EXECUTIVE SUMMARY

Title of the Project:

The Project under review of this Environmental Impact Assessment Report (EIA) is the Extension of the unit Named as M/S "Escorts Advanced Textiles Private Limited". **(Environmental Approval was accorded vide NO.DD(EIA)/EPA/F-686(IEE)/1701/2015/678 in July 24, 2017 for Construction Phase & vide NO.AD(EIA)/EPA/F-686(IEE)/2015/56 in January 28, 2021 for Operational Phase** respectively. Now, Proponent/CEO further going to extend his unit with spinning in addition to Dyeing with an area of around 22 Kanal to meet his increasing demand for the purpose EIA (Environmental Impact Assessment) Report is Prepared.

Location of the Project:

The site of the project is same as 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.

The Name of Proponent and Total Cost of the Project:

The Name of the Proponent/Chief Executive Officer is Mr. Sher Ahmad S/O Naseer Ahmad. The approximate cost of the project is 40 million PKR. Total extension area will be of 22 Kanals approximately.

Name of the Organization Preparing the Report:

The proposed site of the project was surveyed, keenly studied & (Environmental Impact Assessment) EIA report prepared by M/S **"Green Globe Associates."**

Purpose of Report:

The Purpose of this report is to conduct Environmental Impact Assessment (EIA) report of the Extension by M/S "Escorts Advanced Textiles Private Limited". The EIA is conducted under the Legal framework of Pakistan Environmental Protection Act, 1997 amended 2012 and Review of IEE/EIA Regulations, 2022 to seek the Environmental Approval. In compliance with the applicable Environmental Regulations, it was decided to get the Environmental Examination of the project, conducted through consultants. In order to fulfil the legal requirement of Punjab Environmental Protection (Amendment) Act 2012, Section 12; for obtaining No Objection Certificate from Environmental Protection Agency (EPA), Government of Punjab, Lahore, this Environmental Impact Assessment (EIA) Report is being submitted to the said agency. The EIA Report, as desired

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by EPA, has been prepared according to the prescribed by the **"Guidelines for the Preparation of Environmental Reports, 1997" amended 2012 & "Review of IEE/EIA Regulations, 2022."**

Purpose of the Project:

The main purpose for the extension as above:

1) To meet the increasing market demand of yarn
2) To provide better job opportunities to the local community including skilled & un-skilled workers during Construction Phase
3) To contribute towards improvement of economy in the country
4) To change the social life style of the area
5) Revenue generation for the Government
6) To upgrade the socio-economic conditions of the area
7) Safe working conditions for the workers & employees

Economic Benefits:

Job Creation:

- ✓ The spinning industry provides employment opportunities in both urban and rural areas. This includes direct jobs in spinning mills and indirect jobs in supply chains, transport & related services

Industrial Growth:

- ✓ Spinning is a key part of the textile value chain, supporting downstream industries such as weaving, knitting, dyeing, and garment production. This stimulates industrial growth & contributes to a diversified economy.

Linkages to Agricultures:

- ✓ Supports the agricultural sector by creating a steady demand for raw materials like cotton and wool, benefiting farmers and reducing agricultural waste.

Boost to GDP:

- ✓ The spinning industry is a significant contributor to GDP in countries with a strong textile sector, enhancing overall economic performance.

Infrastructure Development:

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- ✓ Industrial zones & regions hosting spinning mills often see improvements in infrastructure such as roads, power supply, & communication networks.

Social Benefits:

Rural Development:

- ✓ By establishing spinning mills in rural areas, the industry helps to reduce urban migration & fosters economic development in less-developed regions.

Women Empowerment:

- ✓ The spinning industry often employs a large number of women, providing them with income & financial independence.

Skill Development:

- ✓ Training & employment in the spinning industry equip workers with specialized skills, enhancing their employability and career prospects.

Improved Standard of Living:

- ✓ Employment in the spinning sector increases household incomes, leading to better access to education, healthcare, and housing.

Cultural Preservation:

- ✓ The industry supports traditional crafts & hand-spinning techniques in some regions, preserving cultural heritage & promoting local artistry.

Broader Impact:

Sustainability:

- ✓ With modern sustainable practices, the spinning industry can minimize environmental impact & promote recycling & upcycling of materials.

Global Integration:

- ✓ As a part of the global textile supply chain, the spinning industry connects local economies to international markets, fostering global partnerships.

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- ✓ The spinning industry's contributions go beyond economics, significantly shaping societal progress and supporting sustainable development.

Brief Outline of Project:

Proponent Name/ Chief Executive Officer	Mr. Sher Ahmad S/O Naseer Ahmad (CEO/Proponent) CNIC#35202-2963441-3 **Present &** **Permanent Adress:** LDA Flates Allama Iqbal Town, Flat 20 C/2, Block Chanab C-2 Lahore, Lahore City District Lahore Pakistan.
Project Title	**M/S "Escorts Advanced Textiles Private Limited."**
Category Falls in	Firstly, the Unit Falls in the (Schedule-I) Category (C) (Manufacturing & Processing) (1) Apparel (including garments & leather stitching units) Cotton, spinning mills, woolen mills, weaving mills & manual carpet weaving units). But in the extension of the concerned unit due to the addition of Dyeing process the project will Falls in EIA Category of (Schedule-II) List of projects requiring an EIA (B) Manufacturing & Processing (6) Textiles unit comprising of **Dyeing** & printing. So, EIA is prepared.
Description	The project's primary goal is to build a contemporary plan that would give inhabitants a safe, secure, and pleasant environment while also offering improved employment possibilities to the local population, including skilled and unskilled people, throughout the construction period.

Project Location	33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.
Google Coordinates	Lat 31.86503° Long 74.242606°
Consulting Firm	M/S "Green Globe Associates"
Head Office *Regional Office*	Office# 23,27 First Floor, Jamshaid Plaza, 100 Ferozepur Road Ichhra District Lahore. Office#69, Ground Floor, Mall of Lyallpur, D-Ground Harrianwala Chowk District Faisalabad.
Email id.	Greenglobeassociate@gmail.com
Total Area	Approximately 22 Kanals (Extension)
Project Process	✓ Land levelling ✓ Construction ✓ Installation of Machinery ✓ Operational ✓ Processing ✓ Yarn Manufacturing's ✓ Dyeing ✓ Dispatched
Source of water	Ground Water
Nature of Area *State of Project*	Agricultural Land Open Land (Extension)
Solid Waste	Waste effluents will primarily consist of the domestic sewage from the workers/Residence Colony of the company staff/labors The garbage will be collected at a designated area within the premises of the unit. From this place, garbage will be collected by local vehicles/contractors and transported to a suitable location for final disposal/dumping. The location for this final disposal will be decided in consultation with the district government.

Tree Plantation:

Trees will be planted in all open spaces & boundary of the Project Area.

Traditionally, the Textile Sectors has been a barometer of socioeconomic growth of a country. It has a strong linkage to other sector of the economy & alone sets the wheels of more than 40 industries moving & results in their development besides creating employment opportunities.

The project site is situated at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.

The project will be involved for the Extension of the M/S "Escorts Advanced Textiles (Pvt.) Ltd."

The approximate cost of the project is 40 million PKR. Total area for the Extension is 22 Kanals.

The proponent intends the extend the unit to meet the increasing demand of the yarn & tends to start dyeing processing in future for the purpose proponent is applied for the NOC.

The Major Impacts & Recommended Mitigation Measures:

During construction, vehicles and machinery will be employed. These will generate some dust & smoke temporarily which will stop on completion of the construction work. This impact is classified to be short term, reversible & limited, as it will only occur during the construction activities. Also, these impacts are expected to be contained within the site boundaries. During construction phase the soil quality may be affected due to very small number of discharges during vehicle & equipment maintenance & leakage from equipment & vehicles.

Impacts during operational phase will be mitigated in environment friendly manner. The botanical garden will keep the air clean and also enhance the aesthetic value. There is no problem of water supply in this area. Solid waste generation due to different activities will be minimized by proper management if any waste is found would be recycled and any other waste would be sold to the contractor other construction waste that cannot be reused /sold dispose-off to officially designate dumping site. The construction of the project will create skilled & unskilled labour opportunities during its construction & operational stages. Most of the unskilled labour will be employed from the local communities, which will reduce the unemployment in that area and improve living standards of the local population. The waste water would be treated by constructing septic tank at proper place.

It is recommended that the project will run in compliance with legal requirements of environmental controls of Pakistan including Punjab Environmental Protection (Amendment) Act 2012 other rules, regulations and laws of the land. At last of this EIA report, a comprehensive

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account of both the Environmental Management Plan (EMP) is given. Assigning responsibilities to various officials for effective Environmental control has been described therein.

Based on the potential impacts, the project falls in the category of high beneficial and low adverse. The project potential impacts will be mitigated by adopting all suggested technical/ engineering best practices and measures. Detailed Mitigation Measures are mentioned in Chapter#05.

Summary of Potential Impacts & Mitigation Measures During Construction Phase

Environmental Aspect	Summary of Potential Impacts and Mitigation Measures	
	Potential Impacts	Mitigation Measure
Dust Emissions	• Dust emission during construction activities may result in deterioration of ambient air quality in the vicinity of the source. • Earth work and Excavation exposing. • Hauling and vehicle movement.	• Water will be sprinkled daily when there is an obvious dust problem on all exposed surfaces to suppress emission of dust. • Vehicular movement will be restricted to a specific time for supplies of construction material. • Site workers and drivers will wear dust masks especially during dry & windy weather conditions to avoid health risk.
Gaseous Emissions	• Gaseous emissions may arise from construction equipment e.g. generator, may deteriorate the surrounding air quality and have impact on person exposed to it. • High concentration & may also cause vegetation damage by clogging the photosynthesis process in plants.	• Generators will be kept away from walking areas and at safe place where the probability of human intervention is limited, • Generators will be properly tuned, serviced and monitored on regular basis, • All vehicles, generators and other equipment used during the construction will be maintained in good working condition in order to minimize emission of pollutants. • Emissions from the machinery & vehicles will be monitored on regular

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		basis to ensure compliance to NEQS. • The stack height of the generators used, if any, will be at least 3 m above the ground.
Construction Noise	• Noise will be generated during construction activities which is a concern both from worker exposure standpoint as well as ambient noise levels experienced by the local area, especially during early morning and night time site work activities	• The site for stationary sources of noise will be selected & segregated from work area. • Use of adequate ear plugs at all exhaust systems will be mandatory. • Blowing of horn by the project related vehicles will be strictly prohibited. • Workers will be provided with personnel protective equipment at places of high noise levels
Environmental Aspect	**Summary of Potential Impacts and Mitigation Measures**	
	Potential Impacts	**Mitigation Measure**
Water	• The water pollution will not be significant as this will be used only in small quantities and there will be no addition of large amount of contaminants to water. • The construction activities will not require establishment of any additional water source. • No high water consuming activity is likely to occur during construction so the water usage during proposed developments would not reduce the availability of water for other activities occurring within the area and for living environment in proximity.	Loss of water will be minimized. Water conservation practices will be followed during construction period.

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Terrestrial Ecosystem	The proposed project is the extension of the yarn manufacturing with dying unit in future with name as M/S "Escorts Advanced Textiles Private Limited" in an open plot, there is no ecosystem within the area so there will be no loss to any flora or fauna.	• Night time construction activities will be avoided. • The plants and grass near the proposed site boundary will be protected to the extent possible. • The damaged area due to construction work will be restored after completion of construction work. • After the construction phase, plants & trees will be planted on the proposed site and landscaping of the area will be done to increase its aesthetic value.

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Solid Waste	• The construction phase of the project is expected to generate construction waste; packing waste; scrap waste and excess materials waste. • The waste can also pose a health hazard if disposed-off improperly and may pollute ground, and waterways. • Waste may result from construction material, packing material, scrap metal from construction and equipment fabrication, vehicle maintenance.	• Recyclable material will be separated at source. • Waste bins will be placed at the construction site for waste materials including plastic, paper, metal, glass, wood, and cotton. • The recyclable waste will be sold to or picked up by waste contractors • All non-hazardous waste material that cannot be recycled or reused will be disposed properly.
Health & Safety Issues	• Health & safety issues can be arisen due to machinery handling and constructional activities.	• Proper training will be given to worker, Health & safety related sign board will be installed at working places. Personal protective equipment will be provided to worker. PPE's is crucial in industries and jobs where there are hazards that could cause injury or illness, such as construction etc.

Operational Phase

This section outlines potential impacts during the operation and maintenance phase gathered from a process that included a review of available documentation, verified during the site visit, i.e. how, where and when the proposed development can interact and affect the environment significantly, and details what mitigation measures may be taken to counteract these impacts.

Summary of the impacts with possible mitigation measures have been presented in table below

Environmental Aspect	Summary of Potential Impacts and Mitigation Measures	
	Potential Impacts	Mitigation Measure
Meteorology	• During operational stage there will be no impact on pattern of rainfall, climate and other related factors. Thus, its impact on meteorology will be insignificant	No mitigation measures required
Ground Water	• There will be no production of hazardous waste during the operational phase of the yarn manufacturing unit or dying. There is no chance of any seepage into the ground water so no contamination will take place.	No mitigation measures required
Water & Wastewater	• Wastewater will be generated from washrooms Kitchen & by dying. The wastewater will be treated through Waste water treatment plant.	No mitigation measures required
Air Quality	• As the project does not include any manufacturing process so no air pollution will be produced. The generator installed will be maintained and regular monitoring will be carried out to keep its emissions within NEQS	No mitigation measures required
Biological Environment	• The operational phase will not pose any adverse impacts on Biological Environment. The emissions from generators and wastewater	• The Proponent will plant indigenous plants and trees within and around the project site as already has

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	parameters will be kept within NEQS.	been planted in the existing unit premises.
Noise Level	• No significant amount of noise will be generated as the project is only the extension of the existing unit with dying & it will have no impact on the surrounding environment.	• The Proponent should assign task of proper cleaning in and around the unit
Health & Safety	• Open fires by workers can result in accidents. • Accidental fires may result due to paper and paper products catching fire.	• Fire safety precautions to prevent or reduce the likelihood of a fire to break out. • Placing and maintaining fire extinguishers in easily accessible places. • Display of Safety and Information Sign Boards at required places. • Adequate training of workers/labors on use of firefighting system to deal with the situation as well as environmental and waste management trainings.

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Proposed Monitoring:

The EMMP is prepared to ensure that the activities are undertaken in a responsible non-detrimental manner with the objectives of:

i) Providing a pro-active, feasible and practical working tool to enable the measurement and monitoring of environmental performance on site;
ii) Guiding and controlling the implementation of findings and recommendations of the environmental assessment.
iii) Detailing specifications deemed necessary to assist in mitigating the environmental impact.
iv) Ensuring that safety recommendations are complied with detailed Environmental Management Plan (EMP) is presented in Chapter 6.

Particulate Matter/Dust:

Monitoring for particulate matter should be conducted during construction and during operation & report should be submitted to EPA Punjab, as already been submitted of this existing unit to the field offices.

Flue Gases:

Monitoring for vehicular emissions & generator should be conducted during construction & during operation phase as per PEQ'S & report should be submitted to EPA Punjab.

Noise:

Regular monitoring for noise level should be maintained periodically During construction & during operation it should be conducted on quarterly basis & report should be submitted to EPA Punjab.

Water Quality:

Regular monitoring for waste water should be conducted during construction & during operation & report should be submitted to EPA Punjab. Record should be maintained regarding the underground water pump & consumption.

Sr. No.	Parameters	Monitoring Schedule During Construction	Monitoring Schedule During Operation
01	Ambient Air Monitoring (Nox, Co2, So2, PM10)	Quarterly	Quarterly
02	Noise Level	Quarterly	Quarterly
03	Drinking water Quality	Quarterly	Quarterly

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04	Waste waster	Quarterly	Quarterly

SCREENING:

As per directions of PEPA Act 2012, the Initial Environmental Examination (IEE)/ Environmental Impact Assessment (EIA) Regulations, 2022, The unit falls in the (Schedule-II) Category B (Manufacturing & Processing) (6) Textile units comprising of dyeing & printing of the project requiring Environmental Impact Assessment Report (EIA), Schedule-II of IEE/EIA Regulation 2022. Screening was performed at the first stage of the EIA process which resulted in a key EIA decision, namely to either conduct the assessment (based on the likely significant impacts) or not conduct it (in the anticipated absence of such impacts). Screening was done as early as possible in the development of the proposal in order for the proponent and other stakeholders to be aware of possible EIA (Environmental Impact Assessment) obligations.

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CHAPTER#01
INTRODUCTION

1. Proposed Project Introduction:

Mr. Sher Ahmad S/o Naseer Ahmad (CEO/Proponent) has planned to extend the existing unit Named as M/S "Escorts Advanced Textiles Private Limited" with an open land of approximately 22 Kanals. The Site of the project is located at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.

The Proponent of this project is looking for Environmental Approval No Objection Certificate (NOC) for this unit under section 12 of the Punjab Environmental Protection Act-2012 for which an Environmental Impact Assessment (EIA) Report has to be submitted to the EPA prior to the commencement of the construction of the Project.

The Main objective of this Environmental Impact Assessment (EIA) was to identify the baseline environmental, physical & the socio-economic conditions and the potential impacts along with formulation of suitable mitigation measures of an environment friendly implementation of the project.

1.1 Purpose of the Report

The CEO/Proponent of M/S "Escorts Advanced Textiles Private Limited" intends to extend the unit for producing high quality of fabric yarn to meet with the increasing demand of the market.

The proponent needs the No Objection Certificate (NOC) for their said project for which an EIA (Environmental Impact Assessment) Report is required under Section 12 of the Punjab Environmental Protection Act 2012 which has to be submitted to the Environment Protection Agency (EPA) before the commencement of the construction of the project.

The proponent fully understands the need of social, moral, national and legal obligations to environment & intends to follow such requirements in all of its activities.

The purpose of this report is to analyze impacts of the project. This report is prepared by critical examine of the environmental factors which might be affected due to the construction activity and also after the construction has been completed. Keeping in view the potential environmental

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impacts, this EIA report has been prepared & submitted to Environmental Protection Agency (EPA), Government of the Punjab, Lahore.

This EIA identifies, describes and evaluates the potential environmental impacts that could result from the implementation of the project, & include possible cumulative impacts from all the activities. It also identifies required environmental permits relevant to the project. As appropriate, the affected environment and environmental consequences of the project may be described in terms of regional overview or site-specific descriptions. The Report also identifies measures to prevent or minimize environmental impacts. The report highlights existing environmental, social, physical and other aspects of the area. It also provides necessary measures to be taken to mitigate any environmental impact. The monitoring plan is also described in the report.

The regulations & guidelines considered while preparing this EIA Report include:

- ✓ Policy & Procedures for filing, review & approval of the environmental assessments.
- ✓ Guidelines for the preparation & review of Environmental Reports.
- ✓ Guidelines for public participation.
- ✓ Guidelines for sensitive & critical areas.
- ✓ Detailed sectoral Guidelines.

The EIA Report describes environmental, socio-economic, physical, & environmental, land use, crops, forestry, water bodies, bio diversity and other relevant aspects associated with this project. It also describes mitigation measures to be adopted.

The EIA Report also provides information as desired under the format used to help decision makers, EPA Punjab in the present case, before issuing the desired NOC.

1.2 Identification of the Project

The proposed project site is located at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.

The total area for the extension will be approximately 22 kanals.

1.3 The Proponent

The Project Proponent is Mr. Sher Ahmad S/O Mr. Naseer Ahmad Chief Executive Officer/Proponent of M/S "Escorts Advanced Textiles (Private) Limited.

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1.4 Details of Consultant:

The Services of M/S **"Green Globe Associates"** having its

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have been engaged to carry out an Environmental Impact Assessment (EIA) Report of the subject project.

1.4.1 EIA Team

A core team of qualified professionals having relevant experience of conducting environmental & social assessments contributes to preparation of an Environmental Impact Assessment (EIA). The team shown in Table 1.1 overleaf collaborated during survey of the project site, discussions with the proponent and the stake-holders, collection & analysis of data, & preparation of this report in consultation with the specialists. The core team was supported by enumerators and surveyors engaged specifically to conduct surveys, such as social survey, interviews and traffic counts, and gather other relevant data. The core team was also assisted in the process by a number of experts available to the environmental consultants to provide technical input & information, & assembled a number of times for discussions to finalize the report.

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Table: EIA Study Team

Consultants Team		
Name	Designation	Qualification
Dr. Muhammad Ahmad Samdani	Chief Environmentalist	PhD (Env.) PGD (Env. Laws) LLB,
Mr. Basit Farooq	Senior Environmentalist	PhD (Env. Sciences) In Process (UOL) M.Phil. Environmental Sciences (Punjab University) BS (Hons) Environmental Sciences (UOL)
Mr. Umer Farooq	Environmentalist	M. Phil Environmental Sciences (NCBA&E) LLB (IUB) BS Hons. Environmental Sciences (UOL)
Engr. Munawar Qamar	Road Expert	M.Sc. Transport Engg.
Mr. Talha Javed	Senior Environmentalist	M.Phil. Environmental Sciences (PU)
Mr. Anees	Marketing Manager	M. B. A
Mr. Shakeel Ahmad Wahla (Advocate High Court)	Legal Advisor	M.A, L.L.B.

1.5 Nature, Size and Location of Project

Keep in view the design, construction & operation phases of the project along with potential impacts generated during the course of the project, the proposed plan is subjected to fall under the such categories of the projects that requiring EIA as per Pakistan Environmental Protection Agency (PAK-EPA) (2022) regulations.

The project under consideration involves the Extension of the subject unit with dyeing facility to be located at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.
The land is owned by the proponent and has a total area of the Extension will be 22 kanals.

1.6 Need for Environmental Impact Assessment (EIA)

According to the section 12 of the Punjab Environmental Protection Act 2012, no proponent of a project shall commence construction or operation unless he has filed with the Federal Agency/Provincial Agency an initial environmental examination or where the project is likely to cause an adverse environmental effect, an environmental impact assessment, and has obtained from the Federal Agency approval.

Subject to the provision of this Act, Proponent must get a NOC for construction/Extension of any unit under section 12 of PEPA-2012 from Provincial Agency in order to start construction, for which an Environmental Impact Assessment (EIA) Report is mandatory for getting Environmental Approval as this project comes under the **(Schedule-II) List of projects requiring an EIA (B) Manufacturing & Processing (6) Textiles unit comprising of dyeing & printing** of the project requiring Environmental Impact Assessment (EIA), of Schedule-II of PEPA 1997 amended 2012 of IEE/EIA Regulation 2022.

The Director General, EPA Punjab is the authority to issue the requisite Environmental Approval after proper review of the project. The EIA report has been prepared under the format of guidelines issued by EPA. The Total Project Cost is 40 Million.

The applicable laws for the environmental study of the project are briefly given below:

- ✓ Punjab Environment Protection Act, 2012
- ✓ National Environmental Policy, 2005
- ✓ Review of IEE and EIA Regulations, 2022
- ✓ Guidelines for Preparation and Review of Environmental Reports, 1997.
- ✓ Solid Waste Management Rules 2005
- ✓ National Environmental Quality Standards 2000,
- ✓ Punjab Land Use Rules 2009

1.7 Objectives of the Environmental Impact Assessment (EIA)

The Objectives of EIA are as follows:

- ✓ To access and establish the existing environmental condition of the area.
- ✓ To implement & execute environmental safeguards.

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- ✓ To propose mitigation & monitoring measures that can be incorporated into the operation of the project to remove or reduce any damaging effects as far as possible.
- ✓ To prepare an EIA Report as per the relevant guidelines for submittal to the concerned EPA.

1.8 Scope of the Study

Scoping identifies the key issues of concern at an early stage of planning process to assess range of impacts and need for EIA. Scoping is a process of interaction. Scoping identifies boundaries of the EIA study, important issues of concern, the necessary information for decision making, significant effects and factors to be considered. It identifies concerns, evaluates them, organizes and presents them to assist analysis and decision making. The scope of work encompasses the following aspects:

- ✓ Review of applicable existing environmental legislation and National Environmental quality Standards (NEQS);
- ✓ Review the available data, drawings and report to ascertain their adequacy and need for collection or additional data;
- ✓ Proposed mitigation measures to eliminate or to reduce the negative impacts to an acceptable level;
- ✓ Prepare Environmental Impact Assessment (EIA) Report including Environmental Management Plan (EMP) for environmentally safe & operation of the site.

1.8.1 APPROACH & METHODOLOGY

For timely & effective completion of the EIA study, the project activities were planned and best team was selected. Careful planning ensured effective resource management and timely completion of tasks throughout the period of study.

EIA is conducted under the legal framework of Pakistan Environmental Protection Agency (PEPA). As per legal requirements, the proposed Project will be reviewed in the light of the provisions of Pakistan Environmental Protection Act, 1997 and Pakistan Environmental Assessment Procedures, issued by Pakistan Environmental Protection Agency (Pak EPA).

Secondary information for this EIA Study was collected from relevant departments/personnel and literature to establish physical, socio-economic and environmental profile of the Project Area. Relevant secondary information available with

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the proponent on the physical, technical and institutional aspects of the Project was also utilised. Architect and Engineers of the Project were also consulted for obtaining information about various features of the Project.

On the basis of secondary data analysis, environmental aspects and impacts were concluded for design/pre-construction, construction land operational phases of the proposed Project.

Following methodology was adopted to carry out the EIA study:

Step 1. Meetings with the Proponent and Key Officials

Detailed meetings have been held with the Proponent and key officials of the proposed Project. In these meetings, issues related to the execution of the Project have been discussed in detail. These meetings helped in arriving to a mutual understanding of various components of the proposed Project.

Step 2. Planning for the Collection of required Data

After the concept clarification and understanding, a detailed data acquisition plan has been developed by the EIA Team. The plan identified specific data requirements and their sources; time schedules, methods and responsibilities for their collection; and indicated the logistics and facilitation needs for obtaining the necessary data.

Step 3. Data Collection

In this step, secondary information about physical, technical and environmental parameters available with the Proponent was collected. Additional data was also collected from the concerned departments/ personnel.

Step 4. Review of Environmental Impacts of the Proposed Project

Review of the Project was carried out with the objective to determine the potential impacts of the Project on the physical, biological and socio-economic profile of the Project area.

Following elements of the Project were reviewed, Screening criteria was applied to identify significant (long / short term) environmental impacts.

- Impacts of the Project on physical and ecological environment of the Project areas

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- Impacts of the Project on socio-economic environment
- During the process it has been found that cutting of green trees are not involved at the site of the project. However, it has been planned to make landscaping to make the site a lush green to improve the aesthetic outlook and give input in the air quality improvement.

Step 5. Mitigation Measures and Implementation Arrangements

After the identification of impacts related with the implementation of the proposed Project, Mitigation along with their implementation mechanisms were proposed so that the Proponent could incorporate them before the execution of construction works.

Step 6. Draft Report

EIA Team prepared the report under the guidelines issued by the Pakistan Environmental Protection Agency and submitted to the management of the project for their comments.

Step 7. Final Report

After incorporation of the comments from the Proponent on draft report, the EIA Team has prepared the final report and has presented to the management of the project for further submission to the EPA Punjab.

1.9 Roles and Responsibilities

The role & responsibilities are defined in the procedure of Environment Management System they will give due diligence to Environmental issues.

1.9.1 Components of the Report

This EIA Report presents the screening of potential environmental impacts of the construction of the project site which is located at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura & discusses the necessary mitigation measures to eliminate or reduce the negative impacts to an acceptable level. It also

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describes the institutional requirements and provides an Environmental Monitoring Plan (EMP).

EIA report comprises of the following chapters.

Structure of the Report

The Environmental Impact Assessment Report comprises of nine chapters and annexes.

Chapter# 01

Introduction; gives an introduction of the Project, scope of work for Environmental Impact Assessment, Approach and methodology, the study team etc.

Chapter# 02

Legislative and regulatory requirements; provides an overview of the policy framework and national legislation that applies to the proposed project. The project is expected to comply with all national/provincial legislation relating to environment in Pakistan, and to obtain all the required regulatory clearances. It also deals with the requirements of international agencies and other international protocols for protection of biodiversity for which Pakistan has firm commitment.

Chapter# 03

Description of the Project; gives a rather detailed account of the Project particularly emphasizing those project components which are of importance in relation with environmental and social aspects.

Chapter# 04

Description of the Environmental; provides information about the environmental and social settings of the project area, geology, climate, flora, fauna, water resources, socioeconomic conditions etc.

Chapter# 05

Analysis of Alternatives

Chapter# 06

Stakeholders and Public Consultations; deals with the outcome of the consultation carried out with the local communities, knowledgeable people, public representatives, etc. It discusses the concern of various tires of the people and provides an outline how these have been addressed within the EIA of the project.

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Chapter# 07

Potential Environmental and Social Impacts and Mitigation Measures; identifies the potential impacts due to the Extension of Yarn Manufacturing unit on the physical, biological and social environment of the Project Area.

Chapter# 08

Environmental Management and Monitoring Plans; outlines the environmental management plan, identifies the roles and responsibilities to implement EMP, suggest monitoring frequencies of various parameters, environmental costs etc.

Chapter# 09

Conclusions & Recommendations; sums up the report & conclusions & recommendations resulting from the study

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CHAPTER 02

POLICY, LEGAL & ADINISTRATIVE FRAMEWORK

2. General

The enactment of comprehensive legislation on the environment, covering multiple areas of concern, is a relatively new and ongoing phenomenon in Pakistan. However, a basic policy and legislative framework for the protection of the environment and overall biodiversity in the country are now in place. The Project is expected to comply with all legislations relating to environment in vogue in Pakistan.

This section discusses the related policy, legal and administrative outline/structure applicable in Punjab for carrying out the EIA of a yarn processing industry in addition of dyeing for the purpose EIA is prepared. Since the project is located in Punjab, therefore its EIA procedure will be governed by the existing policies, legislation and administrative framework in place in Punjab.

The project proponent is under obligation to carry out the EIA in conformity with the policy, legal and administrative framework in Punjab.

2.1 National Conservation Strategy (NCS)

The National Conservation Strategy (NCS) is the first policy document (approved by the federal cabinet in March 1992) that pledged to balance Pakistan economic development with the conservation of natural resources. Underlying goal of this document is that all economic and statutory development in the country should be such that it does not conflict with the interests of nature conservation. The NCS outlines the country's primary approach towards encouraging sustainable development, conserving natural resources, and improving efficiency in the use and management of resources. The NCS has 68 specific programs in 14 core areas in which policy intervention is considered crucial for the preservation of Pakistan's natural and physical environment. The core areas that are relevant in the context of the proposed project are pollution prevention and abatement, restoration of rangelands, increasing energy efficiency, conserving biodiversity, supporting forestry and plantations, and the preservation of cultural heritage. The Pakistan Environmental Protection Act, 1997 is the basic legislative tool empowering the government to frame regulations for the protection of the environment. The policy, laws, regulations and standards relevant to the project, in the context of environmental protection are described in the following sections.

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2.2 Biodiversity Action Plan

Pakistan is a signatory to the Convention on Biological Diversity, and is thereby obligated to develop a national strategy for the conservation of biodiversity. The Government of Pakistan has constituted a Biodiversity working group under the auspices of the Ministry of Environment, Local Government and Rural Development to develop a Biodiversity Action Plan for the country. After an extensive consultative exercise, a draft Action Plan has been developed. The plan which has been designed to complement the NCS and the proposed provincial conservation strategies identifies the causes of biodiversity loss in Pakistan and suggests a series of proposals for action to conserve biodiversity in the country.

2.3 Wildlife Management:

The Punjab Wildlife (Protection, Preservation, Conservation & management) Act 1974 and rules 1974 empower the government to declare certain areas reserved for the protection of wildlife and to control activities within these areas. It also provides protection to wild life species declared endangered / threatened and rare. With a view to the protection and preservation of flora and fauna in natural state, Government may declare any area to be a national park and may demarcate in a manner as prescribed.

2.3.1 Cutting of Trees (Prohibition Act), 1975

The act prohibits cutting and chopping of trees without permission of the Forest Department. Section 3 of the act states "No person shall, without prior approval of the local formation commander or an officer authorized by him in this behalf, cut fell or damage or cause to cut, fell or damage tree".

2.3.2 Environment Related National Laws/ Policies

Pakistan has a number of laws concerned with the management and protection of the environment. Most of the existing laws on environmental issues were enforced over an extended period of time, and are context-specific. These laws are old and do not cover all the environmental issues. The penalties under these laws are very small, that becomes ineffective to control the environmental degradation. However, the enactment of comprehensive legislation on the environment, in the form of an act of parliament, has been promulgated as PEPA, 1997.

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2.3.3Pakistan Environmental Protection Act, 1997

The Pakistan Environmental Protection Act, 1997 (the Act) is the basic legislative tool empowering the government to frame regulations for the protection of the environment. The Act is applicable to a broad range of issues and extends to air, water, soil, marine and noise pollution, as well as the handling of hazardous waste. The discharge or emission of any effluent, waste, air pollutant or noise in an amount, concentration or level in excess of the National Environmental Quality Standards (NEQS) specified by the Pakistan environmental Protection Agency (Pak-EPA) has been prohibited under the Act, and penalties have been prescribed for those contravening the provisions of the Act. The powers of the Federal and Provincial Environmental Protection Agencies (EPAs), established under the Pakistan Environmental Protection Ordinance 1983, have also been considerably enhanced under this legislation and they have been given the power to conduct inquiries into possible breaches of environmental law either of their own accord, or upon the registration of a complaint.

The requirement for environmental assessment is laid out in Section 12 (1) of the Act. Under this section, no project involving construction activities or any change in the physical environment can be undertaken unless an Initial Environmental Examination (lEE) or an Environmental Impact Assessment (EIA) is conducted, and approval is accorded by the Federal or Provincial EPAs. The section 12(6) of the act states that this provision is applicable only to such categories of projects as Pakistan Environmental Protection Agency Review of lEE and EIA Regulations, 2022 (the Regulations); and are discussed hereinafter.

2.4 Punjab Environmental Protection (Amendment) Act, 2012

After 18th Constitutional Amendment in the Constitution of Pakistan, the Federal Ministry of Environment has been dissolved and subject of environment has been handed over to provinces. EPA Punjab has formulated its own act. The major content of the act is same as of PEPA, 1997. Minor amendments/changes have been made viz.

The Name of Act has been changed into "Punjab Environmental Protection (Amendment) Act, 2012".
For the words "Federal Government", wherever occur, the word "Government" shall be substituted;
For the words "Federal Agency", wherever occur, the words "Provincial Agency" shall be substituted; and
For the word "National", wherever occurs, the word "Punjab" shall be substituted.

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All the other clauses, sub-clauses, sections and sub-sections are almost same.

2.4.1 Environmental Protection Agency Review of IEE & EIA Regulations, 2022

The Pakistan Environmental Protection Agency Review of IEE and EIA Regulations, 2022 (the Regulations) prepared by the Pakistan Environmental Protection Agency (Pak-EPA) under the powers conferred upon it by the Act, provide the necessary details on preparation, submission and review of the IEE and the EIA. Categorization of projects for IEE and EIA is one of the main components of the Regulations. Projects have been classified on the basis of expected degree of adverse environmental impacts. Project types listed in Schedule-I are designated as potentially less damaging to the environment and those listed in Schedule-II as having potentially serious adverse effects. Schedule-I projects require a IEE to be conducted, provided they are not located in environmentally sensitive areas. For the schedule-II projects, conducting an EIA is necessary.
The Project falls in the schedule-II, Section-A Energy, hence an EIA has been conducted. Since the project is located in Punjab, therefore it falls in the jurisdiction of Punjab-EPA. Salient features of the regulation, relevant to the proposed Project are listed below:

i. Categories of projects requiring IEE and EIA are issued through two schedules attached with the Regulations.
ii. A fee, depending on the cost of the project, has been imposed for review of EIA and IEE.
iii. The submittal is to be accompanied by an application in prescribed format included as schedule IV of the Regulations.
iv. The EPA is bound to conduct a preliminary scrutiny and reply within 10 days of submittal of report a) confirming completeness,
   b) asking for additional information, or
   c) requiring additional studies.
v. The EPA is required to make every effort to complete the review process for 45 days and of the EIA within 90 days, of issue of confirmation of completeness.
vi. EPAs accord their approval subject to following conditions:
   - ✓ Before commencing construction of the project, the proponent is required to submit an undertaking accepting the conditions.
   - ✓ Before commencing operation of the Project, the proponent is required to obtain from EPA a written confirmation of compliance with approved conditions and requirements of the EIA.
vii. An EMP is required to be submitted with the request for obtaining confirmation of compliance.

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viii. The EPAs are required to issue confirmation of compliance within 15 days of receipt of request and complete documentation.

ix. The EIA approval will be valid for three years from the date of accord.

x. A monitoring report is required to be submitted to the EPA after completion of construction, followed by annual monitoring reports during operations.

2.4.2 National Environmental Quality Standards (NEQS), 2022

The National Environmental Quality Standards (NEQS), promulgated under the PEPA 1997, specify the following standards:

- ✓ Maximum allowable concentration of pollutants (32 parameters) in municipal and liquid industrial effluents discharged to inland waters, sewage treatment facilities, and the sea (three separate sets of numbers).
- ✓ Maximum allowable concentration of pollutants (16 parameters) in gaseous emissions from industrial sources.
- ✓ Maximum allowable concentration of pollutants (two parameters) in gaseous emissions from vehicle exhaust.
- ✓ Maximum allowable noise levels from vehicles.

These standards apply to the gaseous emissions and liquid effluents discharged by batching plants, campsites and construction machinery. The standards for vehicles will apply during the construction as well as operation phase of the project. The standards are attached as Annex.

2.4.3 The Antiquities Act, 1975

The Antiquities Act of 1975 ensures the protection of cultural resources in Pakistan. The act is designed to protect antiquities from destruction, theft, negligence, unlawful excavation, trade and export. Antiquities have been defined in the Act as ancient products of human activity, historical sites, or sites of anthropological or cultural interest, national monuments, etc. The law prohibits new construction in the proximity of a protected antiquity and empowers the Government of Pakistan to prohibit excavation in any area that may contain articles of archaeological significance. Under the Act, the project proponents are obligated to:

- ➢ Ensure that no activity is undertaken in the proximity of a protected antiquity, and
- ➢ If during the course of the Project an archaeological discovery is made, it should be reported to the Department of Archaeology, Government of Pakistan.

2.4.4 The Motor Vehicles Ordinance, 1965, and Rules, 1969

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The Motor Vehicles Ordinance, 1965, has been extended with effect from March 05, 1978, to the whole of Pakistan. It deals with the licensing requirement for driving; powers of licensing authority, Regional Transport Authority and those of Court *vis-à-vis* disqualification for license and registration requirements to control road transport; compensations for the death of or injury to a passenger of public carrier; powers of Road Transport Corporation; traffic rules, power to limit speed, weight, use of vehicles; power to erect traffic signs; specific duties of drivers in case of accident and powers of police officers to check and penalize traffic offenders.

2.4.5 The Factories Act, 1934

The pertinent clauses of the Act are those that deal with health, safety and welfare of the workers, disposal of solid waste and effluent, and damage to private and public property. It also deals with the regulations for handling and disposing of toxic and hazardous materials. As the construction activity has also been classified as an 'industry', the regulations will be applicable to the Contractors.

2.4.6 The Pakistan Penal Code, 1860

The Act deals with the offences where public or private properties and human lives are affected due to intentional or accidental misconduct of an individual or a mass of people. It also addresses violation to any law of the country.

2.4.7 The Explosives Act, 1884

It provides regulations for handling, transportation and use of explosives. The contractors have to abide by the regulation during quarrying, blasting and for other purposes.

2.4.8 National Resettlement Policy and Ordinance

At this point, the only legislation relating to land acquisition and compensation is the Land Acquisition Act (LAA) of 1894. The LAA is, however, limited to a cash compensation policy for the acquisition of land and built-up property, and damage to other assets, such as crops, trees, and infrastructure. The LAA does not consider the rehabilitation and resettlement of disrupted populations and the restoration of their livelihoods.

Experience with large-scale infrastructure development projects implemented by institutions such as the Pakistan Water and Power Development Authority (WAPDA) has demonstrated the need for a cohesive national policy for resettlement. In spite of the fact that a National Resettlement Policy and related legislation has been drafted, it has not been officially notified.

2.4.8 The Forestry Act, 1927

The Forestry Act, 1927; empowers the government to declare certain areas reserved forest. As no reserved forest exists in the vicinity of the proposed subproject, this law will not affect to the proposed subproject.

2.4.9 The Punjab Wildlife (Protection, Preservation, Conservation and Management) Act, 1972

The Punjab Wildlife Protection Ordinance, 1972; empowers the government to declare certain areas reserved for the protection of wildlife and control activities within in these areas. It also provides protection to endangered species of wildlife. As no activities are planned in these areas, no provision of this law is applicable to the proposed subproject.

Highway Safety Ordinance, 2000

This law provides legal basis for establishing National Highway & Motorway Police for regulating and controlling traffic on the national highways and strict enforcement of traffic laws. The law also provides for axle load limits for commercial vehicles and legal framework for its enforcement and includes provisions for licensing and registration of vehicles and construction equipment, offences and penalties for traffic violations.

2.4.10 Safety Regulations

Following laws and regulations directly or indirectly govern the occupational health and safety issues during the currently studied production activities:

- ✓ PEPA Laws, 2000
- ✓ Labor Laws
- ✓ Electricity Rules, 1937

2.4.10.1Occupational Health and Safety Regulations

Quantitative national standards with respect to the occupational health and safety of workers have yet to be developed in Pakistan, however, following laws and regulations directly or indirectly govern the occupational health and safety issues during construction and operations of the project:

- ✓ Factories Act, 1934 (Pakistan Factories Rules 1962)
- ✓ Labour laws Amended, 1972
- ✓ Mines Act, 1923
- ✓ Natural Gas Safety Rules, 1960.
- ✓ Gas Cylinder Rules, 1940.
- ✓ Law of Explosives, 1940
- ✓ Explosive Rules, 1944

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- ✓ Electricity Rules, 1937

2.4.10.2Canal and Drainage Act, 1873

Canal and Drainage Act, 1873 is the main legislation relating to the management of irrigation system in Punjab. Under the act almost all the irrigation network has been entrusted to the provincial government through its officers.

Other Regulations

Other regulations which could be relevant to this project include:

- ✓ The Forest Act 1927.
- ✓ West Pakistan Land Reform Rules, 1959.
- ✓ West Pakistan Land Reforms Regulation, 1959, MLR No. 64.
- ✓ West Pakistan Wildlife Protection Ordinance 1959.
- ✓ Wildlife Protection Rules 1960.
- ✓ The Land Acquisition Act 1984.
- ✓ Wild Birds and Animals Protection Act 1992.

Environmental Guidelines

2.4.10 Guide lines of Pakistan EPA

Sets of environmental guidelines to facilitate environmental assessment studies have been developed under the statutory cover of the Pakistan Environmental Protection Act, 1997. The following guidelines have been developed through a consultative process:

- ✓ Guidelines for the preparation and review of environmental reports
- ✓ Guidelines for Public Consultations
- ✓ Guidelines for sensitive and critical areas
- ✓ Sectoral Guidelines

International Protocols & Obligations

As Pakistan is a member of a number of international organizations like United Nations Organization (UNO), Organization of Islamic Countries (OIC), South Asian Association for Regional Corporation (SAARC), Economic Corporation Organization (ECO), etc., so it has to follow the

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international protocols and obligations related to the environmental perspective. The protocols and obligations related to the proposed project are as under:

2.4.13 The Convention on Conservation of Migratory Species of Wild Animals, 1979

The Convention requires the countries to take action to avoid endangering migratory species. Species covered in the Convention should be given special attention during EIA and monitoring, and any impacts identified should be mitigated to acceptable levels.

2.14 The Rio Declaration, 1992

The Rio Declaration comprises twenty-seven principles which address such important issues as; sustainable development to integrate environmental protection into the development process; common but differentiated responsibilities to conserve, protect and restore the earth's ecosystems; public participation and information access at the national level, reduce and eliminate unsustainable patterns of production and consumption.

2.4.14Convention on Wetlands (Ramsar Convention), 1971

The broad aim of the Convention on Wetlands (Ramsar, Iran, 1971) is to halt the worldwide loss of wetlands and to conserve those that remain through wise use and technology transfer. Contracting Parties have made commitments to:

Designate at least one site that meets the Ramsar criteria for inclusion in the list of Wetlands of International Importance.

Protect the ecological character of listed sites.

Include wetlands conservation within their national land-use planning.

Establish nature reserves on wetlands and promote wetland training.

2.5 Statutory Framework:

A number of laws exist in Pakistan containing a number of clauses concerning protection of the environment. However, the first legislation on environmental protection was issued in 1983. The Pakistan Environmental Protection Ordinance, 1983 was the first legislation promulgated for the protection of environment.

Pakistan Environmental Protection Agency was established in 1984. No significant environmental policy, guidelines and regulations were made till early 1990s. The National

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Conservation Strategy was developed and approved by the federal cabinet in 1992. Provincial Environmental Protection Agencies were also established in 1992-1993. National Environmental Quality Standards (NEQS) were established in 1993. Detailed environmental guidelines were issued in 1996. The National Assembly and the Senate conferred Pakistan Environmental Protection Act in 1997.

In 2010, Nation Assembly passed eighteenth amendment and environment and ecology became the sole legislative domain of the provincial assemblies. The subject earlier found in the concurrent list of the constitution. The devolution provided provincial governments the opportunity to respond to the environmental challenges faced in the provinces.

In 2012, Punjab enacted Punjab Environmental Protection Act 1997 (amended 2012), adopting Pakistan Environmental Protection Act 1997, a federal legislation, to the framework of the Punjab. The newly enacted legislation allowed the Provincial Government to frame its own Environmental protection tribunal and appoint its members. The Act is applicable to a broad range of issues and extends to air, water, soil, marine and noise pollution, as well as the handling of hazardous waste. Section 12 of the Act deals with the Environmental Impact Assessment / Initial Environmental Examination which states;

Section-12(1): *"No proponent of a project shall commence construction or operation unless he has filed with the Environmental Protection Agency (EPD in case of Punjab) an Initial Environmental Examination (IEE) or, where the project is likely to cause adverse environmental effect, an Environmental Impact Assessment (EIA), and has obtained the approval in respect thereof"*.

2.7 District Officers Environment

Offices of District Officers (Environment) were established under the Provincial Local Government Ordinance 2001 with the aim to perform environmental control, including control of air, water and soil pollution in accordance with federal and provincial laws and standards at the district level. District Officers (Environment) are currently functioning as the arm of the Director General, Punjab Environmental Protection Agency for the enforcement of the Punjab Environmental Protection Act 1997 (Amended 2012) in their respective Districts.

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District Officer (Environment) provides guidance and assistance to the proponent of the projects in submission of the EIA Report to Director General, Punjab EPA. Subsequently, Environmental Assessment Reports submitted to the DG for the issuance of No Objection certificates (NOC) are referred to respective District Officer (Environment) for scrutiny and verification of the project details mentioned in the report.

The District Officer (Environment) is also responsible for the environmental monitoring of the projects under execution in the district and regular submission of progress reports to the Director General, Punjab EPA. In case of the initiation of construction of the projects in the district without prior issuance of IEE/ EIA as the case may be, District Officer (Environment) issues notices to the violators for complying with the provisions of the Punjab Environmental Protection Act 1997 (amended 2012). 1.8 Role of Punjab Environmental Protection Agency (EPA).

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CHAPTER#03
DESCRIPTION OF THE PROJECT

3. Type & Category of Project

According to environmental laws of the country development projects have to undergo the process of Environmental Impact Assessment (EIA) or Initial Environmental Examination (IEE) in order to predict and mitigate the impacts of the development at an early stage. Based on nature, size, cost and associated impacts, the project under consideration has been categorized for EIA Study according to the regulation 3 of Statutory Notification issued on June 13, 2000 (S.R.O.339 (1) /2001).

The project envisages at developing a modern & suitable yarn spinning & knitting unit with dyeing in future. The unit falls in the (Schedule-II) List of projects requiring an EIA (B) Manufacturing & Processing (6) Textiles unit comprising of dyeing & printing. (List of projects requiring EIA) of the IEE / EIA Regulations 2022 made under section 12 of Pakistan Environment Protection Act 1997 (Amended 2012) under which the Environmental Impact Assessment (EIA) is mandatory for getting Environmental Approval. The Director General, EPA Punjab is the authority to issue the requisite Environmental Approval after proper review of the project.

3.1 Objective of the Project:

The main Objective to establish a M/S **"Escorts Advanced Textiles Private Limited"** is to response a number of driving forces, the main of all is:

- ✓ To bolster the regional economy through large capital expenditures and infrastructural improvements.
- ✓ To contribute towards improvement of economy in the country.
- ✓ To change the social life style of the area.
- ✓ To upgrade the socio-economic conditions of the area.
- ✓ To meet the market demand for yarn
- ✓ To provide better job opportunities to the local community including skilled and un-skilled workers during construction phase
- ✓ Revenue generation for the Govt
- ✓ Safe working conditions for the workers & employees

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3.2 Project Benefit:

The project will produce high quality fabric yarn & also providing employment for indigenous people and involving them in building operations. In every way, the project is ecologically beneficial.

3.3 Alternatives Considered

Alternatives Considered & Reasons for their Rejection:

Alternatives sites were identified initially for the proposed project. These sites were also located in District Sheikhupura. The present site has been selected after consideration of the other alternative sites. Those sites and their reasons of rejection are summarized below:

Reasons of Rejection:

The reasons of rejection of those sites are:

- ✓ Land was deep and water logged
- ✓ Underground water was deep and not easy to extract.
- ✓ Ground water quality was not well.
- ✓ Distance from the main city was greater
- ✓ Land ownership conflict as well as the higher cost of land

Present Selected Site:

The reasons of selection of this site are:

- ✓ Availability of access roads main (G.T Road)
- ✓ Present nearby the existing unit
- ✓ Communication facilities
- ✓ Availability of electricity
- ✓ Basic infrastructure
- ✓ Sewerage system
- ✓ Less/few vegetation/plantation
- ✓ No fauna species at site

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Because of this no alternative was feasible or possible.

Environmentally sound, neat & clean environment are the other considerations for site selection. The project will also facilitate the people of the area with increasing the opportunity of employment and others related facilities. Keeping these requirements and their feasibility and other basic infrastructural requirements at the site, the selected site is ideally suited for the extension.

3.4 Location and Site Layout of the Project

3.4.1 Site Layout

Site Layout is attached as Annexure to this Report.

3.4.2 Project Location

The project site is to be located 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.

The site map/location plan of the Project is annexed.

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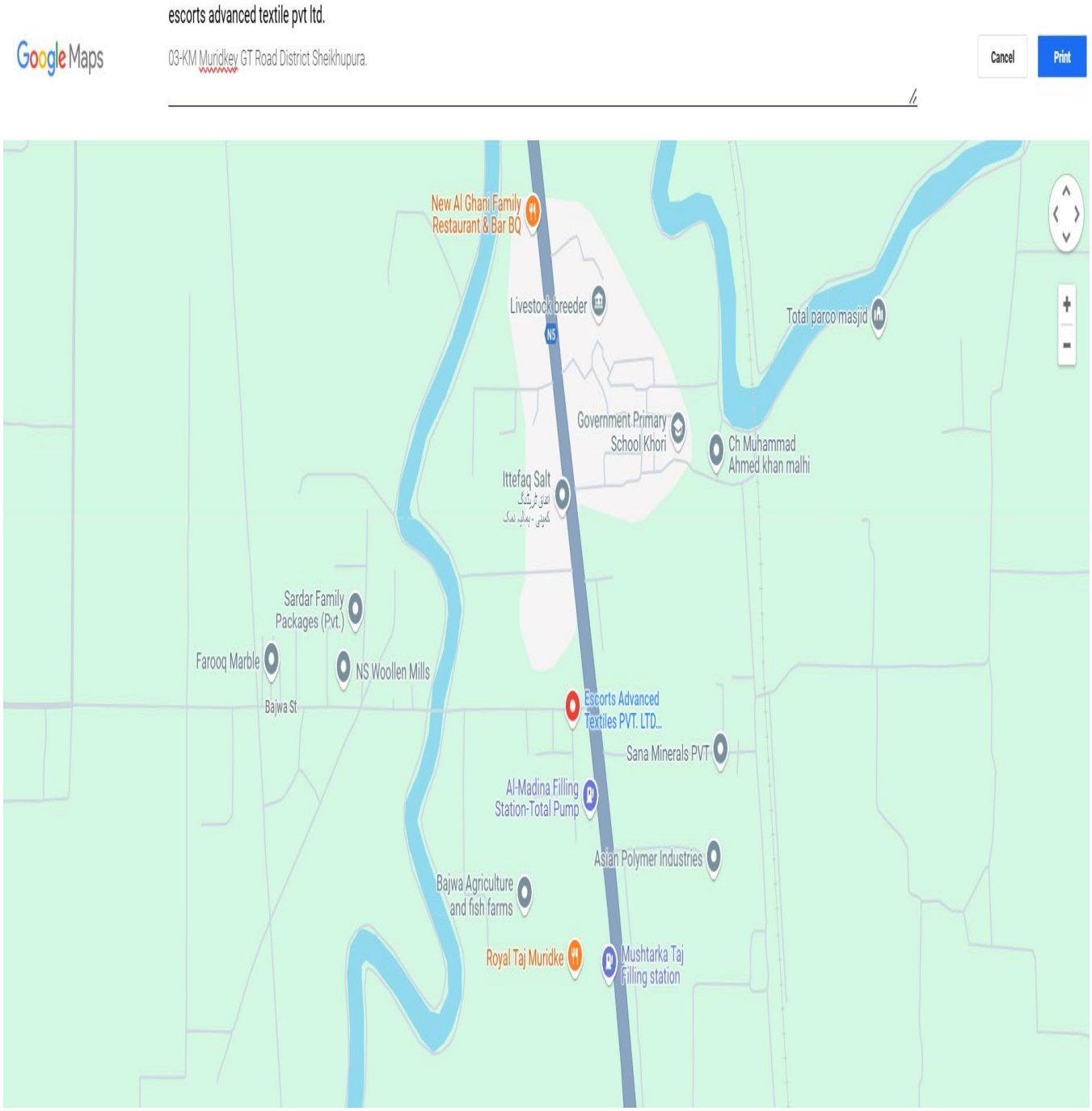
Email: Greenglobeassociate@gmail.com Cell: 0310-0070830, PTCL#042-37422224

Google Coordinates: Lat 31.86503° Long 74.242606°

Address: 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.



Google Coordinates: Lat 31.86503° Long 74.242606°

Address: 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura

Table 0-1 Project Coordinates

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Project Coordinates	Settings
Front	Main G.T Road
Back	Agricultural Land
Right	Sana Minerals (Pvt.) Ltd.,
Left	Al-Madina Filling Station Total Petrol Pump

3.4.3 Area of the Project

Total area for the Extension is around 22 Kanals.

Schedule of Areas	
Total Plot Area	353353 SQFT
Covered Area Existing Ground Floor	99246 SQFT
Covered Area Proposed Ground Floor	51564 SQFT
Covered Area Existing First Floor	80692 SQFT
Covered Area Proposed First Floor	48516 SQFT
Open Area of Plot	202543 SQFT
Covered Area Existing 2nd Floor	70713 SQFT
Covered Area Proposed 2nd Floor	48516 SQFT
Covered Area Existing 3rd Floor	10721SQFT
Covered Area Proposed 3rd Floor	NILSQFT
Covered Area Existing 4th Floor	2453SQFT
Covered Area Proposed 4th Floor	NIL
Total Covered Area of Existing & Proposed Ground Floor, 1st Floor, 2nd Floor, 3rd Floor, 4th Floor	263825 SQFT

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3.5 Other Infrastructure:

In other infrastructures proper water supply and sewerage system will be provided Proper metalled roads will be constructed.

3.5.1 Present Land Use & Location

The project site is currently a vacant plot as shown in pictures.

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3.5.2 Road Access

The project site is located on 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura.

3.5.3 Vegetation Features of the Site

The land is purely agriculture & open plot in nature where the unit is going to be extend.

3.5.4 Cost & Magnitude of operation:

This project is the extension of "Escorts Advanced Textiles Private Limited" located at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura, with all above mentioned facilities. Total area of the project is 22 kanals & the total cost of the subject proposed project will be 40 million.

3.5.5 Schedule of Implementation

Project construction of extension will start as soon as the no objection certificate from the environmental protection agency, Punjab will be issued, as the proponent has applied for other mandatory approvals like TMA, GEPCO, from concerned departments. The Project will be implemented in 8-10 months after the issuance of the NOC from EPA.

3.6 Description of the Project

The project site is situated at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura. The Extension land is owned by the proponent and has a total area of 22 kanals. No construction has been done yet as currently the land is on an open plot. The proponent intends to extend the subject unit.

The waste water would be treated by waste water treatment plant to dispose-off in WASA drain. Detailed sketch and specifications are annexed.

The proponent needs No Objection Certificate (NOC) for their said project for which an Environmental Impact Assessment (EIA) Report is required under Section 12 of the Punjab Environmental Protection Act – 2012 which has to be submitted to the Environment Protection Agency (EPA) before the commencement of the construction of the project.

3.6.1 Project Process:

i. Land acquiring
ii. Levelling
iii. Construction of Building
iv. Installation of machinery
v. Operational
vi. Production of yarn by Blowing/Carding, Auto Cones, Carding, Ring Department, Spinning, Winding, Feeding Yarn in cruel, Knitting department, Welding Workshop Stitching
vii. Dyeing
viii. Inspection & Numbering
ix. Selling to market
x. Dispatched

3.6.2Source of Water

Underground water at the project site is available at the depth of 250-300 feet and source of water for the project will be the pumps. According to the chemical analysis report water is fit for the drinking purposes. RO plant has been installed already in the existing unit.

Table 3.1 Water Requirement Parameter

SR.No#	Parameter	Unit	Value
01.	Design avg flow rate	m^3/d	109.4
02.	pH	-	7 to 8
03.	TSS	mg/l	220
04.	BOD5	mg/l	220
05.	COD	mg/l	500

3.6.3 Restoration & Rehabilitation Plans

None of the locals or residents is being moved from the site as the plot is owned and in possession of Proponent Mr. Sher Ahmad S/o Naseer Ahmad & is on an Open Plot. Due to the current development around and adjacent to the proposed site, none of significant vegetation features are present in or around the plot; therefore, the proposed project does not require any restoration or rehabilitation plan.

To preserve the project's attractiveness after it is finished, the debris will be removed from the area. All necessary steps will be taken to ensure the project area is safe for workers, secure, and clean. In order to repair the area, ornamental trees and flowering plants will be planted on the unit's interior perimeter.

3.7 Government Approvals

The proponent, Mr. Sher Ahmad of M/S "Escorts Advanced Textiles Private Limited" has applied for other necessary NOC like WASA, TMA which are being kept pending till the NOC from EPA Punjab is issued.

3.8 Cost Breakup & Time Schedule:

The initial time planning which includes layout plan and broad scale design of the building, car parking areas, green spaces, has been done for the Escorts Advanced Textiles Private Limited.
New job opportunities will arise especially for the locals during construction & as well as during the operational phase.

Necessary legal, administrative and financial formalities are being finalized. The project is expected to be completed within 1-2 years from the date of environmental approval.

Subsequently the operational and maintenance aspects of the project will be undertaken by the proponent.

COST BREAKUP ANALYSIS		
Sr.No.	Description	Amount
01.	Cost of Land	10Million
02.	Electrical works	03Million
03.	Water supply system	04Million
04.	Building/Infrastructure	08Million
05.	Miscellaneous	05Million
06.	Training and firefighting system	02Million
07.	Maintenance, restoration and plantation	04Million
08.	Personal protective equipment (PPE's)	02Million
09.	Environmental Budget	02Million

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Total Cost	Approx. 40 Million

3.9 Project Description:

M/S "Escorts Advanced Textiles Private Limited" located at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura, is spinning & knitting unit producing high quality yarn to meet the market demands. In order to fulfil the increasing demand of the yarn proponent of the subject unit intend to extend his unit with 22 kanals. The purpose of the extension will be expansion of existing unit with dyeing. Raw Material in form of cotton fiber (bales) will be purchased from the perspectives sellers in the market which will go through spinning process & end up as yarn as a finished goods/product after dyeing. The finished good then will be sold out to perspectives vendors in the market.

The design of the building has been planned while keeping all the environmental factors under consideration. Green belts are planned to surround the storage area & the official complex. The building has been designed by highly experienced, well qualified & competent architects following the latest building safety codes. Protection from natural disasters like earthquake has also been considered according to the safety codes for disaster management. The building will accommodate 50 to 60 persons at any given time during its construction phase. Estimated 50 persons will work on the project during its construction/operational phase.

A sewerage line passing nearby from the project site will be used for wastewater disposal.
The whole project will require about 10000 litres estimated of water per day.

Solid Waste & Garbage disposal system is also embedded in the design of the project. All type of solid waste will be segregated at the point of their generation. Recyclables, including plastics, metals, paper, glass, rugs, fibers, Will be sold in the market while the remaining waste will be duly collected & land filled in the designated landfill designated by the TMA. Trained people will run this activity under the overall project maintenance cell. A contractor (solid waste collector) for the transport of all solid waste will be assigned the job under the supervision of project management. Adequate firefighting arrangements will be provided at the proposed project site to deal with any case of emergency, a firefighting team comprising of trained firefighters will be available to attend any fire case. Adequate safe ducting & routing has been designed for electricity & telecommunication lines.

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The design of the building fulfils the latest safety & technical requirements of modern architecture design parameters. It also incorporates the feature to make it look pleasant & add to the scenic beauty of the area around it.

Along with the secondary Facilities, the proponent of the proposed project has planned provision of the basic facility/utility for the proposed project. Provision of natural gas, infrastructure for provision of telecommunication services will be developed to meet the future demand. Adequate open space has been provided around the building in order to maintain the aesthetic beauty of the Area. An open area for car parking is also allocated. M/S “Escorts Advanced Textiles (Pvt) Ltd, believe in the principles of conservation, which is why it will encourage its employee on carpooling.

Moreover, the project will pose the positive impacts in terms of employment opportunities, will create jobs during construction and functioning of the project and will improve the living standards of the people.

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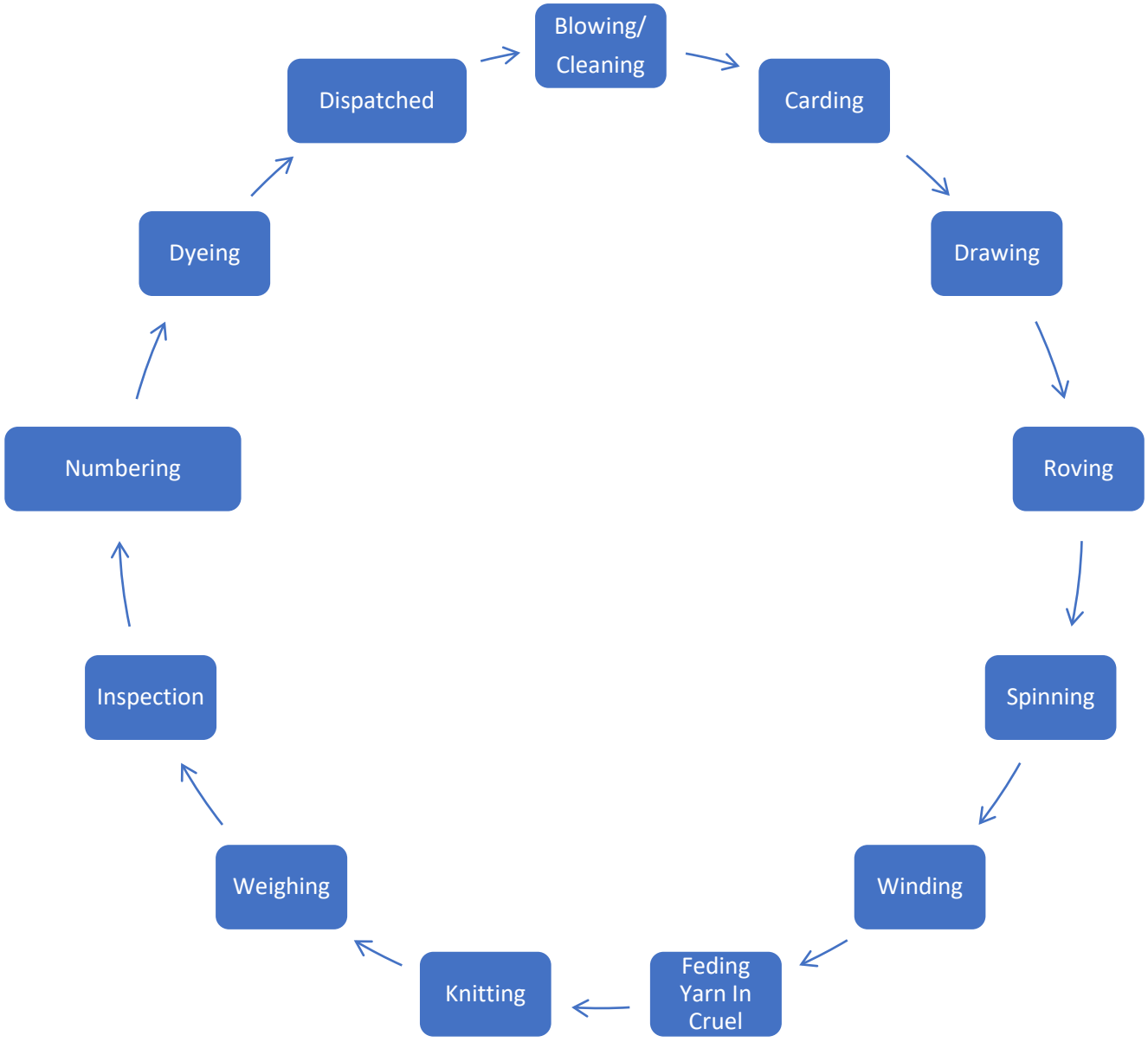
3.9.1 Project Process:



3.9.2 Design Criteria for Development:

All the Construction activities of the M/s "**Escorts Advanced Textiles Private Limited"** at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura, will be carried out according to the schedule and will be completed in time. The utility services that will be provided at the M/S **"Escorts Advanced Textiles Private Limited"** include water supply system, electricity network, telecommunication system, network of roads and streets, Sui gas, water purification/ filtration plant, sewerage network.

3.9.3 Water Requirement:

Estimated 10000 litres of water per day required in M/S "Escorts Advanced Textiles Private Limited".

3.9.4 Sources of water:

Underground water at the project site is available at the depth of 200-300 feet but drinkable good quality of water is available at the depth of 400ft and source of water for the unit will be water pump. According to the chemical analysis report water is fit for the drinking at the depth of 400ft.

3.9.5 Septic Tank:

A septic tank is a watertight chamber made of concrete, fibreglass, PVC or plastic, through which domestic waste water (sewage) flows for primary treatment. Settling and anaerobic processes reduce solids and organics, but the treatment is only moderate.

The term septic refers to the anaerobic bacteria environment that develops in the tank which decomposes or mineralizes the waste discharged into the tank.

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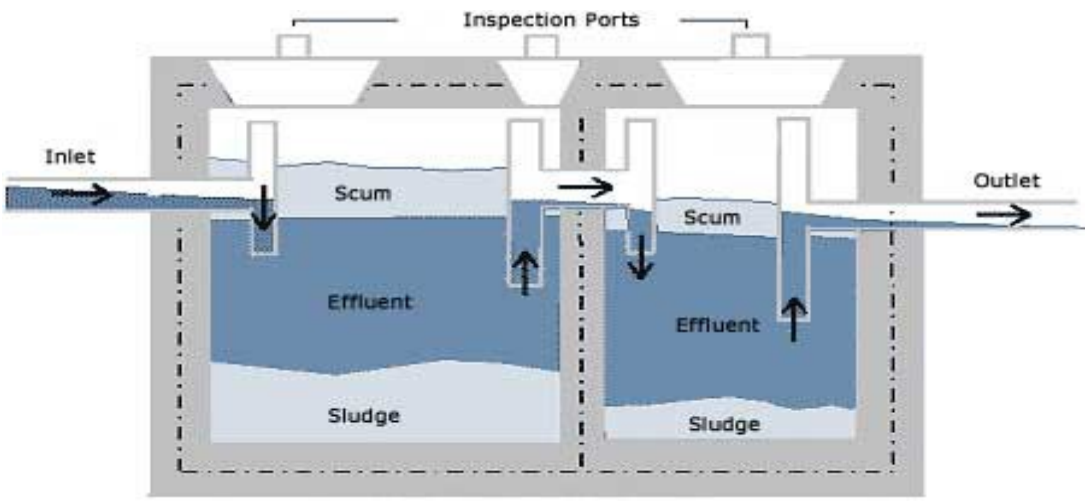
Diagram of Septic Tank



3.9.6 Working Principle:

Sewage and waste of the factory come into septic tank and solid matters settle down at the bottom of the tank. Anaerobic bacteria convert the sewage into liquid and gases during the process of digestion. In this way there is appreciable reduction in the volume of waste and it changes into semi solid condition which is called sludge. It is necessary that septic tank is covered with water tight top roof slab.

3.9.7 Description:

A septic tank consists of one or more concrete tank, one end is connected to an inlet wastewater pipe and the other to a septic drain field. Generally, these pipe connections are made with a T pipe, allowing liquid to enter and exit without disturbing any crust on the surface. Today, the design of the tank usually incorporates two chambers; each equipped with a manhole cover, and separated by a dividing wall with openings located about midway between the floor and roof of the tank.

Wastewater enters the first chamber of the tank, allowing solids to settle & scum to float. The settled solids are anaerobically digested, reducing the volume of solids. The liquid component flows through the dividing wall into the second chamber, where further settlement takes place.

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The excess liquid, now in a relatively clear condition, then drains from the outlet into the septic drain field, also referred to as a leach field, drain field or seepage field, depending upon locality. Generally, the removal of 50% of solids, 30 to 40 % of BOD and a 1-log removed of E-coli can be expected in a well-designed and maintained septic tank although efficiencies greatly depending on operation and maintenance and climatic conditions as well.

A properly designed and normally operating septic system is odor-free, periodic inspection and emptying of the septic tank should last for decades with tank should last about 50 years.
No. of septic tank will be 01-02.

3.9.8 Recommendation:

The best situation for a long septic tank life would be that only human waste waster enters the tank. This includes bathroom sink waste and proper toilet tissue. In moderation, a properly working septic tank can handle some biodegradable detergents, laundry soaps, kitchen wastes, and biodegradable chemicals. In large amounts, any and all of these things can limit the digestive properties of septic tank. Things like cigarette butts, sanitary napkins, plastics, any other trash, or high levels of cleaning agents or chemicals create problems for septic tank. Some things kill the good bacteria, the septic tank needs to breakdown human waste. Other items do not readily decompose and more importantly, may clog the baffles and prevent proper fluid flow inside the septic tank.

Before commissioning the septic tank, it should be filled with water up to the outlet level and if possible, two buckets of sludge from a working septic tank or cow manure should be added to seed the tank with bacteria. This will make the tank more efficient from the start.

3.9.9 Waste Water Disposal:

Proponent will dispose of waste water into sewer line as per direction from authorized body. Waste water after treatment by waste water Treatment Plant will be discharge into nearest sewerage line. Waste Water Treatment Plant Details are annexed in the Annexures.

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3.10 Solid Waste Management:

Waste effluents will primarily consist of the domestic sewage from the colony of the factory /employee residence. About 50-60 kg/day of domestic solid waste will be generated from the project. For domestic solid waste, a system of door-to-door garbage collection will be employed. The garbage will be collected at a designated area within the vicinity of the project site. From this place, garbage will be collected and transported to a suitable location for final disposal. The location for this final disposal will be decided in consultation with the district government.

3.10.1 Solid Waste Storage:

Storage area has been allocated for the disposal of solid waste within the project site. Local vehicles of solid waste managing company will collect the solid waste from the storage site and transfer to the landfill site for dumping. Proponent will make contract with the landfill site/contractor for the collection and disposal of solid waste).

3.10.2 Solid Waste Facilities:

Waste containers/ wheel bins will be placed at different points, sanitary workers/ sweepers will be appointed for collection of waste.

3.10.3 Solid waste collection and transport:

Wheel bins, hand carts and compactor vehicles will use for waste collection and proper schedule and route will be developed and allocated for solid waste collection vehicles for collection the waste and transfer to the storage facility. Vehicle will transfer the waste to storage facility with proper covering with plastic.

3.10.4 Schedule for waste collection:

The waste will be collected on daily basis from waste containers/wheel bins & transfer to the storage area.

3.10.5 Awareness plan:

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All sanitary workers should undergo extensive training in SWM, including the linkage between a deteriorating environment, waste and human health, the treatment and management of waste, occupational hazards, health and hygiene, collection and transportation procedures, and etc.

3.10.6 Atmospheric Emissions:

Dust and particulate matter can be generated during the construction activities. Sprinkling of water will be done on dust tracks, stock piles; raw material will be covered by plastic sheets, loading and unloading of raw material will be done at night etc.

3.11 Health, Safety and Hygiene:

3.11.1 First Aid Facility:

Proper medical facilities and proper training about first aid will be provided to workers and staff to cope with any incidental accidents.

3.11.2 Personal Protective Equipment (PPE's):

At subject project during working hours, PPE's like gloves, masks, boots, caps, earplugs, safety clothing etc. will be available and provided to workers to protect at workplace.

Table: Types of PPE's with Exposure to Hazards

Protection	Occupational hazards	PPE's
Head protection	Falling objects, inadequate height clearance, and overhead power cords	Helmets with or without electrical protection
Hand protection	Hazardous material, cuts or lacerations, vibrations, extreme temperatures	Synthetic or rubber gloves, leather, insulating material etc.
Eye and Face protection	Flying particles, molten metal, liquid chemicals, gases or vapors, light radiation	Glasses, shield protective, etc.
Hearing protection	Noise, Ultra Sound	Hearing protectors like ear plugs, ear muffs.
Respiratory protection	Dust, Fogs, Fumes, Gases, Smokes, Vapors, Oxygen Deficiency	Facemasks or air supply

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Body protection	Extreme Temperatures, Hazardous materials, biological agents, cutting and laceration	Aprons, insulating clothing etc of appropriate materials

3.11.3 Safety Signs/Safety Boards:

At any workplace safety signs and symbols are very important to avoid many accidents. They must be in easy and understandable language to all the workers during constructional phase. Workers should have the knowledge of sign wordings and they provided by every department to protect the workers and employees from the risks of hazards that has not been controlled by other mean. Safety signs and board give safety message and they must be of different colors that workers could understand their meanings easily. At the subject project, safety signs and boards will be placed to avoid the workers and staff from any risk.

3.11.4 Roads:

Situated at main G.T Road Near Khori Village Muridkey District Sheikhupura.

3.11.5 Electrical Works:

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The design criterion for the electrical works will be in compliance with the requirements of WAPDA. Main lights /street lights will be provided and their maintenance will also be carried out by the management of the M/S "Escorts Advanced Textiles Private Limited".

3.11.6 Sui Gas:

Sui gas will be provided after approval from the department.

Telephone facility will be provided by the PTCL. An underground cable will also be provided for electronic media.

3.11.7 Plantation:

Plantation will be done within the premises of the subject project along the boundary walls, road sides, in the parks and green belts parking area has also been reserved in the unit.

3.11.8 Budget for Plantation:

A budget of 01 million for the restoration, plantation and environmental management has been reserved by the proponent.

3.11.9 No. of Plants/Trees to be planted:

Total 500 different plants and trees will be planted, which will comprise of 60 % ornamental plants and trees and 40% fruit trees.

Further details of plantation will be provided to EPA-Punjab at the time of operation.

3.12 Fire Protection System

An addressable fire protection system with detection and alarm annunciation and other installations etc, would be provided to protect against any fire hazards. Fire buckets and fire extinguishers will be placed at sensitive places within the proposed project.

3.13 Security

Security guards round the clock will be present which improves the security of the project site and also in its vicinity.

3.13.1 Project Cost

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The approximate cost for the extension of subject project M/S "Escorts Advanced Textiles Private Limited" is 40 million.

3.13.2 Industries

Many Industries are present nearby the project site & on main GT Road Near Khori Village Muridkey.

3.13.3 Infrastructure

Piped water from the civil water supply is available to the area. Proper sewage system will be present. Sewage will be disposed after treatment to the local drain.

Electricity is fed by the water and power Development authority (WAPADA).

3.13.4 Institutions

No any institute present in and around the area the project.

3.13.5 Transportation:

Project site is provided with roads networks. All type of transportation is available almost round the clock.

3.13.6 Power Sources and Transmissions

The power requirements in the area are fulfilled by WAPDA and the electricity provision to the site will also be provided by WAPDA.

3.13.7 Restoration/rehabilitation plan

All possible precaution will be taken to prevent an untoward incident in terms of life and property losses. The demolition materials will possibly be reused and recycled. All excavated surfaces will be termite proofed.

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In order to preserve the project's aesthetics after completion, the debris will be cleared from the site. All necessary steps will be taken to ensure the project area is safe for workers, secure, and clean. In order to repair the area, ornamental trees and flowering plants will be planted on the unit's interior perimeter.

3.13.8 Government approvals required by the project:

Approval from other concern departments will be obtained, after getting approval from EPA Punjab.

3.13.9 Waste characterization:

3.14. Type & source of solid waste

- ✓ **Domestic Waste:**

Plastics, rubbers, metals, papers, cardboards, rage, Glass, bones, food waste, leaves and grass, wood & stones.

- ✓ **Market Waste:**

Shopping Bags, wrappers, food waste, glass and rubbers)

Only domestic waste will be generated from the said project.

3.14.1 Solid waste management system/Practices:

The Solid waste will be managed in proper way by following operations;

- ✓ Placement of segregated waste bins.
- ✓ Placement of waste containers/wheel bins at different points of the unit.
- ✓ Collection of waste from every site on daily basis.
- ✓ The collected waste will be disposed off at allocated storage area.
- ✓ The garbage will be collected at a designated area and will be handed over to contractors.
- ✓ The location for this final disposal will be decided in consultation with the authority, and the city district government for the transferring of waste to dumping site.

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Chapter#04

Description of the Environment

4. City Profile

Sheikhupura formerly Kot Dayal Das is an industrial city in the province of Punjab slightly northwest to Lahore in Pakistan. Sheikhupura is bound by 6 other districts of Pakistani Punjab namely: Lahore, Nankana Sahib, Narowal, Hafizabad, and Gujranwala. To the east is the international boundary of Amritsar-India Punjab. It is known for its historical places, and is commonly known locally as Qila Sheikhupura, because of the fort in the city, constructed by the Mughal Emperor Jahangir, also called 'sheikhu'. According to the 1998 census of Pakistan, the district had a population of 3,321,029 of which 25.45% is urban. The district comprises 4 tehsils: Sheikhupura, Ferozewala, Muridke and Sharaqpur. The overall literacy rate of Sheikhupura district is 43.8% and it is ranked 15th out of 34 districts of Punjab in terms of literacy rates. There are 2,220 Public schools in District Sheikhupura. Out of which, 1,703 are Primary schools, 293 middle Schools level and 173 are High Schools and 51 are Higher. Sec/ Inter Colleges/ Degree Colleges (XIII-XIV)/ Technical & Vocational Institutions/Deeni Madaris.

4.1 Study Parameters

The existing information to establish a database for the IEE of the proposed Project was collected from different government departments; review of previous studies/reports, laboratory tests and through site visits to the Project Area. To comprehend the existing environmental conditions, a comprehensive survey was conducted and salient observations were duly noted.

A Social Impact Assessment in the Project Area was also carried out through consultation with the various communities. Local residents living in the Project Area were interviewed to obtain their feedback regarding the construction of the proposed Project and its impacts on their daily life/future in the short and long term.

4.2 Physical Environment

Following is a synopsis of various physical resources of the Project Area.

4.2.1 Geography

Sheikhupura is situated at a distance of about 36 Km from Lahore, the provincial headquarters. Sheikhupura is located 31.71 latitude and 73.98 longitude and it is situated at elevation 209 meters above sea level.

Sheikhupura has a population of 361,303 making it the 9th biggest city in Punjab.

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The city is well connecting with its surroundings big urban centres like Faisalabad 94 Km, Sargodha 143km and Gujranwala 54 Km. Sheikhupura city is connected with Faisalabad through newly constructed road Lahore - Faisalabad road and also connected Faisalabad by M2 and M3 Motorway Hiran Minar, a place of archaeological and historical growth, is situated about 5 kilometres from the city. It is bounded by 6 other districts of Pakistan Punjab namely: Lahore, Nankana Sahib, Narowal, Hafizabad and Gujranwala.

4.2.2 Geology

The area is a part of Rachna Doab, and consists of some recent sediment brought by spill channel from Chenab River. There are some old channel levee remnants and old basins filled up with clay materials. It is probably of late Pleistocene age derived from mixed calcareous, sedimentary and metamorphic rocks of the lower Himalayas. The only mineral products of the District are Kankar and Kallar. The small particles of Kankar may be burnt into lime. These are the features of all bare lands and are found on the surface or a little below it. Kallar is found on mounds, which are sites of old ruined habitations, and is used for the manufacture of crude saltpeter. The land mass is plain and under urban development projects. There are river-transported deposits (alluvium), which are thick and fairly homogenous in extent. The topsoil consists of brown, soft to firm, clayey silt/ silty clay having slight plasticity and contents of dissolved salts. The top layer is likely to extend about 3 to 6 meter below natural ground. This layer generally continues to deeper depths. These layers of silty clay and sandy gravel may also exist below 10 meter depth.

4.2.3 Topography

Pakistan lying in the north-western part of the Southern Asian Subcontinent, occupies the western end of the Indo-Genetic Plain, which is beyond bounded in the north by mountain wall of the Great Himalayas and their offshoots. Physiology of the earth is description of the behaviour of the upper crust. Accordingly, some knowledge of the geology is desirable.

Topography of the City is plain. The area is a part of Rechna Doab and consists of Sub-recent sediments brought by spill channel from the Chanab River. There are some old channel levees remnants and old basins filled up with clay materials. The material is probably of Late Pleistocene age derived from mixed calcareous sedimentary and metamorphic rocks of Lower Himalayas. Seepage from the canals in the Area has considerably raised the water table resulting in water logging and salinity. The tube wells installed by the WAPDA have however considerably brought down the water table.

4.2.4 Climate and Meteorology

Like in other major parts of the province of Punjab, the site observes four seasons- summer, winter, spring and autumn during twelve months of the year.

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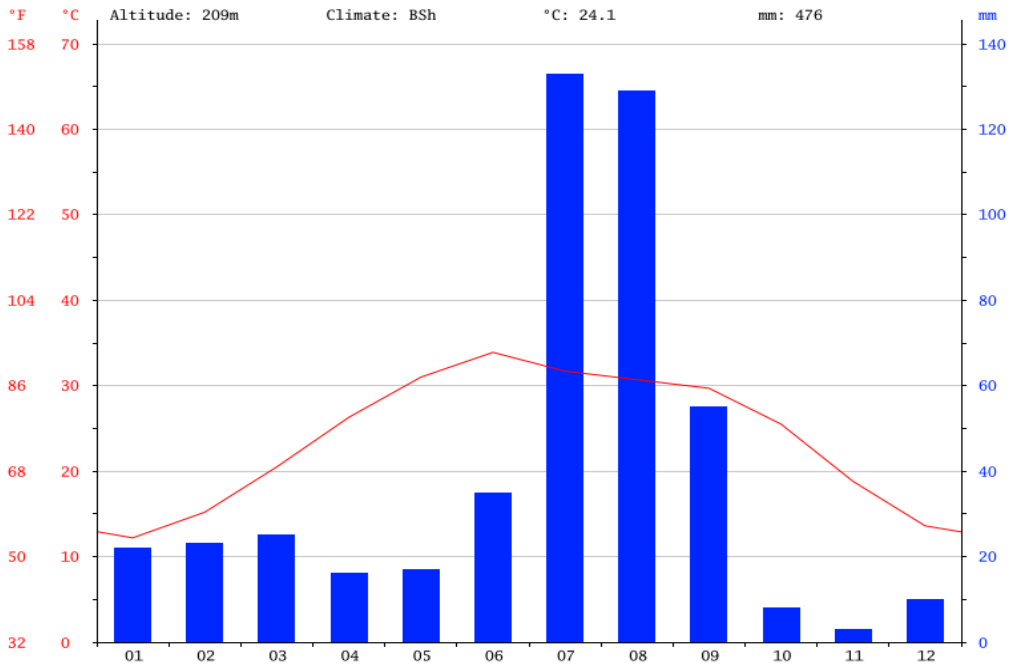
The District has extreme climate; the summer season starts from April and continues till October. During the summer season, temperature ranges from 30 to 45 degrees Celsius. The winter season starts from November and continues till March. December and January are the coldest months with a mean minimum temperature of 5 degrees.

The dust storms occur occasionally during the hot season, during June, July and August. Rainy weather alternates with oppressive weather. The rainfall is 635 mm per year. The mean minimum and maximum humidity during winter is 37% and 84%.

- **Rainfall**

The following graph shows rainfall graph for Sheikhupura.



The driest month is November, with 3 mm of rain. With an average of 133 mm, the most precipitation falls in July.

Source:

(https://en.climate-data.org/location/3511/)

Table 4x.1: Mean Wind speed, Atmospheric Pressure recorded at Regional Meteorological Station Lahore from 1961-2010.

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Rainfall (mm)	23.3	30.0	36.3	19.3	20.8	36	192	168	61	12.2	5.6	11.1
Wind speed (m/sec)	0.5	0.9	1.2	1.3	1.3	1.4	0.8	1.0	0.8	0.5	0.2	0.3
Atmospheric pressure (atm)	1.0	1.0	1.00	0.99	0.99	0.98	0.98	0.99	0.99	1.00	1.00	1.00
Wind speed (KM/day)	41.6	78.0	101.1	114.3	110.2	118.5	65.5	83.9	66.9	40.8	18.3	21.6

Source:
www.nestle.pk/asset-library/documents/creating_shared.../nespak-study-skp.pdf

- Temperature

The following graph shows average temperature (^{o}C) graph for Shiekhupura

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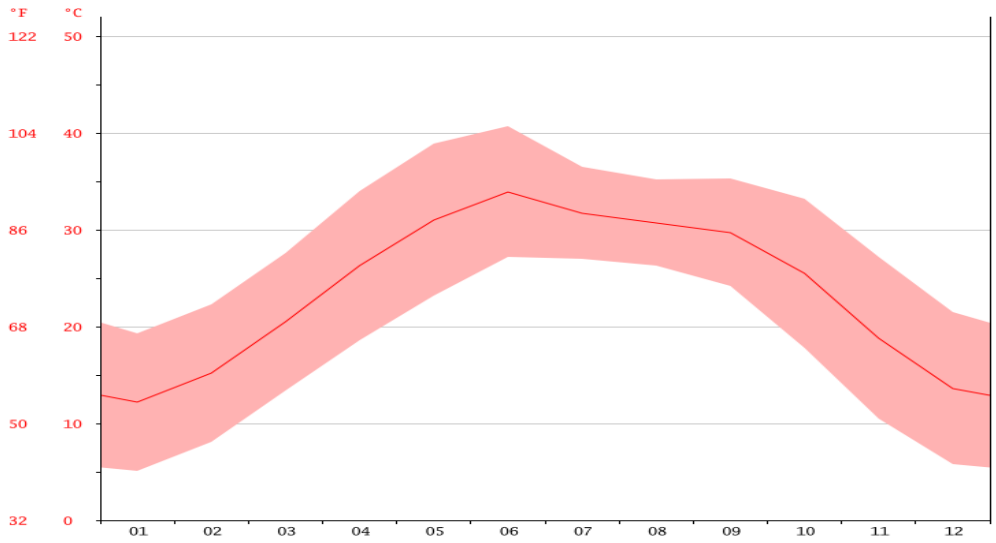

June is the warmest month of the year. The temperature in June averages 33.9 °C. January has the lowest average temperature of the year. It is 12.2 °C.

Source:

(https://en.climate-data.org/location/3511/)

Table 3.2: Sheikhupura climate table / historical weather data

month	1	2	3	4	5	6	7	8	9	10	11	12
mm	22	23	25	16	17	35	133	129	55	8	3	10
°C	12.2	15.2	20.5	26.3	31.0	33.9	31.7	30.7	29.7	25.5	18.8	13.6
°C (min)	5.1	8.1	13.4	18.6	23.2	27.2	27.0	26.3	24.2	17.8	10.5	5.8
°C (max)	19.3	22.3	27.6	34.0	38.9	40.7	36.5	35.2	35.3	33.2	27.2	21.5
°F	54.0	59.4	68.9	79.3	87.8	93.0	89.1	87.3	85.5	77.9	65.8	56.5
°F (min)	41.2	46.6	56.1	65.5	73.8	81.0	80.6	79.3	75.6	64.0	50.9	42.4
°F (max)	66.7	72.1	81.7	93.2	102.0	105.3	97.7	95.4	95.5	91.8	81.0	70.7

There is a difference of 130 mm of precipitation between the driest and wettest months. During the year, the average temperatures vary by 21.7 °C. Useful hints about reading the climate table: For every month, you will find data about precipitation (mm), average, maximum and minimum temperature (degrees Celcius and Fahrenheit). Meaning of the first line: (1) January, (2) February, (3) March, (4) April, (5) May, (6) June, (7) July, (8) August, (9) September, (10) October, (11) November, (12) December.

Source:

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(http://archive.is/96qMd#selection-685.0-685.505)

4.3 Seismology

According to the seismic map of Pakistan, Lahore division is situated in seismic Zone-2A. This zone is associated with unknown geologic conditions and the earth quake damage is moderate. The area has no any major earthquake history for the long lasting. However the design of the project will be made earthquake proof for long lasting.

4.3.1 Hydrology and Water Resources

The Study Area forms the upper part of Punjab plain, which is a part of the Indo-Gangetic depression. This depression is of a synclinal nature. Synclinal depression is a fore deep downward of the Himalayan foreland of variable depth, converted into flat plains by simple process of alluvial deposition.

The aquifer underlying the Study Area comprise unconfined alluvium with a thickness of about 1050 feet as a part of regional groundwater investigation. It is part of the large inter alluvial upper Bari Doab, which is bounded by the Ravi River in northwest and the Sutlej River to the southeast. The Bari Doab along with other Doabs like Rechna, and Chaj form the vast alluvial plain of the upper Indus Plain in Punjab.

The alluvium is derived from the erosion of mountain ranges in north. It has been deposited and reworked by the large meandering rivers and tributaries of the Indus River and comprises a random distribution of fine to coarse sand with lenses of silty clay and clay of varying thickness and extension. Borehole logs for tube-wells shows that the lenses of less permeable material are neither thick nor continuous so, in spite of their heterogeneity, the alluvial sediments constitute an aquifer which on regional basis behaves as a single homogeneous unconfined water body.

4.3.2 Surface Water

- Rivers.

The river Ravi which forms the southern boundary of the district enters the district from Sialkot at Chak Zafarwal Dattan in the extreme south-east and leaves it at Jhalar Lundi in the extreme south-west. Its course, however, is winding and at places. It disappears for short intervals into the opposite districts of Montgomery, Lahore and Amritsar (India). The Deg Nallah joins it below Sharakpur. Its banks are for the most part low and flood water overflows them on either side. The Ravi silt is much valued as a fertilizer, but few estates on its banks enjoy a long lease of prosperous existence on account of its erosive action. The soil all along the course is light loam and is fairly productive. Higher up, the quality falls off into inferior sandy lands yielding indifferent crops. The whole of the southern length of the district is fringed by the Ravi riverain.

- Nallahs.

a) Deg.

The Deg is a hill stream taking its rise near Jasrota in Jammu. In passing through Sia1kot

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district, it gets divided into branches. Its activities within the limits of Sheikhupura district have been much restricted by the Rayya Branch of the Upper Chenab Canal, and its distributaries. Its water supply is no longer collected, as was done in pre-canal days. A large area higher up the course of the stream is subjected to Doba (submersion under water) by which standing kharif crops are damaged. The moisture is too much and continues too long to enable tillage to be done for the rabi crops except on some elevated spots which emerge from the water early enough. In fact, the Deg does more harm than good to the tract as a whole. The main Deg passes by Kala Shah Kaku, K ot Pindi D ass and Hadiala. Near the first named village it is known as Baghh Bacha or young-tiger, a nomenclature given to it for the loss of so many lives in the Fort near the village of Kot Pindi D. Yet another legend connects it with an event in the life of Gautama Buddha.

b) The Bhed and the Lela.

The Bhed and the Lela were minor streams of local formation from the overflow of the big Deg Nallah and surface drainage. The former course has been intercepted by the distributaries of the canal. Both unite and fall into the main Deg before its junction with the Nikki Deg.

- Marshes.

The Deg valley abounded in Nallas and Chhambs. Big areas in almost every estate lay waste and their surface drainagc gathered in depressions. Where this supply was supplemented by overflow from the Deg. a Chhamb was formed. Canal irrigation has. However made Chhambs a post history and only a few exist now.

4.3.3 Ground Water

The Sheikhupura ground water table is sharply depleting the average depth of water table was 12m in 1980 and 52m in 2003. About 250 tube wells are present in city, catering for about 50% of present water demand. The details of the ground water quality is attached along with other lab reports of air quality and noise level.

4.3.4 Air Quality

To determine the air quality in the Project Area, air quality monitoring was carried out for priority air quality parameters such as Carbon Monoxide (CO), Sulphur Dioxide (SO_2), Nitrogen Dioxide (NO_2) and Particulate Matter (PM_{10}) continuously for twenty four (24) hours & was found quite normal in the Project Area.

4.3.5 Noise Level

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The noise level was monitored with the help of a potable digital sound meter at the same locations of ambient air quality monitoring for twenty four (24) hour's with an interval of 1 hr. The Noise Level is within the limits of NEQS.

4.3.6 Ecological Environment

As climate of Sheikhupura is semi-arid and subtropical, the vegetation of the area falls under scrub, dry, tropical thorn forest type as per phyto-geographical classification of the area.

The alignment, in which our project area stands now, was once covered with native vegetation consisting, of trees like Karir (Capparis deciduas), Wan (Salvadora oleoides) and Jand (Prosopis spicigera). With the onslaught of civilization, this vegetation was cleared for agricultural purposes. Due to rapid increase in the population of the city and to cater for its housing and commercial requirements, these agricultural lands were converted into business centres, multi storey plazas and housing colonies

4.3.7 Flora

The fauna and flora of the area include: Kikar, Piple, Bohar, Eucalyptus, Popular and Sharin. The Bar jungle has almost entirely disappeared owing to colonization and extension of canal irrigation. Jand (Porsopis Spicigera) much prized for its firewood and charcoal is becoming a rarity. Karil (Capparis aphylla) is commonly met with, but is nowhere bigger than a shrub. Wan (Salvadora oleoides) which has also become rare is kept for its shade, which is sometimes very dense. Shisliam (Dalbergia sissoo), Kikar (Acacia arabica) along canal banks have developed into fine big trees. No abadi is without a rich growth of trees mainly Pipal (Flous religiora), Bohar (Ficus beng:alensis) and Sharinh (Albizzia lebbek).

The Deg valley was never favourable to the growth of trees. Kikar alone flourished to any extent. Lana and Lani shrubs on which camels are fed grow rank in Kallrathi wastes. Lm1a is used in making Sajji. Among grasses, Khhabbal or roots is the commonest grass in the Deg valley. Date trees are rare except near Shahdara, where a few clusters exist.

4.3.8 Fauna

There is very little of wild life in the area. Wild boar is met within the riverine track. Jackals and hares play havoc with crops. Waterfowls are found everywhere in the Degh valley. Particularly after good rains. Black partridges are found along the Ravi and gray ones all over the district. Falcon, eagle, quail, Starling. Jungle pigeon, Russian Sparrow, all doves, all ducks and egrets, king fisher, all snipes, parrot and local sparrow. Crow are also found in the district.

Hares are everywhere to be found even iu the Lana bushes. The district abounds in water-birds, which attract parties of sportsmen from Lahore on holidays. Water-fowls are found everywhere in the Deg valley particularly after good rains. They are more numerous in the riverain tract along the Ravi. Mallar teal, pachard and pintails are the common varieties. Snipes are found in Chambs.

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Black partridges are found along the Ravi and grey ones all over the district. Fish is found in abundance in Deg and Hiran Minar tank.

The snake requires to be specially noted. The Deg valley is notorious for its poisonous variety-the Karees or the Viper. It is short, thin and of the colour of the earth. It is extremely poisonous and its bite is always fatal. The Muridke vicinity has the worst snakes. Their number and also the venom is said to have diminished since the advent of the canal, but they are numerous enough still to make the tract unsafe in the hot weather. No fauna is disturbed during construction and operation phase.

4.4 Socioeconomic Environment

Socioeconomic environment is represented by the human and economic development and quality of life values. For the study of socioeconomic environment of the project area, the District Census Report was consulted. The city Sheikhupura is gaining a new development scenario in the business activities and competitiveness.

People mostly follow old traditions in almost all walks of their life. Elders are very much respected and play vital role in decision-making. Old people are mostly illiterate. Old customs are being practiced. Arranged marriage system is followed and it is quite successful. People are proud of their traditions and customs. Joint family system prevails and people reap the fruits of this system. Families are quite coherent. Guests are welcome as a tradition from the old past. Life style is simple.

Due to awareness about the importance of education most of younger generation, including both sexes, is now trying to get education. There is a rising trend in the society to change their old traditional socioeconomic pattern of life. Print and electronic media are playing great role in bringing tangible change in the old pattern of life.

4.4.1 Methodology

Social baseline was developed using both the primary and secondary sources of data. Social survey was conducted in the nearby localities to get primary information about the socio-economic status of these communities. For the purpose of social survey, structured interview schedule was used keeping in view the nature and level of the respondents, in which both open and close ended questions were used. During the survey about 50 people were contacted to study the socioeconomic conditions of the nearby settlements. In addition, informal and formal group discussions were also held within these communities to study their awareness, acceptance, concerns, preferences and perceptions about the project running for many decades.

4.4.2 Administrative Jurisdiction

The city of Sheikhupura is administered by the

- City District Shjeikhupura

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- Four Tehsils Administrations

4.4.3 Demography

4.4.4 Demographic profile

The demographical profile of city shows that it became city in 1619, became tehsil in 1851, there are 14 UCs, and total area of the City is 38 Sq. Km, total Population of the City (Population reported by Urban Unit) was 389.768 in 1998, literacy rate of the City was 60.5 %, average household size was 7.6 person, growth rate during1981-98 was 2.74 % (District Census Report 1998).

Table 4.4: Demographic profile of Sheikhupura.

Item	Unit	Value
Creation of Tehsil	Year	1851
Creation of City	Year	1619
Number of Union Councils	Number	14
Total Area of the City	Sq.Km	38
Total Population of the City (Census 1998 including current urban growth)	Number	389,768
Population – Male	Number	204,021
Population – Female	Number	185,647
Literacy rate of the City (census 1998)	%	60.5
Average Household size	Number	7.6

Source:

Outline Development Plan Sheikhupura, Tehsil Municipal Administration Sheikhupura records, Urban Unit information July 2020.

4.5 Population.

The total population enumerated in 2017 is 3,460,426 excluding Non-Pakistanis out of which 1,789,956 were males and 1,670,310 females. The percentage increase during the years between 1998 and 2017 works out to 2.2%.

Table 4.4: Shows the population in rural and urban area as per 2017 census.

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Area	Population	Percentage
Rural	2,258,636	65
Urban	1,201,790	35

4.5.1 Culture:

The introduction of canal-irrigation has robbed the farmer of the leisure which draught or timely rain gave him. He is keener now to bring every inch of his land under cultivation. Amusement is, therefore no part of his daily routine now. At noon when work is suspended, or in the evening when the day's work is finished the people gather under a, shady tree, or in the cold weather round the fire in the village Takia in the night when they talk and enjoy themselves. The usual topics of conversation are the crops, the rains.

4.5.2 Irrigation

The irrigation is done in the following ways:

- **Canals:** the district is irrigated by the Upper Chenab and Lower Chenab Canals, the mileage of their main channels in the district being roughly 14 and 44 miles respectively.
- **Tube wells:** to combat the menace of water logging, tube-wells a have been sunk extensively in the districts and have gained sufficient popularity. About 700 tube-wells have been sunk so far and many more are a part of the Water and Power Development Authority Project of anti-logging campaign. The Persian well wheel is still popular.
- **Flow and lift irrigation:** Jhalars set up on Deg and its tributaries are still a feature of importance in the northern Bangar Circle Of Ferozewala Tehsil. The gear is the same as that of the Persian wheel and frequently the same gear is removed from a well to a Jhalar and back again to the well.

4.5.3 Agriculture

The main crops during Rabi are Wheat and Gram and in Kharif Rice, Cotton and Sugarcane. In addition to these main crops, there are subsidiary crops known as Zaid Rabi and Zaid Klwrif and Dobari. The area of Ferozewala Tehsil which is known as Kalar has a name for Paddy cultivation. The best variety is the Mushkin or Begmi.

Table 4.5: The area under principal crops is given below:

Crops	Area in acres	Average yield
Wheat	3,43,900	15 maunds
Rice	2,12,900	18 maunds
Cotton	46,500	4 maunds
Sugarcane	46,600	17 maunds

4.5.4 Professional Status

Cultivation is the main occupation of the people. Skilled Labour and professional classes such as carpenters, black-smiths, weavers, shoe-makers, earthen-pot makers'" masons and hakims help in the work of agriculture directly and indirectly. The farmer is known for his hardihood. He rises early in the morning, drives his cattle to the field and ploughs, weeds, and works there. He takes his breakfast at nine and again goes to work in the field and works till 12. From 12 to 3 he takes rest. In the afternoon, he goes to work. In the evening he returns home and takes meal and then goes to rest.

The women folk in the village lead a very busy life. They do household work, and pick up cotton from the cotton plants in the field. Children look after the cattle and herds of sheep.

- Income status

Most of the respondents (75%) had income above Rs. 35,000. Only twenty five percent (25%) were in the income group of Rs. 21,000 to 35,000.

4.6: Table shows the income status of respondents:

Sr. no	Monthly Income (Rs.)	Percentage (%)
1.	10,000-20,000	0
2.	21,000-35,000	25
3.	›36,000	75
Total		100

4.5.5 Economically Active Population

The economically active population is defined as the persons working, most of the time during the year preceding the census date, looking for work, laid off and unpaid family helpers assisting their family. The economically active population of the district in the last census was 40% of total population.

4.6 Quality of Life values

4.6.1 Religion

The population of the district is predominantly Muslims i.e. 93.9 percent. The main religion of the people is Islam and important groups consist. of Shia, Sunni, Hanfi and Wahabi. The urban population is on the whole less religious than the rural. The westernised section of the community are less religious than those who live on tradition of national culture. Those who have modern education are less religious than those who received orthodox education. The richer classes are less religious than the poor classes.

The basic principles of religious groups are the same but they differ in details. Religious rights and ceremonies (prayers) Milad-un-Nabi meetings and Eid prayers are observed in their own circles. Christians of Catholic and Protestant Churches are to be found in the district. There is a United Presbyterian Mission in Sheikhupura.

4.6.2 Ethnography, Races and Tribes.

Original tribes are living in Tehsils Nankana Sahib and Shahdara and some parts of Sheikhupura Tehsil. They were called Jangli, but their majority has become settled now. They are sub-divided into Jat, Rajput, Kharl, Chatha, Dogra and Virk. At the time of partition, the Hindus and Sikhs evacuated the distri1,;t. Various classes of people such as Jat, Rajput, Arain, Kamboh, Gujar, Kakkezai, Sheikh, Syed and Mughal etc., who migrated from East Punjab (India) have settled here.

4.6.3 Literacy

The number of literates (aged 5 & over) recorded in the 1961 Census is 1,19,016 out of which 94,511 are males and 24.505 females, which gives percentage of 12.2 for the population aged 5 and over. Considering the literacy figures by sex, the percentage of literacy amongst males is 16.39 and females 4.68.

The position of the district in respect of literacy in Punjab is 15th as per 2006-7 statistics.

4.6.4 Language

The principal mother tongue of the district is Punjabi. The other important languages spoken in the district are Urdu and English.

Table 4.6: The percentage of people speaking these languages in the district is indicated in the table below:

Languages	Percentage
Punjabi	98.5

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Urdu	11.6
English	2.8

4.6.5 Dress and Ornaments.

The majority of the rural population both male and female, wear tehmand or lacha and kurta. The men wear pagri and the women wear dupatta for the head. The urban population commonly wear trousers and shirts. Modern educated people wea1: westerns style coat or Achkan and Jinnah cap. Cotton clothes are worn in summer and woolen ones in winter. Gloves, stocking, sweaters and wrappers are used in winter. The agricultural and poor classes wear thick cotton clothes in the winter. Their working dress is the qamees. Even those who are fond of western clothes such as pants, coats, waistcoats, etc., use local dress while at home in leisure.

The festival dress of women and men is -of superior quality. Silk clothes are mainly used by women with ornaments such as finger rings, ear rings, bangles, necklace and hair clips. The rural population is accustomed to long clothes and like bright colours.

Accessories like Umbrella, long waterproof coats are not in use in the rural areas. 90 per cent of the rural population wear Jutti and about the same proportion of urban areas wear Chappals and boots. Women in urban area wear burqa to observe pardah while in rural areas, the majority of women use their chaddars or other head cloth for this purpose.

4.6.6 Recreational Facility:

Sheikhupura, on the outskirts of Lahore, derived its name from a nickname for Prince Jahangir. It was one of Jahangir's princely dominions during his father Akbar's reign, just north of Sheikhupura town lies a hunting complex known as the Hiran Minar. Hunting grounds were an important part of the physical environment of Mughal emperors, and the Hiran Minar is one of the best known and most beautiful of such sites.

The Hiran Minar, though situated outside the limits of the Municipal Committee is connected with the town by a metalled road and is a very attractive recreation resort.

Hazarat Data Shah Jamal are also very important. Annual Urs is held at both these Mazars.

There is one Cinema House namely Regal in the town.

There are two children parks maintained by the Municipal Committee and Red Cross Society. In the heart of the town, there is a beautiful municipal garden. A stadium has also been constructed recently. A service club both for men and women is also located in the town.

4.7 Public Facilities

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4.7.1 Electricity

Predominant units (86.6%) are using electricity as a source of light in the whole district both in rural and urban areas.

4.7.2 Cooking fuel

Sui gas, LPG, LNG and wood is available in Sheikhupura city, people mostly using gas as cooking fuel in the city.

4.7.3 Institutions

There are number of Government and private schools in the district.

4.7.4 Infrastructure

Electricity from LESCO grid station is available in majority of the villages of the district.. Main Lahore- Islamabad GT Road is also passing at a distance of approximately 2Km's from the project area. Private buses and wagons are available as public transport. Underground water of good quality suitable for drinking and irrigation is available.

4.7.5 Health care facilities:

Health care facilities are adequately present in the project area such as hospitals, medical units, clinics and day care centres.

The district is provided with ample facilities of medical relief. There are Civil Hospitals at Sheikhupura and its tehsils. There is also a Police Hospital at Sheikhupura with a bed strength of 18 and a Female Hospital with a bed strength of 13, a T. B. Clinic has also been opened recently. Besides, there are 35 Civil hospitals and Dispensaries spread all over the district both in rural and urban areas including 5 Canal dispensaries.

4.7.6 Industries

The area is self-developed industrial area. There are number of industrial units in project area.

4.7.7 Means of transportation.

The town is a railway junction. The trains coming from Lahore take their routes for Faisalabad and Shorkot. The town is also well connected by metalled roads with Lahore Faisalabad, Sargodha and Gujranwala, on which bus services ply in abundance.

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4.8 Analysis of Environmental Findings

The lab results for the analysis of environmental findings have been incorporated. All the findings have been tested, monitored and interpreted in accordance with NEQs defined by EPA for all mediums of environment.

Results are attached in the Annexures.

Risk Analysis
Potential hazards of the district

Hazards	Likelihood (Score 1-5)	Impact (Score 1-5)	Risk
Floods	2	1	2
Urban flooding	1	1	1
Flash flood	1	1	1
Hill torrent	1	1	1
Glacial Lake Outburst Flood (GLOF)	1	1	1
Landslide	1	1	1
Tornado	1	1	1
Earthquake	2	4	8
Drought	1	1	1
Epidemic	2	4	8
Fire incidents	1	4	4
Other Major Accidents (Building Collapse, road traffic accidents, train accident, Stampede, plane crash)	2	4	8
Environmental Hazards (industrial accidents, severe pollution etc.)	2	2	4

Risk=impact Likelihood

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Low: 1-7
Medium: 8-14
High: 15-25

Hazards:

- ✓ Disasters occurred over the past two to three decades and their impact on communities and development sectors
- ✓ Provide a brief description of the hazards being planned for (medium and high risks), including potential location that could be affected;
- ✓ Briefly outline the triggers
- ✓ Over the past two or three decades there is no major Disaster history in sheikhupura.
- ✓ Floods and Earthquakes have negligible impact on communities and development sector.
- ✓ There are Fire incidents, Road Traffic Accidents, Building Collapse etc. but not to an extent to be counted towards Disasters.
- ✓ The hazard may be minimized if proper building codes / by laws and fire safety standards would be adapted.

Hazards	Leading Agency	Support Agencies
Evacuation	Revenue department	The district Govt.
		Rescue 1122
		MCs
		Provincial & District Highway Departments
		Department of Community development
		Civil Defense
		Department of Public Works
		Police
Road Accident	Punjab Emergency Service (Rescue 1122)	Traffic Police/Patrolling Police

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	DHQ Hospital, Sheikhupura & THQs
	Edhi Ambulance Service
	Police

Air accident	Rescue 1122
	The district govt
	Army
	Rangers
	Police
	TMAs & TMA Fire Service
	DHQ Hospital, Sheikhupura & THQs
	Civil Defense
	Edhi Ambulance Service

Rail Accident	Revenue Department	Pakistan Railways
		Railway police
		District police
		Rescue 1122
		MCs
		DHQ Hospital, Sheikhupura & THQs
		Civil Defense
		Edhi Ambulance Service
		Provincial & District Highway Departments
		Army
		Rangers

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Major Fire	Punjab Emergency Service (Rescue 1122)
	Police
	DHQ Hospital, Sheikhupura & THQs
	Civil Defense
	Edhi Ambulance Service

Earthquake & Flood	Revenue Department
	Rescue 1122
	Police
	Army
	Provincial & district irrigation department
	MCs
	DHQ Hospital, Sheikhupura & THQs
	Civil Defense
	Edhi Ambulance Service
	Provincial & District Highway Departments
	Provincial & District works Departments
	All NGO's

Building Collapse	Punjab Emergency service (Rescue 1122)
	The District Govt.
	Police
	MCs
	DHQ Hospital, Sheikhupura & THQs
	Civil Defense
	Edhi Ambulance Service
	Provincial & District Highway Departments

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Law and Order Situation (Processions, strikes, violent Mobs etc)	Police department
	The District Government
	MCs
	Rescue 1122
	DHQ Hospital, Sheikhupura & THQs
	Civil Defense
	Edhi Ambulance Service
	Provincial & District Highway Departments

Terrorist attack (Bomb Blast etc)	Police department
	Rescue 1122
	Civil defense
	District Govt.
	DHQ Hospital, Sheikhupura & THQs
	Edhi ambulance service
	Provincial & District Highway Departments

Drowning	Rescue 1122
	The district Govt.
	Police
	MCs
	DHQ Hospital, Sheikhupura & THQs
	Edhi ambulance service
	Provincial & District Highway Departments
	Irrigation department

Mitigation Strategy

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Hazards	Mitigate Actions	Responsible Department
Floods	1-Early warning through media, Announcements etc. 2-The residences/commercial area should be constructed far away from the route of rivers, canals etc. 3-Strategic locations have been selected for the positioning of relief stocks so that all the required stock may be available during disaster. Public is being educated time to time and they are being given trainings by Rescue 1122	All DDMA members.
Urban flooding.	Sewerage system is kept clean to avoid urban flooding.	All COs
Flash Flood	Although there is no history of fash floods, Nullahs should be kept clean all the time to avoid early flash flooding even of minor nature.	All COS
Hill torrent	No History of Hill Torrents in District Sheikhupura	Nil
Glacial lake Outburst flood (GLOF)	No History of Glacial Lake Outburst Flood in District Sheikhupura	Nil
Landslide	No History of Land sliding	Nil
Tornado	No History of Tornado	Nil
Earthquake	To mitigate the loss or Damage, evacuation drills in all educational Institutions, To educate the local community the pamphlets distributions should be done more frequently.	All DDMA Members
Droughts	No History of Drought in District Sheikhupura	Nil
Epidemic	COVID-19	All line departments
Fire incidents	All high Rise /Multi Storied Buildings should have hydrant system. The external hydrants shall be located at least 6 feet's away and not more than 50 feet's from the building.	Rescue 1122, all COs

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	Distance between any hydrant shall not exceed more than 100 feet. Separate fire exit, Fire Alarm System, First Aid Box, Smoke Masks, Breathing Apparatus. water hydrants must be installed at a distance of 50 feet. One multipurpose (A, B, C) Dry Chemical Powder 6Kg Extinguisher for each 2000 Sq. Feet of floor area. Maximum travel distance to a fire extinguisher shall not exceed 75 feet, but in kitchen area this distance is 30 feet. Fire extinguisher in Kitchen should be installed separately. Overhead water tank should have 7500 Gallons capacity While external underground water tank should have 15000 Gallons Capacity. If the building is more than 10 storeys then the capacity of both water tanks should be doubled. By following recommended building Codes, Fire safety standards, awareness campaigns etc. fire incidents can be minimized. Installation of Fire Hydrants at proper proposed location can also minimize the damage by fire	
Other Major Accidents (Building Collapse, road traffic accidents, train accident,	Building owners must follow building codes to avoid heavy loss in case of building collapse. Road condition should be improved to minimize the Road Traffic Accidents. Only drivers having valid driving license should be allowed drive vehicles. Over speeding must not be allowed especially in busy areas.	Concerned Departments

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Stampede, plane crash)		
Environmental Hazards (industrial accidents, severe pollution etc.)	No History of Environmental Hazards in District Sheikhupura	NIL

4.8.1 Income Level

It is noted that by now, the GDP per capita would be about US $ 1,000 per capita. In the project location, the GDP on the average would be slightly higher than the national average.

4.8.2 Education & Literacy

The literacy rate in the country ranges from 97% in Islamabad to 20% in the Kohlu District. Between 2000—2004, Pakistanis in the age group 55–64 had a literacy rate of almost 30%, those aged between 45–54 had a literacy rate of nearly 20%, those between 25–34 had a literacy rate of 20%, and those aged 15–24 had a literacy rate of 10%. These data indicate that, with every passing generation, the literacy rate in Pakistan has risen by around 10%. Literacy rates vary regionally. Despite these statistics, Pakistan still has one of the highest illiteracy rates in the world.

4.8.3 Analysis of Environmental Findings

The lab results for the analysis of environmental findings have been incorporated in the annexure. All the findings have been tested, monitored and interpreted in accordance with NEQs defined by EPA for all mediums of environment. Results are attached in annexure.

4.8.4 Suitability of the Site

The site does not fall in environmental sensitive area and all commodities are at a suitable distance from project site as they will not impact by the construction activities even locals will get more benefits and job opportunities. No replacement, relocation and rehabilitation are required for the development of proposed project.

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CHAPTER#05

ANALYSIS OF ALTERNATIVES

5.General

This chapter deals with an analytical overview of the different alternatives that have been considered in the project. The analysis has been carried out critically so as to justify the need of the project. Beside the economic viability, environmental sustenance and social soundness of the proposed project should also be considered when analyzing various alternatives. The various alternatives which have been considered during the conduct of the study are as under:

- ✓ No Project Option
- ✓ Alternative Construction Methods
- ✓ Alternative Geometry

5.1 No Project Option

In Sheikhupura there is a shortage of textile industries or these types of units. In this report proponent wants to extend his unit in future by installing dyeing that's why he is applying for the NOC from now on. Proponent extends his already established unit on the available space/land with the ownership by proponent suitable & easily available.

Therefore, no option other than this project is considered.

- ❖ Alternatives of location
- ❖ Development of Environmental Site Selection Criteria:

The site selection criteria were based on a number of parameters as indicated below:

a) Land Availability
b) Environmental Issues
c) Social Issues

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a. Land Availability

Proponent is going to extend his already established unit with almost 22 kanals.

b. Environmental Issues

Due consideration has to be given to the sensitive issues related to the environment, forest, wet lands, wildlife reserves, agricultural land etc. while assessing the alternative sites for the development of this facility.

c. Social Issues

Social issues form in important element in the assessment criteria. Different socially sensitive elements like graveyards, mosques, playgrounds, which can create social issues have to be given due consideration while assessing the different sites.

5.1.2 Alternative Construction Methods

The feasibility & constructability of the project is well established. The process basically includes the transportation of equipment to the site & the assembly of pre-fabricated unit. Thus, the impacts from the construction activities are very manageable from the environmental point of view.

5.1.3 Alternative Geometry

The design is as short as it can be and avoids the local, villages & all settlements.

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CHAPTER#06

PUBLIC CONSULTATION

6. Objectives of Consultation

Public consultation plays a vital role in studying the effects of any development project on stakeholders and in its successful implementation and execution. It affords an opportunity to exchange knowledge with public, immediately or remotely. Referring particularly to a project related to environmental assessment, involvement of public is all the more essential, as it leads to better and more acceptable decision-making. The overall objective of the consultation with the stakeholders is to help verify the environmental and social issues, besides technical ones, that have been presumed to arise and to identify those which are not known or are unique to the Project. In fact, discourse with many who have thoroughly observed the site conditions in the pre-developmental phase, goes a long way in updating the knowledge and understanding.

6.2 Responsible Authority

The proposed Project M/S "Escorts Advanced Textiles (Pvt) Ltd." District Sheikhupura, involves stakeholders from various segments of the area, who have direct or indirect interest in the developmental activity. The consultant team has endeavored to hold consultative sessions with a number of prominent stakeholders to evince their views on the proposed Project, inter-alia, their opinions, suggestions, understanding on various issues and concerns.
The consultations aimed specifically at:

- ✓ Exchange of information related to the Project and its possible utilization in the Project planning and execution.
- ✓ Dissemination of information through discussions, education and liaison.
- ✓ Collaboratively solving the problems.
- ✓ Eliciting the comments and feedback on the proposed Project.
- ✓ Documentation of information narrated by the stakeholders.
- ✓ Documentation of mitigation measures proposed by the stakeholders.
- ✓ Incorporation of public concerns and their redresses in the EIA.

6.3 Stakeholder's Consultations

There are two types of stakeholders, i.e. primary and secondary stakeholders. The primary stakeholders are the initial stakeholders, such as affected persons, general public including women resided in villages in the vicinity of the project area. Accordingly, the consultations were made with all primary stakeholders for sharing the information regarding the sub-project components, i.e. Extension of the subject unit & community feedback regarding the project. However, the consultative meetings were also held with the secondary stakeholders including the officials/ staff involved in planning & design, and management.

6.4 Public Consultations:

Eight consultations were made with the affects and other local community to share the information about the project and record their concerns/ feedback associated with this project.

The individuals and organizations consulted are given in Annexure. List of public consultations carried out in the surrounding of the proposed project is given in the Table.

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Table 6.3: List of Participants during the Public Consultations& Concerns

Sr. No.	Location/ Venue	Names of main Participants	Feedback/ Concerns (Positive)	Feedback/ Concerns (Negative)
1	Kamoke	Mr. M. Manzoor Hussain	People are mostly satisfied with the project. On overall basis, this is a good project because it will help to improve economic conditions of area.	Little bit Dust will blow during arrival of constructio n material.
2	Muridkey	Mr. Basharat Ali	Construction of the project will create labour opportunities for locals Very Beneficial	No change
3	Within the vicinity of the project	Mr. Nazam Ahsaan	In favour because it will help in reduction unemployment	None
4	Near Kala Shah Kaku	Mr. Irfan S/o M. Kareem Bakhsh	No issue regarding project rather it will create job opportunities and improve the living standard of local community	Noise Dust
5	Near Muridkey	Mr. Sajjad	This project is highly recommended and supported as unskilled persons will get the labor opportunities	None

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			during construction phase.	

MEETINGS WITH STAKEHOLDERS

Interviews and focus group discussions were held with government authorities, nearby networks and stakeholders. During conversations with occupants and nearby locals of the area, it was uncovered that individuals knew about the project and majority were in favor forits development.

M/S "Escorts Advanced Textiles (Pvt.) Ltd.,"	Occupation	Organization	Response
Mr. M. Hussnain			In favour
Mr. Faryad Hussain	Retired Govt Employee	Govt	In favour
M. Ali Ijaz	Shop owner	Business	In favour
Mr. Faryad Hussain	-	-	In favour
Mr. Kashif	-	-	In favour
Mr. Arselaan	-	-	In favour
	Fruit Vendor	Business	In favour
Mr. Hussnain	Shop owner	Business	In favour
Rashad Ali	Shop owner	Business	In favour
Mr. Mudasser Khan	Shop owner	Business	In favour
Mr. Nauman	Busi ness	Business	In favour
Mr. Faryad Virk	Employee	Employee	In favour

Public Response Regarding Project

All interviewed individuals for the extension were in favor of the project and wanted work to start as soon as possible.

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Public Response against Proposed Project Development

EXTENSION OF M/S "ESCORTS ADVANCED TEXTILES (PVT) LTD."		
1	Mr. Arselaan	- Highly in favour of project - Avoid delays in construction to limit the in convenience to the public - Avoid dumping of construction material and carry out proper site clearanceafter completion of construction activities
2	Mr. Asim	- In favor of project
3	Mr. Hussnain	- In favour of project -
4	Mr. Abdul Razzaq	- In favour of project - proper traffic planshould be provided
5	Qazi Shakeel Ahmed	- In favour of project - Avoid delays in construction to limit - Avoid dumping of construction material and carry out proper site clearance after completion of construction activities
6	Mr. Azam Myo	- Govt should involve locals in construction/Operational phase to increase employment
7	Mr. Basharat Ali	- Highly in favour of project

Stakeholder Concerns

The most common concerns regarding the project are listed below

- ✓ All stakeholders were in favor of the project and want it to be started without delay
- ✓ Take on measure to limit residue, smoke and clamor contamination during development
- ✓ Avoid dumping of development material and do legitimate site leeway after consummation of development exercises
- ✓ Avoid delays in construction to limit the inconvenience to the public
- ✓ Appropriately planed redirections during development/construction phase

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- ✓ Construction to be done on time without delay

6.4.4 Equipment and Instruments Maintenance Details

The project proponent will create their own system, i.e. equipment for monitoring of air, water and noise or hire the services of a private laboratory for the monitoring and analysis.

6.4.5 Environmental Budget

Environmental budget for the Extension is approximately 0.4 million rupees.

6.5 Technical Training Programs

In order to raise the level of professional and managerial staff, they need to upgrade their knowledge in the related areas. The EMC will play a key role in this context.

Contractor's environmental awareness and appropriate knowledge of environmental protection is critical to the successful implementation of the EMP because without appropriate environmental awareness, knowledge and skills required for the implementation of the mitigation measures, it would be difficult for the contractor(s) to implement effective environmental protection measures. A domestic training program is proposed to train the staff that will be involved in the construction and operational stage on environmental protection and management.

CHAPTER# 07

ENVIRONMENTAL MANAGEMENT & MONITORING PLAN

7.Purpose and Objectives of the EMP:

The primary objectives of the EMP are to:

- ✓ Facilitate the implementation of the mitigation measures identified in the EIA
- ✓ Define the responsibilities of the project proponent.
- ✓ Define a monitoring mechanism and identify monitoring parameters in order to:
- ✓ Ensure the complete implementation of all mitigation measures
- ✓ Ensure the effectiveness of the mitigation measures
- ✓ Provide a mechanism for taking timely action in the face of unanticipated
- ✓ Identify training requirements at various levels.

7.1 Institutional Capacity:

Following functionaries will be involved in the implementation of EMP:

- ✓ Project Proponent
- ✓ HSE/Project Manager
- ✓ In-Charge Administration
- ✓ Supervisor of project
- ✓ Environmental Engineer

Training for the management/contractors/engineers and workers on environmental aspects of the project will be arranged. It will be imparted by a team of experienced trainers.

The project will be implemented and made monitored by the Project proponent, which will be supported by Design and Supervision Engineer.

Project proponent shall be responsible for ensuring compliance to environmental requirements.

- ✓ Will comply with all applicable legislation and is conversant with the requirements of the

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EMMP

- ✓ Assesses all activities requiring special attention as specified and/or requested by the Engineer and/or Environmental Expert
- ✓ Ensures that the Contractor conducts all activities in a manner that minimizes disturbance to residents and the public in general
- ✓ May, on the recommendation of the Engineer and/or Environmental Expert order the Contractor to suspend any or all works on site if the Contractor or his subcontractor/ supplier fails to comply with the said environmental specifications

7.2 Training of Building Contractors:

Training of building contractor & workers will be the part of the TOR's regarding the construction of the project.

TORs will be including the training and submission of reports in the following area:

- ✓ Handling of Machineries in a safe way
- ✓ Use of PPE's
- ✓ Maintenance of vehicles & submission of Environmental Monitoring Reports
- ✓ Maintenance of Water Consumption records
- ✓ Testing of water and waste water and submission of Environmental Monitoring Reports
- ✓ Placement of safety signs/boards during construction
- ✓ Sprinkling of water on the roads and dusty tracks
- ✓ Monitoring of generator emissions

Training regarding all other aspects of HSE will be ensured by the contractor during the construction phase.

7.3 Responsibility of EMP:

Overall responsibility for implementation of EMP will be that of project proponent. He will appoint an HSE/Project Manager of relevant qualification.

HSE/Project Manager will act as Environmental Manager and will manage the all HSE condition at the PEQS.

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Sr#	Concerned Persons	Duties
1	The Project Manager	Following will be the responsibilities of the Project Manager • Ensure that the contractor is aware of all specifications, legal constraints, standards and procedures pertaining to the project specifically with regards to environment • Ensure that all stipulations within the EMMP are communicated and adhered to by contractor(s) • Monitor the implementation of the EMMP throughout the project by means of site inspections and meetings. This will be documented as part of the minutes of the site meeting documents • Ensuring project execution within defined budget and timelines • Conducting regular check of the project status and meetings with project team • Provide support and guidance to project team as and when needed • Project Manager is expected to continually monitor and improve the overall performance of their operation
3	Site Engineer	Following will be the responsibilities of the Site Engineer during the construction and operational activities: • Be fully conversant with the IEE and conditions of its approval • Be fully conversant with the EMMP • Be fully conversant with all relevant environmental legislation, policies and procedures, and ensure compliance with PEQS • Have overall responsibility for the implementation of EMMP • Conduct audits to ensure compliance to the EMMP • Liaise with the Project Manager or his delegate, the Environmental Officer and relevant discipline Engineers on matters concerning the environment • Prevent actions that will harm or may cause harm to the environment, and take steps to prevent pollution on the site • Confirm activities to the demarcated construction site

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4	HSE Manager	In addition to the health and safety responsibilities held by staff, managers and supervisors must do whatever is reasonably practical to ensure that both the workplace and the work itself are safe. This includes: • Ensuring that staff are appropriately trained and supervised • Identifying, assessing and managing health and safety risks • Consulting with workers (including staff, affiliates and contractors): ✓ Health and safety risk assessments ✓ Decisions are made about the measures to be taken to eliminate or control these risks ✓ Health and safety risk assessments • Implementing health and safety risk management programs relevant to their operations, teaching, research and consulting functions and work environment • Reporting (to the Human Resources Unit), investigating and responding to all hazards, accidents, incidents and taking action to control the risk • Assisting with the development, implementation and maintenance of a return-to-work program for injured staff. • Be fully conversant with the IEE and conditions of its approval • Be fully conversant with the EMMP • Be fully conversant with all relevant environmental legislation, policies and procedures, and ensure compliance • Convey the contents of this document to the contractor site staff and discuss the contents in detail with the Project Manager and Contractor • Undertake regular and comprehensive inspection of the site and surrounding areas in order to monitor compliance with the EMMP • Take appropriate action if the specifications contained in the EMMP are not followed • Monitor and verify that environmental impacts are kept to a minimum, as far as possible • Review and approve construction methods, with input from the Site Manager, where necessary • Ensure that activities on site comply with all relevant environmental legislation

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		• Compile progress reports on regular basis, with input from the Site Manager, for submission to the Project Manager, including a final post excavation audit • Liaise with the Site Manager regarding the monitoring of the site • Report any non-compliance or remedial measures that need to be applied • All environmental problems arising on the construction area will be reported to the Site Manager by the Environmental Manager. Reports on such problems will be submitted to the Project Manager by the Site Manager
6	Contractors and Service Providers	• Environmental management is part of on-site quality management. Under the environmental management plan, the contractor • Shall propose measures to minimize environmental impacts during construction and submit them to the HSE Officer • Comply with the environmental management specifications • In case of having impacts on the environment, the contractor will inform them to the concerned person in time to get instructions and then take next step • Adhering to any instructions issued by the Engineer/Project Manager on the advice of the HSE Manager • Submitting a report at each site meeting which will document all incidents that have occurred during the period before the site meeting • Maintaining a public complaint register • Arrange that all his employees and those of his subcontractors receive training before the commencement of construction

Environmental Management Plan:

Environmental management plan (EMP) is the most important output of an EIA study. It will include the adverse impacts during design, construction & operation phases of this project, & their mitigation measures along with allocation of responsible persons / agencies for the respective mitigation.

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The Environmental Management Plan (EMP) is one of the most important outputs of an EIA process. It consists of the set of measures to be taken during implementation and operation to eliminate, offset or reduce adverse environmental impacts to acceptable levels. As far as responsibilities of mitigation are concerned, the project is design, supervised, constructed & operated by the registered firms, so, all the responsibilities go to the Proponent for proper designing & supervision of construction teams.

The EMP will guide the environmentally-sound project activities & ensure efficient lines of communication between the Engineer, contractors, and Implementing Agency.

The EMMP identifies three phases of development as:

- ✓ Site establishment & preliminary activities;
- ✓ Construction Phase;
- ✓ Post construction/operational phase.

The purpose of the EMMP is to ensure that the activities are undertaken in a responsible non-detrimental manner with the objectives of:

- ✓ Providing a pro-active, feasible and practical working tool to enable the measurement and monitoring of environmental performance on site;
- ✓ Guiding / controlling the implementation of findings and recommendations of the environmental assessment conducted for the sub-project;
- ✓ Detailing specifications deemed necessary to assist in mitigating the environmental impact of the sub project;
- ✓ Ensuring that safety recommendations are complied with.

A copy of the EMMP must be kept on site during the construction period at all times. The EMMP will be made binding on all contractors operating on the site and will be included in the Contractual Clauses. Non-compliance with, or any deviation from, the conditions set out in this document constitutes a failure in compliance.

Table: ENVIRONMENTAL MANAGEMENT PLAN (CONSTRUCTION PHASE)

SR#	Project Component / Impact	Project Activities	Targets to be achieved	Mitigation/Prevention Action	Responsibility	
					Implementation	Monitoring

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Construction Phase						
01	Air Quality	Storage, Handling, and Transport of Material	Compliance with prescribed PEQs to control air pollution	1.Necessary measures like a sprinkling of water on a regular basis, especially during dry climatic conditions, should be taken to limit pollution from dust and other windblown materials. 2.Periodic maintenance and management of all the construction machinery & vehicles 3.Waste burning will not be allowed.	During Construction Phase by Contractor with coordination of Proponent staff	Proponent Consultant
02	Waste	Generation and Disposal of Solid waste near campsite. Dust & particulate matter emissions due to excavation digging & during and during other construction activities	Proper & safe handling and disposal of Construction related waste Compliance with applicable waste management rules for hazardous and non-hazardo	• Ensure prevention of inappropriate disposal of waste material. • Conduct separate collection of construction and office waste to promote recycling and re-use. • Dispose of non-recyclable	During Construction Phase by Contractor with coordination of Proponent staff	Proponent/ Consultant

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		of the project	us waste disposal Implementation of waste management plan	and hazardous waste material properly according to waste management rules. • Proper disposal of waste on agreed site as per agreed method. The area to be leveled and contoured after disposing of the excess material. • No waste or debris will be thrown into the nearest canal water or other water bodies. • The contractor will prepare waste management plan related to		

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				construction activities; get its approval from site engineer and ensure its full implementation.		
03	Noise	Haulage Roots and Movement of Construction Vehicles. The use of heavy machinery and equipment causes noise. Noise generated by generator.	Compliance with prescribed NEQs to control Noise pollution	• The contractor will strictly follow the PEQS for ambient noise • Control noise through control of working hours and selection of less noisy equipment. • Prohibit use of pressure horns • Provision of acoustic enclosures (hood and shrouds) on generator Proper maintenance of vehicles and construction equipment. • Minimize/avoid		

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				unnecessary use of pneumatic drills and other noisy machinery. • The personal protective equipment (PPE) will be provided to the construction workers and its usage will be made mandatory During Construction Phase by Contractor with coordination of Proponent staff		
04	Materials Management	Transport of Materials	Safe and secure environment for construction workers	• If stockpiles are exposed to windy conditions or heavy rain, they shall be covered either depending on the duration of the project. Stockpiles may further	During Construction Phase by Contractor with coordination of Proponent staff	Proponent/ Consultant

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				be protected by the construction of low brick walls around their bases. • All substances required for vehicle / machinery maintenance and repair must be stored in sealed containers until they can be disposed of / removed from the site. Spraying of insecticide shall not take place under windy conditions		
6.	**Workers Health & Safety**	Risk of damage to worker health Risk of any damage by machine, chemicals, liquid waste etc. can be reduced by using	Prevention of any possibility of work site accident /impact on worker's health	• Provision of Personal Protective Equipment to the workers. • Provision of first aid box at work site to cope with emergency situation. • Safety	During Construction Phase by Contractor with coordination of Proponent staff	Proponent Consultant

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		safety signs at construction site and campsite		training to the workers. • Safe driving training to the drivers. • Adequate safety signs on site. • Provide training regarding proper handling and use of chemicals/ paints. • Install fire extinguishers at fire handling places. • Inspect and ensure that any lifting devices, such as cranes, are appropriate for expected loads. • Any loss of public/ private property will		

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				be compensated by the contractor. Regular checks should be carried out to ensure a contractor's is following safe working procedures & practices.		
7.	Socioeconomic Impacts	Conflicts between locals may arise during construction activities	Prevention of conflicts among locals and make the project socially acceptable Empowerment of locals to possible extent Increase in employment and business opportunities for locals	• Contractor's activities and movement of staff to be restricted to designated construction areas. • The conduct of the construction staff when dealing with the public or other stakeholders shall be in a manner that is polite and courteous all the time. • Lighting on the construction site shall be pointed	During Construction Phase by Contractor with coordination of Proponent staff	Proponent Consultant

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				downwards and away from oncoming traffic. • The site must be kept clean to minimize the visual impact of site. • Machinery and vehicles are to be kept in good working order for the duration of the project to minimize noise nuisance to neighbors. • Noisy activities must be restricted to the times given in the Project Specification or General Conditions of contract. • The Contractor is responsible		

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				for ongoing communication with those people that are interested in / affected by the projects. • Employ local residents as much as possible. Promote communication between external workers and local people (e.g. join local events).		
8.	Clearance of site from extra/surplus material and construction equipment	The cutting of trees or flora of the site. Removing extra soil by excavation and digging	Restoration of site to a similar condition prior to the commencement of the work or to a condition agreed with the project management and landscaping of the site	• Timely removal of waste from the site to avoid congestion at workplace. • Construction waste should be collected and disposed separately of other waste. Care will be taken during handling and disposal of waste.	During Construction Phase by Contractor with coordination of Proponent staff	Proponent Consultant

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				• Contaminated soil (if generated) due to accidental spills will be removed and transported to the suitable site for disposal. Safe transportation of construction equipment from the site.		

TABLE: ENVIRONMENTAL MANAGEMENT PLAN (OPERATIONAL PHASE)

SR #	Project Component / Impact	Project Activities	Targets to be Achieved	Mitigation / Preventive Action	Responsibility	
					Implementation	Monitoring
Operational Phase						
1.	Solid waste	The waste	Compliance with inappropriate waste disposal	The contractors to whom any waste effects of the waste to be sold to him if there is any.	HSE Executive	Proponent
2.	Noise Impacts	The noise generated by machiner	Compliance with prescribed PEQS to	Noise reduction measures like buffering of noise through	HSE Executive of Project / Proponent	Proponent

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		y and standby generator	control Noise pollution	trees should be adopted where deemed necessary to reduce the noise level at the project boundary.		
				• Mitigation measures during operation for noise impacts on workers will include standard occupational health and safety practices		

TABLE: ENVIRONMENTAL MANAGEMENT PLAN (DE-COMMISSIONIMG PHASE)

Project Activities	Type of Impact	Potential Impacts on Environment	Extent /Magnitude	Mitigation Measures	Institutional Responsibility	
					Implementing body	Implementing body
De-Commissioning Phase						
				• Carrying out the decommissioning works only during the		

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Noise Generation	Physical, Social & Biological	Nuisance to Local community	Less/ adjacent area	specified time where permissible levels of noise are high and acceptable. • Vehicles should be maintained regularly to reduce noise resulting from friction. Providing workers with PPEs such as earmuffs	Contractor	Proponent
Demolition waste generation	Physical, Social & Biological	Disturbance to local community	Less	• Removing reusable and recyclable material from the building before demolition to minimize the amount of waste. • Making available suitable facilities for the collection, segregation and safe disposal of the wastes.	Contractor	Proponent
Emission of Air Pollutants	Physical, Social & Biological	Disturbance to surrounding environment and local community	Less/adjacent area	• Using efficient equipment and machines with efficient engines meaning low emission.	Contractor	Proponent
				• Ensuring all storage parts are labeled.		

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OSH Risks	Physical & Social	Health hazards to workers	Less	• Raising awareness and educating workers on risks from equipment and ensuring they receive adequate training on the use of the equipment. • Providing the workers with adequate PPEs and monitoring regularly	Contractor	Proponent

The Contractor is deemed not to have complied with the EMMP if:

1-Within the boundaries of the site, site extensions and haul/ access roads there is evidence of contravention of clauses
2-If environmental damage ensues due to negligence
3-The contractor fails to comply with corrective or other instructions issued by the engineer/ IA within a specified time
4-The contractor fails to respond adequately to complaints from the public

Environmental & Social Aspects	Measures	Responsibility
Construction and noise control plan	Periodic surveys will be conducted for the control of noise level from the construction equipment's, operational machinery and vehicles. Noise control measures will be implemented	Administration
Dust emission control	Water will be sprinkled on all the exposed sites to suppress the emission of dust.	Administration

Vehicle and equipment exhaust control	All vehicles and other equipment used during the construction will be tuned and maintained in good working condition in order to minimize the emission of pollutants.	Administration
Water conservation plan	Groundwater being extracted for construction activities would be recorded, where possible, water would be recycled.	Administration
Community safety plan	The said project is nowhere within the vicinity of barren land but still fence surrounding the site will be put in on during the construction to prevent assesses. All entry points into the construction site will be staffed 24 hours a day. No machinery will be left unattended, particularly in the running condition. Night time driving of the project vehicle will be limited.	Administration
Soil contamination	Spills trays will be provided and used at refuelling locations. Emergency plan for the spill management will be prepared and inducted to the staff for any incident of spill. Fuel, lubricants and chemicals will be stored in the covered bounded area.	Administration

Sr. #	Project Component or Impact	Target	Action	Responsibility
01	Overall environmental impacts	To reduce overall negative impact of the project and structures on the environment and conserve natural resources.	Should take all possible measures to ensure that operation of the project does not harm the environment	Proponents/ Management

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02	Noise & Vibration	To ensure that the noise levels do not exceed the limits.	• Put silencers on the machines. • Isolators should be made for the absorption of vibrations. • Workers should be told and encouraged to use PPE's (ear plugs or ear muffs).	Proponents/ Management
03	Water Conservation	To conserve water	• Workers should be regularly advised on importance of water conservation so as to preserve water	Proponent/ Management Committee
04	Air Quality	To ensure that the pollution levels do not exceed the limits	• No waste should be burnt at the premises. • Workers should be advised to keep their vehicles and machines in good working order to minimize emissions.	Management
05	Traffic congestion	To mitigate the traffic problem	• There should be prohibition on roadside parking. • Parking spaces would be provided within the area.	Proponent/ Management

Sr.#	Project component/ Impact	Target	Action	Responsibility
06	Energy Conservation	Conservation of energy and use of environmental-friendly energy sources	Efforts should be made to ensure that energy is conserved and that environment-friendly techniques are adopted too.	Proponent/ Management
07	Solid Waste Management	To manage waste in an environment friendly manner.	• The solid waste from the project should not be	Proponents/ Management

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			allowed to pile up at the temporary storage site. • Generated solid waste should be disposed-off according to TMA facilities.	
08	Security	To secure the lives of employees and nearby area.	All possible measures should be taken to maintain security at all times.	Proponents/ Management
09	Emergency Response	To deal with any emergency efficiently.	You should have an emergency escape plan in place.	Proponents/ Management
10	Environmental Monitoring	To ensure that periodic reports on environment at the project site are furnished to EPA in pursuance of conditions of the environmental approval.	A mechanism should be employed for Environmental Monitoring at the project when it comes into operation	Proponents/ Management

7.4 Environmental Technical Assistance and Training Plan

In order to raise the level of professional and managerial staff, there is a need to upgrade their knowledge in the related areas. HSE/Project Manager should play a key role in this respect and arrange the training programs.

HSE/Project Manager will provide training to staff and workers about the best environmental management practices at the construction site and affective implementation of the EMP.

The training modules will include air, noise and water pollution monitoring, social awareness, Environmental Laws, Punjab Environmental Quality Standards (PEQS),

Usage of personal protection equipment's, and health and safety related issues on the construction site.

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The HSE/Project Manager will train all workers & staff in basic sanitation and health care issues (e.g., how to avoid malaria and transmission of Sexually Transmitted Infections (STI) HIV/AIDS and in general health and safety matters, and on the specific hazards of their work. Training should also consist of basic hazard awareness, site specific hazards, safe work practices, and emergency procedures for fire, evacuation.

HSE/Project Manager will arrange Training on monthly or quarterly basis regarding health & safety, hygiene, firefighting and first aid.

7.4.1 Training & Capacity Building Plan:

Training & Capacity Building Plan		
	Construction Phase	**Operation Phase**
Potential Impacts	Due to construction phase, following issued will occur: ✓ Noise Pollution from Vehicles ✓ Fugitive Dust Emissions ✓ Solid Waste ✓ Air Emissions ✓ HSE ✓ First Aid Training	During operational phase, there will be no major negative impacts
Mitigation	**Training & capacity Building Plan**	
Management Plan	Project will ensure in-house training for the project staff, labour and the supervisory staff of the Proponent/EA through the provision of one day basic training and one day advanced training, covering environmental and social aspects of the projects in general, and implementation requirements will emphasis on the development projects in general, and implementation requirements with emphasis on the roles and responsibilities of the staff and the labour while executing the environmental monitoring plan in particular. The training protocols will include the following aspects: ✓ Procedures for monitoring the air quality parameters and measures to be adopted for avoiding or minimizing air pollution, particularly from the transportation, handling of the by-products, biological, chemical and physical hazards ✓ Procedures for monitoring water quality parameters and measures to be adopted for avoiding or minimizing water pollution, particularly from the wastewater effluent generated from municipal uses and in the process activity	

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	✓ Safe waste disposal practices ✓ Safety measures against hazards for workforce and the local communities arising from the construction activities ✓ Use of safety gadgets by the workforce ✓ Training for the use of PPEs		
Monitoring	Responsibility	Responsible	Monitoring Duration
	Training of staff, vehicle operators and labour	Project Manager / HSE Manager	1 day training in a month

Summary of Environmental Impacts and Mitigation measures is present in following table in term of Environmental Management Plan:

7.4.2 Air Quality Management & Monitoring Plan

Air quality management & monitoring Plan		
Potential Impacts	Construction Phase	Operation Phase
	Emissions resulting from construction activities are vehicular emissions and diesel emissions from generators. It includes: ✓ Carbon Monoxide ✓ Nitrogen Oxides ✓ Particulates ✓ Fugitive Dust	The odour will be the most significant form of air pollution during the construction phase. Major processes that generate odour includes; from storage areas, wastewater treatment.
Mitigation	Regular water sprinkling, proper tuning and maintenance of equipment/vehicles used and implementation of best management practices.	Although the odour is considered to be negligible as the loader will carry the waste once a day and waste will be carried in closed containers. It will be ensured that the waste material is kept in the closed containers and will regularly move from the site.
	1-Regular sprinkling of water will be done to control the suspended dust particles during the construction phase 2-The transporting vehicles and generators will be maintained on regular basis	

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Plan	3-Enforce speed limits to reduce airborne fugitive dust from vehicular traffic 4-Re-vegetate disturbed areas as soon as possible after disturbance 5-Regular water sprinkling to suppress the fugitive dust emissions 6-Cover dump trucks before travelling on public roads 7-Train workers to handle loose materials and debris to reduce fugitive emissions 8-Water sprinkling will be done on the regular basis during the construction phase 9-Good quality fuel will be used for vehicle and machinery 10-Visual inspections to detect air pollution generated during the construction phase will be carried out on the regular basis 11-Minimize the land disturbance as much as possible 12-Do not alter existing drainage systems 13-Indigenous tress around the facility will be planted to control the odour and air pollution 14-Odour monitoring should be under-taken on the regular basis 15-Avoid movement of the vehicles during peak traffic hours 16-Regular water sprinkling will be done in order to control fugitive dust emissions, that may become cause the deterioration of the water resource 17-Rehabilitation of areas outside of the site security fence will be undertaken by the successful implementation of the landscaping plan.		
Monitoring	**Responsibility**	**Responsible**	**Monitoring Duration**
	Preparation of required or requested information for submission to the Project Manager including air quality monitoring data Liaising with the Project Manager with respect to all significant air quality matters.	Project Manager/Contractor	As & when required

7.4.3 Health & Safety Management & Monitoring Plan

Health & Safety Management & Monitoring Plan	
Physical Hazards	The health and safety risks to workers include but are not limited to: ✓ Proper training will be provided for the proper use of the cutting equipment and personal protective equipment (PPE) will be

	provided which will include metallic gloves and leather aprons for cutting related activities ✓ It will be ensured that operation is carried out by the individuals who have received the correct training and have subsequently been approved ✓ Floor will be kept dry through regular housekeeping practices ✓ Dry boots and insulation gloves will be provided to the workers in addition to the other PPE's
Chemical Hazards	Following mitigation measures will be adopted: ✓ Personal Protective Equipment (PPEs) should be given to workers including protection and impermeable clothing for use during disinfection ✓ Wearing of the PPEs should be regulated strictly by the concerned authority
Biological hazards	To control biological hazards following mitigation measures will be adopted: ✓ Proper ventilation system will be designed to avoid the accumulation of the dust in the working area ✓ Humidity will be maintained in the facility ✓ All the waste/by-products will be stored in the closed containers to eliminate the chances of vector production ✓ Workers personal hygiene will be ensured by the segregating work and welfare facilities ✓ Appropriate Personal Protective Equipment (PPEs) will be provided to the workers which will include protective clothing, gloves and masks ✓ All waste material will be properly managed and will be removed on the daily basis to avoid the exposure of the hazard.
Security Risks	To eliminate the security issues following mitigation measures will be adopted: ✓ Proper Security will be provided to the workers ✓ Security guards will be appointed ✓ Before hiring any worker and his criminal record may be checked ✓ CNIC of all the workers will be kept by the Proponent ✓ Strict law will be enforced to control the crime at site

7.4.4 Schedule of Implementation

The proponent is waiting for the environmental approval from environmental protection department. No Construction work has been initiated so far as the company is waiting for the

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Environmental Approval from the Department. After the approval, the project construction work would be carried out within 2-3 months.

Sr. #	Activities	2.5 Months			2.5 Months			2.5 Months			2.5 Months		
		4W	4W	2W	4W	4W	2W	4W	4W	2W	4W	4W	2W
1	Detailed Designing												
2	Mobilization of Contractors												
3	Lean Development Period												
4	Peak installation Period												
5	Plantation at Site												
6	Commissioning												*
W=Weeks													

7.4.5 Environmental Budget:

Project proponent will allocate the Environmental Budget for the Training, maintenance and management of Environment is one lac per year that will include filling and maintenance of equipment's, restoration, plantation, and strategic planning to cope with any emergency situation and formulate the disaster management plan to cope with natural disaster. Any equipment or devices failure or replacement will not be included in this budget.

Environmental Practitioners & Experts

Consultants Team		
Name	Designation	Qualification
Mr. Umer Farooq	Senior Environmentalist	MPhil Environmental Sciences (NCBA&E) BS (Hons.) Environmental Sciences (UOL) LLB(IUB)
Engr. Munawar Qamar	Project Coordinator	M.Sc. Transport Engg.
Mr. Talha Javed	Senior Environmentalist	MPhil Environmental Sciences (PU)
Mr. Basit Farooq	Environmentalist	PhD (Environmental Sciences) (In Process) (UOL) MPhil (Environmental Sciences) (Punjab University) BS (hons) Environmental Sciences (UOL)

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Following functionaries will be involved in the implementation of EMMP:

1-The project Proponent as owners of the EMMP.

2-Project contractor(s) as executors of the EMMP during installation and operational phase of the project.

3-Operational & Maintenance (O&M) and the Health, Safety and Environment team of the project as an executor of the EMMP during the installation and operational phase of the project.

Designation	Responsibilities
Manager	• Direct operations at the site. • He will act as team lead. • Interact with community residents. • Effectively motivate staff to follow protocols and to work productively. • Look after the Health and Safety Related issues. • Responsible for scheduling staff and ensuring that supplies are stocked. • He will play a direct role in developing business goals for the mine they run, and he will help to produce a business plan to ensure that those goals are met.

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Accountant	• Proper management of the funds for the CSR. • Development of fund proposal for environment related expenses. • Ensuring the smooth transaction of funds for environmental related projects/activities. • He will prepare the yearly budget. • Taking minutes in meetings and other administrative duties. • During his shift timings, he will be responsible to look into smooth functioning of the process in environmentally sustainable way. • He will be responsible to rectify any problem regarding environmental matter in collaboration with concerned authorities. • Prepare reports on different events and incidents. • He will report all matters regarding E.M. to the manager.

7.5 Responsibilities of Functionaries

1-Responsibilities of Management of Project

Management of the project will be responsible for the environmental management and supervisory affairs during the project activities. Environmental personnel designated by the management of the project will look after the environmental related issues during the project activities.

The responsibilities of environmental personnel are as follows:

1-Monitoring progress of the project as per planned schedule of activities.

2-Exercising oversight over the implementation of environmental mitigation measures by the contractor.

3-Documenting the experience in the implementation of the environmental process.

4-Preparing training materials and implementing programs.

5-Maintaining interfaces with the other lined departments/ Stakeholders & Reporting to the management of the project on the status of EMMP implementation.

7.6 Equipment and Instruments Maintenance Details

The project proponent will create their own system, i.e. equipment for monitoring of air, water and noise or hire the services of a private laboratory for the monitoring and analysis.

7.7 Technical Training Programs

In order to raise the level of professional and managerial staff, they need to upgrade their knowledge in the related areas. The EMC will play a key role in this context.

Contractor's environmental awareness and appropriate knowledge of environmental protection is critical to the successful implementation of the EMP because without appropriate environmental awareness, knowledge & skills required for the implementation of the mitigation measures, it would be difficult for the contractor(s) to implement effective environmental protection measures. A domestic training program is proposed to train the staff that will be involved in the construction and operational stage on environmental protection and management.

7.8 Stakeholders/ Public Consultations

During the detailed field survey, consultations were made with local community/ general public. The basic purpose of these consultative meetings/ focus group discussions was to

i) share information with stakeholders about the expected impacts of proposed development works on the physical, biological and socioeconomic environment;

ii) Understand stakeholders' concerns regarding various aspects of the project, including the existing conditions and the potential impacts either positive or negative of the proposed project.

The following methodologies were used for carrying out public consultation:

- Local communities, individuals affected and owners and employees of affected commercial establishments who are directly or indirectly affected were given priority while conducting public consultation.
- Walk-through informal group consultations in the proposed project area
- The local communities had been informed through public consultation with briefing on project interventions including its benefits.

The environmental concerns and suggestions made by the participants were listed out, discussed and suggestions were accordingly incorporated in the EMP.

List of Participants during the Public Consultations & Concerns

Sr. No.	Names of main Participants	Feedback/ Concerns (Positive)	Feedback/ Concerns (Negative)
01.	Mr. Umair	People are mostly satisfied with the project. On overall basis, this is a good project because it will help to improve economic/ educational conditions of area.	Dust will blow during construction work Mobility hindrance
02.	Mr. Ali Ramzan	Construction of the project will create labour opportunities for locals	Business will get affected during construction phase
03.	Mr. Ishaq Razzaq	In favour because it will help in reduction unemployment	-None
04.	Mr. Sheikh Ali Akbar	No issue regarding project rather it will create job opportunities and improve the living standard of local community	- Noise - Dust
05.	Mr. Nauman Akbar	This project is highly recommended and supported as unskilled persons will get the labor opportunities during construction phase.	- None

7.9 Feedbacks/Concerns Highlighted

The major feedback/ concerns highlighted due to the implementation of this project were categorized with respect of design, construction and operational phase of the project are as under:

Design Stage

- ✓ Adopt efficient engineering designs and techniques to minimize the noise levels.

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- ✓ Multi-fuel storage yard should be at an appropriate distance, so that its impact could not be on the population resided at adjacent villages/ settlements.
- ✓ Soil strength and load bearing capacity should be checked before to start the construction activities.
- ✓ Jobs should be given to local people preference should be given to local persons residing at neighbor / adjacent location.

Construction Stage

- ✓ Adopt efficient engineering designs and techniques to minimize noise levels.
- ✓ Proper covering of trucks and regular sprinkling of water on land to avoid or minimize dust particulates emissions.
- ✓ Workers should be trained by contractor to control their activities in the vicinity of project area.
- ✓ Avoid the disposal of waste material in the nearby agriculture or open area.
- ✓ Safety sign should be placed at important locations/ units to avoid accidents.

Operation Stage

- ✓ Disposal of waste material in the area adjoining the project site should be avoided.
- ✓ Vegetation and tree plantation should be encouraged in the project area at operation stage.
- ✓ There should be improved storm collection infrastructure due to the operation of this project.
- ✓ Provision of trainings & first aid kits and fire extinguishers to workers to combat any emergency situation.
- ✓ Job opportunities should be provided to local residents especially to neighbours

7.10 Replacement, Relocation and Rehabilitation:

M/s "**Escorts Advanced Textiles Private Limited"** will develop restoration/reclamation or tree plantation plan to develop the project area. Maximum plantation will be done with native species within the unit, along the boundary wall and along the road side if directed by EPA.

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CHAPTER# 08
STAKEHOLDERS CONSULTATIONS

8. Objectives:

Public consultation plays a vital role in studying stakeholders' perspectives regarding the project and henceforth the successful implementation and execution of the proposed project. Public involvement is a compulsory feature of Impact Assessment, which leads to improved and acceptable decision-making. The primary objective of the stakeholders' consultations was to learn and know the apprehensions, concerns, and opinions of the key stakeholders over environmental implications of the project activities from public perception. The consultation sessions also served as a source of first-hand information about the users and the beneficiaries' expectations from the project.

Dialogue with the stakeholders and recording their concerns at appropriate stages of the project would help to tailor the project in line with stakeholders' aspirations and so increases the likelihood for public acceptance of the project and its subcomponents. It also helps to develop and maintain communication links between the project proponents and stakeholders, providing opportunities to the public to influence the project design in a positive manner. This ensures that the views and concerns of the stakeholders are incorporated into the project design and implementation with the objectives of reducing or offsetting negative impacts and enhancing benefits of the proposed project.

8.1 Methodology:

The consultation process began with the identification of the most pertinent stakeholders. Identification of the stakeholders for the proposed project plays a crucial role in development and also assists in quantifying the role of different stakeholders involved. Impacts identified by the stakeholders are measured through matrix method and mitigation measures are proposed according to the intensity of the identified impacts. Efforts were made to identify the relevant stakeholders through a systematic process based on the nature and degree of their actual and perceived stakes related to the project.

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8.2 Environmental Practitioners and Expert

According to the rules and regulations this report will be compiled and submitted to the Environment Protection & Climate Change Department (EP&CCD) and after the review on the report this report will be disseminated to the public. This dissemination and information sharing exercise will then be followed by public participation through print media in which the public will be requested for their reviews. The copies of the report will be placed in the EPA for comments from the public which will be incorporated in the report. As per rules and regulations, Environment Protection Department will hold a public hearing at the proposed project site.

The proposed Project does not have direct impacts on any individual; therefore, no primary stakeholders are identified. Secondary stakeholders are institutional stakeholders, which includes Project Proponent, local Government representatives, and Government officials of the relevant departments, NGO, general public, local residents, shop keepers, vendors, hospital owners/staff, teachers, pedestrians, and businessmen/traders of the city. The categories of the stakeholders who provided useful feedback, included:

- ✓ Project Proponent
- ✓ Government officials
- ✓ Environmental practitioners and experts
- ✓ Teachers/students
- ✓ Shopkeepers

All those stakeholders have different types of stakes according to their involvements in various aspects of the Project. The consultant tried to contact all the stakeholders and shared their views and concerns and also interacted with the community-based organizations that can support the community.

8.2.1 Responsible Authority

HSE manager will be responsible for all the operational activities

8.2.2 Other Departments and agencies

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Proponent has also consulted with other departments and they are completely satisfied with this project installation.

Proponent applied for another department NOC and will be provided in an operational phase of the project.

8.2.3 Environmental Practitioners and Experts

Consultants Team		
Name	Designation	Qualification
Mr. Umer Farooq	Senior Environmentalist	MPhil Environmental Sciences (NCBA&E) BS (Hons.) Environmental Sciences (UOL) LLB(IUB)
Engr. Munawar Qamar	Project Coordinator	M.Sc. Transport Engg.
Mr. Talha Javed	Senior Environmentalist	MPhil Environmental Sciences (PU)
Mr. Basit Farooq	Environmentalist	PhD (Environmental Sciences) (In Process) (UOL) MPhil (Environmental Sciences) (Punjab University) BS (hons) Environmental Sciences (UOL)
Mr. Anees	Marketing Manager	M.B.A
Mr. Shakeel Ahmad Wahla (Advocate High Court)	Legal Advisor	M.A, L.L.B.

8.2.4 Proponent's Environment Management Team:

Name	Designation
Nauman Akbar	HSE Manager
Umer Farooq	Senior Environmentalist

8.3 Affected & Wider Community:

There is no population present in the safe radius of the site that's why community will not be disturbed due to project operation. Although the opportunity of employment will increase if the project will approve.

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CHAPTER#09

RECOMMENDATIONS & CONCLUSIONS

09. RECOMMENDATIONS

The Environmental Impact Assessment (EIA) Report and survey results are finally evaluated to recommend the following:

- ✓ The present Environmental Impact Assessment (EIA) Report of M/S "**Escorts Advanced Textiles Private Limited**" meet the administrative and legal framework of the EPA Punjab.
- ✓ All the required PPEs should be provided to the workers working in the construction of the subject project
- ✓ The Proponent should assign task of proper housekeeping in and around the construction activity.
- ✓ The wastewater generated should be treated in a proper way before discharge.
- ✓ The Proponent should plant indigenous plants and trees as their corporate social responsibility (CSR) in a unit.
- ✓ Consider Fire safety precautions to prevent or reduce the likelihood of a fire to break out.
- ✓ Placing and maintaining fire extinguishers in easily accessible places.
- ✓ Display of Safety and Information Sign Boards at required places.
- ✓ Adequate training of Workers on use of firefighting system to deal with the situation as well as environmental and waste management trainings.

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9.1 CONCLUSION

The EIA Report for the Extension of M/S "Escorts Advanced Textiles Private Limited" at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura, is made to fulfil the legal requirement of Pakistan Environmental Protection Act 2012. In order to address the potentially adverse impacts of the project, particularly during the operational phase, an EMP has been developed, which will further improve the environmental performance of the project. The EMP assigns roles and responsibilities, provide environmental guidelines and discuss the scope of Environmental Management Plan.

The Environmental Impact Assessment (EIA) Report has thoroughly assessed all the potential environmental impacts associated with the project. The Environmental Impacts identified by the study are manageable. Site specific and practically suitable mitigation measures are recommended to mitigate the impacts. The Environmental Impact Assessment (EIA) Report concludes that constructional and operational phase of proposed project will not pose any major adverse environmental impacts on environment if the anticipated impacts are properly mitigated and the Environmental management Plan is properly implemented.

Based on the preliminary plans, environmental and social field surveys, and impacts assessment of the proposed project, it may be concluded that there are insignificant, short term and reversible impacts of the Project. The major impacts of the Project are summarized as under:

- All the other impacts like soil erosion, soil contamination, water contamination, air pollution, high noise level, etc. are of temporary nature and can be controlled and mitigated.
- It is estimated that the implementation of project activities will not cause cutting of any tree.
- No protected forest area or wildlife sanctuary or any other environmentally sensitive site exists along the Project corridor, which may be affected by the Project.
- No indigenous people and women headed households have been identified in the Project.

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- The other social issues like safety of general public and workers, security problems, risk of communicable diseases, vector borne diseases etc. are of temporary nature.
- Most of the above impacts are of temporary nature and manageable through good engineering practices and none of these are irreversible.
- A comprehensive EMP has been developed identifying the impacts, mitigation measures, agencies responsible for implementation and monitoring of the proposed measures. EMP also describes the environmental and social monitoring responsibilities of ESIC.

In the light of the above discussions, it may be concluded that the proposed preliminary Project route is environment friendly and will cause the least effects on the area's existing social and environmental settings.

Therefore, the project under consideration does not require any further environmental study hence the EIA Report has been completed for the said project so the project for the extension of M/S "Escorts Advanced Textiles Private Limited" at 33 KM West Main Grand Trunk Road, Near Khori Village Muridkey District Sheikhupura, is recommended for the Environmental Approval and issuance of NOC from the EPA, Punjab.

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