills.

Tank Monitoring and Control: Advanced monitoring systems will be employed to track the levels, temperature, and pressure inside storage tanks. Automated control systems help manage inventory and prevent issues such as overfilling or product contamination.

Safety Measures: Safety will be a top priority in petroleum storage. Tank farms will be equipped with fire suppression systems, emergency shutdown systems, and other safety measures. Regular inspections, maintenance, and testing of safety systems will be conducted to ensure compliance with industry standards and regulations.

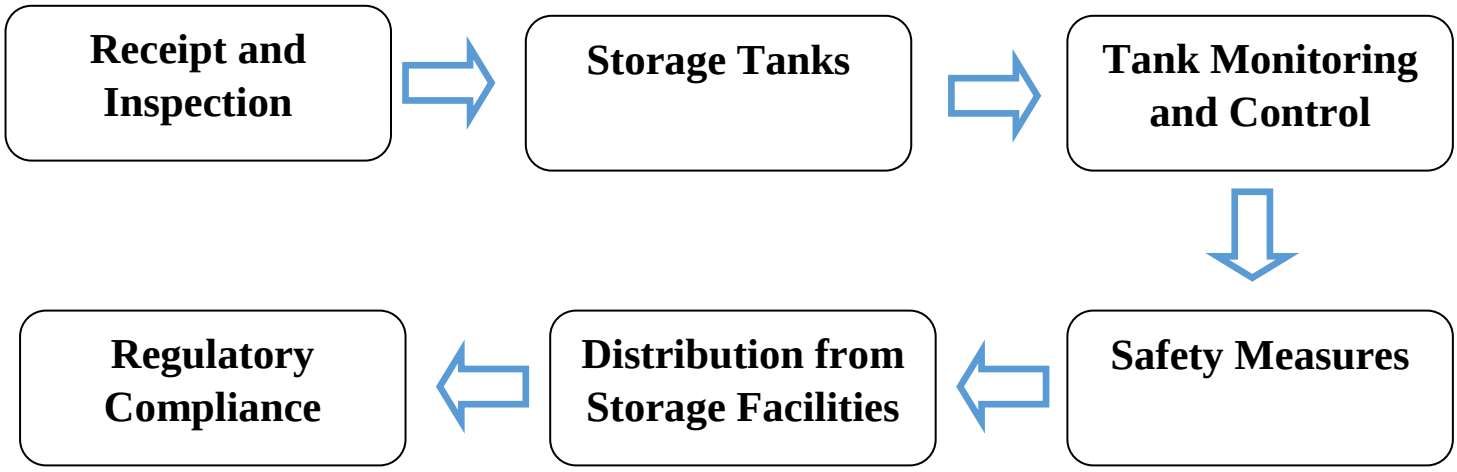
Distribution from Storage Facilities: When there will be demand, petroleum products will be withdrawn from storage and transported to distribution points,

Regulatory Compliance: Storage facilities will be complying with local, national, and international regulations regarding safety, environmental protection, and product quality.

Regular audits and inspections will be conducted to ensure compliance with these regulations.

The total area of land will be 419265 sft.

Process flow chart:



Health & Safety

For health and safety of first Aid Boxes are available and workers are provided Following PPEs

Sr. #	PPEs	Qty.
1	Gloves	100 Pairs
2	Mask	100 Pairs
3	Safety Helmet	50 Pairs

11- 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.

12-Government approvals

The NOC's from different government departments are in approval process. Now, Management has applied for Environmental Approval and after getting Environmental Approval.

DESCRIPTION OF THE ENVIRONMENT

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 here under:

Topography

Sialkot is situated in the Upper Rachna Doab, which is bounded by the Ravi and Chenab rivers. The general slope of the land within the Doab is to the south-west and the area is an active flood plain, although storm flows and hence flooding have been greatly reduced by irrigation and power generation works carried out on the Indian side of the border. The historic centre of Sialkot is located between two seasonal watercourses, the BhaidNullah and the AikNullah. It occupies land that is elevated up to about 10 meters above the surrounding areas. Apart from the central area, the city is generally flat. Overall, there is an east to west fall, from around 253 meters in the east to about 245 meters in the west, an average fall of about 1 in 1000. Sialkot located 225 meters above the sea level..

Soil

The soil of the district Sialkot areas is sandy loam type. The soil is humidified to a great depth and has relatively high natural fertility and is non-calcareous. The soil is thick and fairly homogenous in context. The top soil consists of brown soft to firm silty clay dissolved salts. The top layer is likely to extend 2.5 to 4 meters below ground followed by silty sand layer, which continues to deeper depths up to 10 meters. The second layer extending down to 28 feet depth is

plastic, loose to medium salty sand. The third layer which extends from 28 feet to the bored depth of 50 feet is colored non plastic- dense sand. The ground water table (GWT) is encountered at depth of 90-100 feet.

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Climate

Sialkot experiences significant seasonal variationsin temperature with the average monthly temperature varying from 11.6^{o}C in January to 40.2^{o}C in June.

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

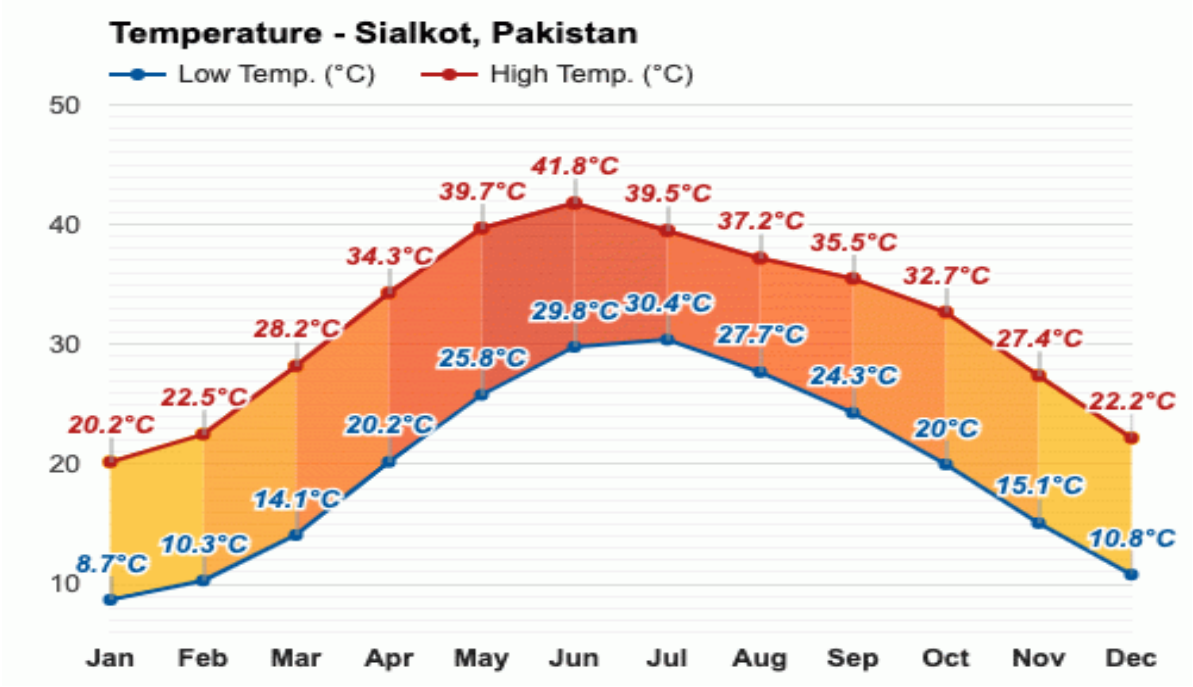
i) Temperature

The area is cold during winters and hot and humid during summer. The May, June, July and August are the hottest months of the year.The warmest month (with the highest average high temperature) are **June** (39.9°C). The month with the lowest average high temperature is **January** (18.5°C). The spring season exists during March and April and is pleasant.

ii) Humidity Monthly relative humidity for this area has been worked out as 59.0%. The maximum recorded humidity for the district is 74.0% while the minimum humidity is 37.0%.

iv) Precipitation

The mean annual rainfall is 957mm, over half of which falls in the months of July and August. The average temperature over the coldest three months of the year is about 12.7^{o}C, rather lower than Lahore.



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.

Ambient Noise

As already explained, there are very few industrial units in the Study Area which are far away from this project site. However, traffic activities are continuous source of contamination of ambient air within the project influence zone.

Water Supply:

Sialkot's water supply is good by Pakistan standards. There are about 42,000 connections in the town (39,000 domestic), which serve about 65% of the population within the old Municipal Corporation limits but only about 35% of the urban population, excluding the Cantonment. There are approximately 5,500 connections in the Cantonment, covering an estimated 38,500 people or about 47.5% of the civilian population of the Cantonment. The TMA say that the existing distribution system covers about 70% of the area within the pre 2001 municipal limits.

Sewerage, Drainage and Wastewater Disposal

Sialkot is partly sewered and partly served by open and covered drains. The sewers are in poor condition and blocked in many places. The main system served the center of the city and the area to the west, discharging to a 54" diameter trunk sewer along Roras Road, which conveyed wastewater to a main pumping station at Mianapura. This was intended to lift wastewater into the BhaidNullah. The pumping station is no longer operational and indeed may never have operated properly. The resulting surcharging of the sewer must have contributed to its reported poor condition. There are also reports that it was poorly constructed, with backfalls in places. A second pumping station lifts wastewater from the Model Town sewerage system into branch of the BhaidNullah. This pumping station is in poor condition and the original wet well – dry well arrangement has been abandoned and replaced by a single pump at ground level. The high suction lift is not conducive to efficient operation. A third pumping station has been provided close to the town centre to lift wastewater from the blocked sewer system. This pumping station is in poor condition and there is only one working pump, located at ground level. Much of the wastewater from the city centre is being discharged via a covered drain.

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.

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).

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	ScientificName
JangliButi	Partheniumhysterophorus
Puthcanda	Achyranthesaspera
Bathu	Chenopodiumalbum
Ak	CalotropisProcera
Bhang	Canibus sativa

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 #	StudyArea	
	Common Name	**ScientificName**
	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

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 #	StudyArea	
	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

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.

Listof Mammals Presentin and Around the Project Area

Project Site		**StudyArea**	
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

Listof Reptiles Present in and Around the Project Area

Common Name	ScientificName
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	Scientific Name
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
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 BadshahiMosque,ShahiQila, Tomb of Jahangir, Shalimar Garden, Minar-e-Pakistan, Lahore Zoo, Lahore Museum,Safari Park, JalloPark,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.

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.

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.

5. 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.

Impact Assessment

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 Stellar Packaging Pvt. Limited 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		✓		

This section discusses the potential environmental impact for the establishment of Stellar Packaging Pvt. Limited 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:

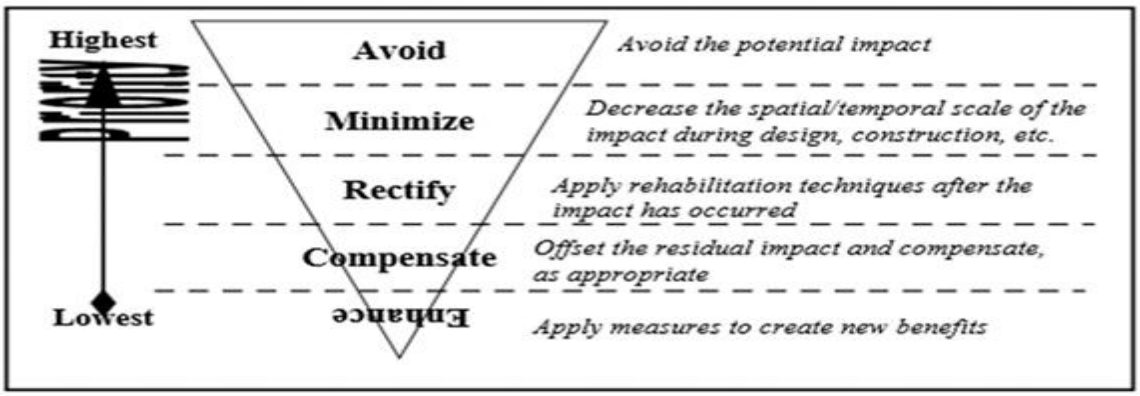


Figure 1: Hierarchy of Mitigations

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

Table 2: Impact Matrix Checklist for Designing Phase

Environmental Sensitivities	Intensity of Impact						Impact Nature		ImpactSignificance				
	LowIntensity	ModerateIntensity	HighIntensity	Local	National	Regional	Beneficial	Adverse	Insignificant	No Impact	ShortTerm	Moderate	LongTerm
Physical Parameters													
Topography	✓			✓									
Land Acquisitions	✓			✓									
Seismicity													
Biological Parameters													
LandEnvironment	✓			✓									
Flora	✓			✓									
Fauna	✓			✓									
Social Parameters													
LocalEconomy	✓			✓									
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

There are no significant environmental impacts associated with the project location No freshwater body present nearby the project site. The proposed site is devoid of any tree cover.

The proponent has selected the site owing to the following reasons:

- The site is undisputed and under the ownership of the proponent
- 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, no considerable impact will occur on land, soil, topography, ground water, and on people of the area. However in pre-construction phase a management system should be provided at design level so impacts can be reduced. Design of the proposed Petroleum Products depot will adhere to all standard technical requirements in order to avoid adverse impacts on environment and human health.

Mitigation Measures

The project will be designed in a way that it will have minimal impacts on the environment and will be carrying out in a sustainable way. Best standards and engineering practices will be used to make it environment friendly. 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

The potential environmental impacts of the proposed project at site and surrounding area during the development / construction phase are described as follows:The main impacts of the project during construction of civil work will be the dust and noise from transportation of construction materials and equipment's. Standard Engineering Practices will be enforced on the construction / development site.

- **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.

- **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 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.

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 TMA,and it will be ensured minimum degradation to the soil around the Project area. Construction waste will also be disposed off as per TMA 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 Tehsil Municipal Administration.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.

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- **Traffic Management**

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**

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.

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 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:

- Petroleum Products Leakage & Ignition Hazard
- Water Consumption
- Wastewater
- Air Quality
- Noise and Vibration
- Solid Waste Management
- Occupational Health and Safety

Impact on Physical Environment

- **Petroleum Products Leakage& Ignition hazard**

Leakage of Petroleum Products from tankers and vehicles can cause suffocation. It could cause cold burn to the skin and it can act as an asphyxiate at high concentrations. It could also form cloud of gas in the air and burn or explode when the gas meets with the source of ignition. Tanks would also explode if comes in contact with the fire.

Mitigation Measures:

Proper ventilation will be provided to avoid the accumulation of Petroleum Products and to minimize the hazards associated with them. Petroleum Products storage tanks will be kept away from the sunlight, heat, sparks, and flame to avoid the chances of ignition. Space and separation distances will to be maintained for safety to avoid hazard. Tanks should be prevented from any physical damage by storing them in cages/racks securing the tanks with safety chains to avoid such incident. The filling pressure should not exceed design pressure of the liquid. It will help to minimize the hazard of leakage and explosion.

- **Waste Water**

The domestic wastewater will be generated during the operational phase of the project. It would deteriorate the surface and ground water quality if not treated properly. Waste water will mainly be domestic waste water in nature. It could affect the underground water table, which in turn affects the health of the people.

Mitigation Measures

Domestic wastewater which will be generated during operational phase will be treated by passing through septic tanks before drainage to the existing drain.

- **Air Quality**

The air quality will not be deteriorated by the proposed project. Project only involves storage of Petroleum Products, not any industrial activity so there will be no emissions. Only dust will be generated during floor cleaning. Minor emissions would also be generated due to increased movement of onsite incoming vehicles and from generator.

Mitigation:

Dust will be controlled by water sprinkling. PPEs such as dust masks will also be provided to workers. It will be ensure that vehicles coming are well tuned and not causing heavy smoke emissions. Vehicles will be properly tuned and maintained. Generators, air conditioners will be properly tuned and maintained to minimize the exhaust emissions and it will be kept in good condition.

- **Noise and Vibration**

During the operational stage, Noise will be generated mainly due to the Movement of vehicles on the roads. Minor noise will come from Generator (if any).

Mitigation:

Noise will only be generated during transportation, for this only those vehicles will be used that are properly tuned and maintained and are equipped with silencers. Generator (if any) will also be 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. It will be ensure that well-tuned equipment and vehicles will be employed and allowed inside the premises to avoid the negative impacts of noise.

- **Solid Waste:**

The solid waste generated during the operational phase of proposed project comprises of paper, plastic, rags, food waste etc. It may deteriorate the aesthetic beauty of the environment and might spread diseases.

Mitigation Measures

Small waste storage bins will be installed. The waste from these bins will be collected by the sanitary workers and waste will be disposed off in accordance with the procedures of Tehsil Municipal Administration

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.

- **Workers' Safety**

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

Mitigation:

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 workers/labors are trained in safety procedures

- Workers will be provided with proper safety equipment such as helmets, goggles, masks, etc.;
- Formal emergency procedures will be developed for 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;
- Proper illumination will be provided at night.
- 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 workers are 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.

- **Traffic Management**

The movement of vehicles 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 operation, following mitigation measures will be followed:

There should be observation of timing by the vehicles to cause minimum disturbance to traffic on existing road. All the vehiclesshould stay inside the periphery of project so it will not cause disturbance in the traffic. Transportation will be done during the low traffic hours. Vehicles should be kept in a good working condition and should be properly tuned and maintained.

- **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. These may include;

Mitigation measures:

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. 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 fir which refers to the designation of safe areas in such conditions.

Fire Hazard

During operational phase of the project, fire hazard poses a serious threat. Fire extinguisher details are mentioned on map.

Mitigation

For firefighting different types of fire extinguishers, sand buckets, fire hydrant etc. are recommended to be installed in the storage area.Tanks are proposed on layout map for Fire Water. The fire water tank would have a capacity of 500 GPM. Three 50 kg Trolley Mounted Fire Extinguisher are present in the proposed project. The firefighting equipment is as per NFPA 20, NFPA 15.

6- 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

Names of Trees, Plants etc.

The following plants will be planted, however other trees will be consulted with gardening experts and other endangered trees will also be planted.

Plant Name	Local Name
Conocarpieceo	Cono Tree
Arabic Gum tree (Acacia nilotica)	Kiker
Golden Shower tree (Casia Fistula)	Amaltas
Indian Beech tree (PongamiaPinata)	Sukh Chain
Camel's Foot tree (Bahunia Alba)	Kachnar
	Jasmine
	Lilly
	Lotus
	Rose

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.

ENVIRONMENTAL MANAGEMENT& MONITORING PLAN

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.

- **Institutional Capacity**

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

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 8-15 workers during construction phase and 8-20 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 Proponent
- Project Manager
- Supervisor

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

• 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.

Fire Safety

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

• Summary of Impacts and their Mitigation Measures

The summary of overall impacts and their mitigation measure is given below EMP:

Aspects	**Potential Impacts/ Risks**	**Proposed Mitigation Measures**
Construction Phase		
Traffic Congestion due to construction phase of Petroleum Products Storage unit	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
	Additional load on	All the effects and mitigations of these

Additional load on Existing Utilities	ground water, sewerage system, electricity , solid waste system	utilities have already been covered in previous sections and no any problem will create due to load on existing facilities
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 TMA,
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 providedwith masks for protection against the inhalation of dust. 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.
Noise and Vibration	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

Solid Waste generation	There will be mostly waste like paper, plastics, and food waste.	Waste storage bins will be Installed, from there the waste will be collected through the sanitary workers and will be disposed of in accordance with the procedures of TMA
Traffic Management	Disturbance to routine traffic moving on the road.	Observation of timing by the vehicles carrying construction material to cause minimum disturbanceto traffic on Road. Construction equipment and machinery will be stationed in the boundary premises to avoid the traffic congestion on the approach road
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,
Operational Phase		
Petroleum Products leakage & Ignition Hazard	It could pose serious health problems & cause ignition	Proper ventilation will be provided to avoid the accumulation of Petroleum Products and to minimize the hazards associated with them. Gas storage tanks will be kept away from the sunlight, heat, sparks, and flame to avoid the chances of ignition. Tanks will be prevented from any physical damage by storing them in cages/racks securing the tanks with safety chains to avoid such incident.
Noise	Noise level may increase due to	The entire operation will be carried out in confined area. The workers will be provided

	increased movement of vehicles.	with necessary protective devices e.g. ear plug ear-muffs etc. vehicles. Furthermore plantation at the specified areas in this unit will reduce the noise level at much extent
Air quality	Dust & emissions produced from incoming onsite vehicles may affect local air quality.	The project involves Petroleum Products storage and filling not any industrial activity, so there will be no emissions. Dust will be controlled by water sprinkling. Further it will be ensure that vehicles coming are well tuned. PPEs will also be provided to workers.
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,
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 and reuse of wastewater for gardening.
Waste water Generation in operational phase	There domestic wastewater will be which will be generated while during operation from	To get rid from domestic Waste water septic tank will constructed. It will be treated before drainage.

	washroom.	
Solid Waste Generation	There will be mostly Domestic waste like paper, plastics, and food waste.	Small waste storage bins will be Installed and solid waste will be disposed off in accordance with the procedures of TMA.
Emergency Response	There are always chances of accidental events and manmade disasters, fire, road accidents etc.	An Emergency Response Plan for Earthquakes and manmade disasters will be developed by the Management. Emergency Response Plan will be implemented in close consultation with the Fire Fighting Department, Bomb Disposal Squad and Paramedics.

- ## Equipment's Maintenance Plan

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.

- ## Environmental Budget

A total of 365,000 rupees will be assigned for environmental budget. Tree plantation will be done from this budget. This budget can be increased in case of any requirement.

Sr.no	PROJECT ACTIVITIES	ALLOCATED BUDGET
1	Fire extinguishers	50,000 PKR
2	Water Sprinkling	25,000 PKR
3	Personal Protective Equipment's (PPEs)	30,000 PKR
4	Safety & awareness Board	30,000 PKR
6	Sanitation and Waste disposal facilities, Solid Waste Bins	80,000 PKR
7	Tree Plantation	150,000 PKR
8	**Total Amount**	**365,000 PKR**

Involvement of Stakeholders/Public Consultation

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 IEE 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.

7.2 IDENTIFICATION OF STAKEHOLDERS

There are two types of stakeholders, i.e.

a. Primary stakeholders
b. Secondary stakeholder**s**

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 expected impacts and understanding about the concerns by category of stakeholders.

7.2.2 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 IEE Report:

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

7.3.2 Stakeholder 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 IEE. 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 IEE 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. • Information sharing about the project (disclosure) • Opinion seeking (concerns and expectations) • Grievance redress	• Focus Group Discussions • Household surveys • Formal and informal Community meetings	• Base line Study Impact Assessment
Secondary Stakeholder	• Participation in the development process • Information gathering • Authentication and validation of the development processes • Verification of the record	• One on one meetings • In-depth interviews	• During the IEE preparation • On need basis during the project implementation and

Stakeholder consultation for this project was planned during the preparation of IEE 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's ENVIRONMENT MANAGEMENT TEAM

All possible impacts and mitigation measure related to the project were discussed with the proponent and management. The proponent's management team which includes Health and safety officers, fire fighting staff, manager and assistant manager. 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 proponent 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 Services 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 IEE 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,
- Chamber Of Commerce & Industry
- Department of Social Welfare,
- Department of Wild Life and Fisheries
- Sui Northern Gas Pipe Line (SNGPL),
- Human Federation Organization (Local NGO)

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 production of medicine & availability medicine on affordable cost

Appendices

	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
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

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
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
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

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, 2022.
- The Land Acquisition Act, 1894
- The Punjab Local Government Ordinance, 2001
- Punjab Environmental Protection (Amendment) Act, 2012

Schedule-IV
Application Form

1.	Proponent Detail	i. Nasir Mehmood S/O barkat Ali ii. Nasir Mehmood iii. House No. 48, Zafar Ali Road, Tehsil and district Sialkot.
2.	Consultant Detail	i. ProGreen Environmental services. ii. Letter of Authority from proponent in favor of consultant. (Attached with EIA Report)
3.	Project Detail	i. Location of project ii. Khasra No. 851, 852, Khatooni No. 438, Khewat No. 169, Mouza Adaah, Tehsil Daska, District Sialkot. iii. Alternative site ,If any iv. Google or scale Map of the project(and alternatives) vicinity clearly showing the distance from nearest settlement, water bodies or other notable geographical features/ protected or reserved forests/ National Parks/ Environmentally sensitive Areas **(Attached)** **Yes** v. Objectives of the project. • To maintain continuity in supply of Petroleum Products. • To help to overcome the scarcity of Petroleum Products due to huge gap between demand and supply. • To create job opportunities for locals • To elevate the socio-economic status of the area. vi. Description of project: The proposed project is Petroleum Products Storage Unit by Awan Sports

		Industries Pvt Limited which will be involved in the storage of petroleum Products like light Diesel, Furnace oil, Kerosine oil, Solvent oil). The total area of land will be 419265 sft. vii. Projects sub component that fall within the list of project enumerated in schedule I or II and, If so, detail of each
4.	Project category	i. Mentioned Schedule of regulations ii. Attached : IEE ☐ EIA Yes
5.	IEE/EIA Details	i. Baseline data on meteorology, ambient air quality and ground water quality ii. Assessment of potential environmental impacts iii. Identification of environmental impacts of the project through its life cycle iv. Assessments of social impacts of the project v. Identification and description of preventive, mitigatory and compensatory measures to be adopted vi. Environment Management plan vii. Monitoring Arrangements viii. Project construction labor details ix. Project operation details. **The above detail has been mentioned in EIA report.**

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

Name and Designation of Proponent: **Nasir Mehmood**

Signature _____

Date _____

TERMS OF REFERENCE FOR IEE / EIA

Title of Project	Petroleum Products Storage unit by Awan Sports Industries Pvt Limited
Title of Assignment	Preparation of Environmental Impact Assessment (EIA) Report
Proponent	Nasir Mehmood S/O barkat Ali
Location of Project	Khasra No. 851, 852, Khatooni No. 438, Khewat No. 169, Mouza Adaah, Tehsil Daska, District Sialkot.
Procurement Method	Formal Quotations

Project Description:

The proposed project is Petroleum Products Storage Unit by Awan Sports Industries Pvt Limited which will be involved in the storage of petroleum Products like light Diesel, Furnace oil, Kerosine oil, Solvent oil). The total area of land will be 419265 sft.

Objectives of Study:

- To assess and establish the existing environmental and socio-economic conditions of the area.
- To assess and evaluate the potential environmental and socio-economic impacts of the project activities and identify the issues of high concern.
- To implement and execute environmental safeguards.
- To propose mitigation measures and monitoring arrangements that can be incorporated into the operation of the project to remove or reduce any damaging effects as far as possible.
- To categorize the significant impacts requiring further consideration.
- To devise the Environmental Management Plan for the project.
- To prepare an EIA Report as per the relevant guidelines for submittal to EPA Punjab.

Scope of Work for Consultants:

- Secondary Data Collection
- Field Survey and Primary Data Collection
- Scoping Meeting
- Baseline Monitoring
- Public Consultation
- Socio-economic surveys (Interviews + Questionnaires)
- Compilation of Data
- Preparation of EIA Report according to Regulation (6) of Review of IEE / EIA Regulations, 2000 and Guidelines for Preparation and Review of Environmental Reports, 1997.
- Responding to any queries by EPA Punjab

Key Deliverables:

- 10 Hard Copies of IEE/EIA Report shall be filed as per Regulation (8) of Review of IEE / EIA Regulations, 2000
- 2 Soft Copies of IEE/EIA Report shall be submitted along with report as per Regulation (8) of Review of IEE / EIA Regulations, 2000
- IEE/EIA Report shall be accompanied by;
  - An application, in the form set out in Schedule IV of Review of IEE / EIA Regulations, 2000
  - An undertaking as per Schedule VII of Review of IEE / EIA Regulations, 2000
  - Copy of receipt showing payment of the review fee
- Reply of Query Letter (will be submitted if EPA requires additional information)

Time Line:

- 18-12-2023 (Draft EIA Report)
- 20-12-2023 (Comments by proponent)
- 22-12-2023 (Final EIA Report)

- 25-12-2023 (Filing of EIA Report in EPA after incorporating changes Suggested by Proponent)
- According to clause (a) of sub-regulation(1) of regulation 9, within ten working days of filing of IEE, EPA shall be responsible to confirm IEE is complete for the purpose of initiation of review process
- According to clause (b) of sub-regulation(1) of regulation 9, EPA require such additional information as may be specified
- According to clause (c) of sub-regulation (1) of regulation 9, return IEE to the proponent for revision, clearly listing the points requiring further discussion and consideration for make-up.
- According to sub-regulation (1) of regulation 11 of Review of IEE/EIA Regulations, 2000, EPA shall review IEE within forty five (45) days and EIA within ninety (90) days, of issue of conformation of completeness under clause (a) of sub-regulation (1) of regulation 9.
- According to Section 12 (4) of Punjab Environment Protection (Amendment) Act 2012, "The Government Agency shall communicate its approval or otherwise within a period of four months from the date the Initial Environmental Examination or Environmental Impact Assessment is filed complete in all respects in accordance with the prescribed procedure, failing which the Initial Environmental Examination or, as the case may be, the Environmental Impact Assessment shall be deemed to have been approved to the extent to which it does not contravene the provisions of this Act and the rules and regulations."

Qualifications:

Personnel involved in the survey and preparation of EIA Report of the said project have the following qualifications;

- BS/MS/M Phil Environmental Sciences
- BS/MS Environmental Engineering

Responsibilities of the Proponent:

- Responsible to pay all the dues of the consultants as per the agreed terms and conditions.

- According to regulation 7 of Review of IEE and EIA Regulations, 2000, proponent shall pay, at the time of submission of IEE/EIA, a non-refundable review fee to EPA, in accordance with rates specified in schedule III.
- Arrange transportation for the survey teams and laboratory
- Fulfill all pre-requisites of EIA Report
- Provide all documents / details required for completion of EIA Report
- Proponent shall be responsible for paying any fines / penalties levied by the EPA Punjab or Environment Tribunal
- Proponent shall be responsible for the validity and correctness of the information provided to the consultants
- Proponent shall be responsible to abide by all the conditions contained in the Environmental Approval accorded to him by EPA Punjab.

The area below will be used for signatures and stamp.

Proponent

Nasir Mehmood S/O barkat Ali
Address: House No. 48, Zafar Ali Road, Tehsil and district Sialkot.

Consultation Firm

Pro Green Environmental Services

Address: 126,1st Floor Memona Center, Moj Darya Road, Lahore

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
Ahmad Waqar Environmental Engineer	Team Leader
Shahid Iqbal Environmentalist	Monitoring and Author
Ali Naeem Environmental Engineer	Monitoring coordinator and Author
Muhammad Hassan Chemist	Monitoring and Author
Gulzaib Afzal Environmental Engineer	Monitoring Assistant and Author

Address:126,1st FloorMemona Center, Moj Darya Road, Lahore

Contact No. 0333-4041950