EIA REPORT

F-263(EIA)-23

Environmental Impact Assessment Report of

Allah Kahir Paper Mill

Industrial Estate Phase II, Plot # 5-A, near China Chowk, Multan



Submitted By:

Daniyal Azam Khilji

Prepared By:

Enviro Stewards Co. (Pvt) Ltd

0301-1199600

www.envirostewardspk.com

akmal@envirostewardspk.com

1st Floor Allied Bank, A Block Commercial Market, Canal View Society, Lahore

Scanned with CamScanner

DISCLAIMER

The data was based on the originality of project site shown by the project proponent/ stakeholders/ promoters, provided maps, verbal communications and all other related documents.The authenticity of supra-mentioned relies with the proponent/ stakeholders/ promoters, not with the environmental consultant. The EIA report can't be negotiated in any court of law.

ENVIRO STEWARDS CO.(PVT) LTD.

Representative: IEE & EIA Team

Scanned with CamScanner

Required Content	PAGE NO.
1. Objectives of Project	15
2. Location and Site Layout of the project (May be annexed at the end of report)	15
3. Land use on the site	15
4. Road access	15
5. Vegetation features of the site	17
6. Cost and Magnitude of operation	17
7. Schedule of implementation	17
8. Description of the project (Process flow chart/steps, Technology, Raw material and products, by-products)	18
9. Restoration and rehabilitation plans	20
Description of Environment: Clear-cut picture of existing environmental resources:	21
1. Baseline Physical Environment	21
2. Baseline Ecological Environment	25
3. Baseline Socioeconomic Environment	26
4. Lab reports of environmental analyses (along with soil tests, geo-investigation in case of building projects and industries)	Annexure
5. Suitability of the site (not prohibited, environmentally sensitive, incompatible to surroundings and unsuitable)	27
Impact Assessment 1. Methodologies for impact identifications (One/more)	30
✓ Checklists	✓
✓ Matrices	
✓ Networks	
✓ Overlays	
✓ GIS and Computer expert systems	

Scanned with CamScanner

Required Content	PAGE NO.
2. Characteristics of impacts (nature, magnitude, extent and location, timing, duration, reversibility, risk)	31
Screening of potential Environmental Impacts and mitigation measures on/during:	33
1. Project location	33
2. Design	33
3. Construction phase	34
4. Operational phase	37
5. Potential Environmental Enhancement Measures	33
Environmental management and monitoring program	39
1. Description of proposed mitigation actions along with	40
2. Schedule for implementation and Environmental budget	45
3. Environmental Management Team along with their Roles and responsibilities (by name or position)	46
4. Proposed monitoring program to assess performance or output of EMP	47
5. Proposed EMP reporting and reviewing procedures	48
6. Any training needs required to ensure implementation of EMP and Monitoring plans	49
Stakeholders Consultation: Communicate the possible impacts and concerns to the following to assist further analysis and decision making:	50
1. Proponent's Environment Management Team	51
2. The responsible authority	51
3. Other departments and agencies	51
4. Environmental practitioners and experts	53
5. Affected and wider community	54
Appendices	

Scanned with CamScanner

Required Content	PAGE NO.
1. Glossary	59
2. List of abbreviations	62
3. Lists of individuals and organizations consulted along with their written feedback	64
4. Sources of data and a full list of all reference material used	65
5. Terms of references of environmental reports and those given to individual specialists	66
6. List of names, qualifications and roles of team members carrying out the IEE/EIA study	67
7. Approvals from other concerned departments	Attached

Scanned with CamScanner

EXECUTIVE SUMMARY

Introduction

The executive summary is an outline of the key outcomes in EIA (Environmental Impact Assessment). The proponent intends to establish paper mill to meet the demand of paper by the **title** "Allah Khair Paper Mill" **located at** Industrial Estate Phase II, Plot # 05-A, near China Chowk, Multan, over an **area** of 14 Kanal and 15 Marla (80313.74 Sq. ft). The **consultant** company for this project is Enviro Stewards Company (Pvt.) Limited.

This project specific EIA (Environmental Impact Assessment) presents a detailed account of environmental and social impacts likely to emanate from the establishment of paper mill industry. The Environmental Impact Assessment (EIA) report is prepared to assess the potential impacts likely to occur from the project's entire life cycle on the local environmental quality and communities.

The proposed project is the manufacturing of paper. It falls under **Schedule II** (list of projects requiring an EIA), **Category B** (Manufacturing and Processing), **Sub sector 5** (Paper and Paper board, Paper Pulping, Paints and Dyes) of the IEE / EIA Regulations 2022 made under section 12 of Punjab Environment Protection Act 1997 (Amended 2012). Details of the process description are given in **Chapter 5** under heading process details. The assessment came up with a set of impact, mitigation measures for the project to pursue to minimize the adverse impacts on the environment and nearby communities.

Brief Outline of Project

Name of the Project	**Allah Khair Paper Mill**
Proponent	Daniyal Azam Khilji
Total Area	80313.74 Sq. ft
Purpose of the Project	To fulfill the market demand of paper
GPS Location	**30.11805 N, 71.38239 E**
Cost of the Project	Approx. 98 million PKR
Current Status of Project	Open Land
Nature of Area	Industrial area

Scanned with CamScanner

Raw Material	Used paper
Final Product	Paper
Project Capacity	8 ton per day
Generators	50 KVA
Ground Water	100-150ft
Manpower:	Construction: 20-25 Persons
	Operation: 70-80 Persons
Water Availability	Groundwater
Water consumption	10 m^3 for each ton
Period of Construction	Approx. 01 Year
Assessed Environmental issues	Air, noise, solid and liquid waste will be environmental issues
Solid Waste Management	Will manage by EPA approved vendor
Wastewater Management	Septic tanks will be installed for wastewater treatment
Consultant Name	Enviro stewards Company (Pvt.) Limited
Compliance	Punjab Environmental Quality Standard (PEQS 2016) and time to time guidelines by EPA and other enforcement Department / Agencies.

Legal and Administrative Framework

The national guidelines and legislations related to the environment considered for the project include, National Conservation Strategy (1992), National Environment Policy (2005), Pakistan Labor Policy (2010), Punjab Environmental Protection Act (PEPA 1997), amended PEPA, (2012), Punjab Environmental Quality Standards (PEQS), Land Acquisition Act (1894), Cutting of Trees (Prohibition) Act (1975), Punjab Wildlife Act (1974), Punjab Plantation and Maintenance of Trees Act (1974), Antiquities Act (1975) etc.

Environment related documents have been reviewed including submission of environmental assessment study report to obtain environmental approval was made mandatory by the Pakistan Environmental Protection Ordinance (PEPO), 1983 and the Pakistan Environmental Protection Act (1997). Section 12(1) of the PEPA (1997) amended 2017 stipulates that no project involving

Scanned with CamScanner

construction or any change in the physical environment can be undertaken unless an IEE or an EIA is conducted, and approval (NOC) is received from the relevant provincial environmental agency.

Major Impacts

Since that, the project is paper manufacturing unit, it is therefore likely to produce effects onto the water quality, land, and air of the project site. Solid waste will also produce during activities. The impacts will be more unless appropriate mitigation measures are employed for balancing out the identified adverse impacts. Innumerable environmental and social impacts are expected during construction and operational phase, significant ones of which would be:

Scanned with CamScanner

Impacts	Mitigation Measure	
	Construction Phase	Operational Phase
Air Pollution	• During the construction phase, transport vehicles must be covered with tarpaulin, and optimally loaded. • Regular sprinkling of water on sand or mud causes less spreading. • Proper maintenance of transport vehicles.	• Air masks, helmets and safety uniforms will be provided to the workers and proper monitoring will be made to check its compliance in the premises. • The engines of transport vehicles will be carefully monitored to control emission level. • Maximum number of tree plantation will be done.
Waste Water Pollution	• No water will be disposed of into sewer lines without proper treatment. • By keeping the solid waste away from sewerage so contamination will be less.	• The wastewater will not dispose of without meeting PEQ's. • Sewerage system will not be contaminated with solid waste to avoid blockage in pipelines. • Septic tanks will be provided to treat wastewater.
Noise Pollution	• Noise control measures will take such as provision of silencers on the heavy construction vehicles. • Proper maintenance of machinery engines.	• Green belts will be provided to control noise pollution. • By avoiding the unnecessary use of horns.

Scanned with CamScanner

Solid Waste Generation	• Solid waste generated will be disposed of on regular basis by appropriate means. • Avoid spreading of gravel, sand particles used in construction. • Provide waste handling facilities such as; waste bins in all sections of the factory.	• Proper solid waste handling and management practices will be adopted. • To avoid leaching solid waste will be dispose of on regular basis by appropriate means. • Separate bins will be provided in each section.
Socio Economic	• Positive impact due to generation of employment opportunity • Local people will also be preferred for the job	• Positive impact due to employment of job opportunities. • Economy rate will be increased.
Health & Safety	• Proper use of PPE's during construction activities. • Training program for the workers before the construction of said project.	• Proper use of PPE's during the operational phase. Use gloves, protective glasses and others. • Implementation of all safety rules and measures during the working hours.

Scanned with CamScanner

Proposed Monitoring

It is the EIA project so the impacts will be long term, significant or adverse. These impacts can be reduced by regular monitoring and implementing all the mitigation measures. Environmental Monitoring Program should be formulated which ensures effective surveillance of the environmental parameters at various stages of the project development and compliances with PEQS and legal obligations.

An environmental management and monitoring plan provides a delivery mechanism to address the potential environmental impacts of a project during its construction and operational phase, to enhance project benefits, and to introduce health and safety standards of good practice to be adopted for proposed project.

The proponent will ensure the proper implementation of mitigation measures for the concerned installation and operation and maintenance phase through adequate monitoring.

Conclusion and Recommendation

The impacts include wastewater, solid waste, air quality, noise and are manageable by applying all the mitigation measures and by complying with environmental laws of the country. The major positive impacts of the project include job opportunities for local people. The Project will raise the worker's income and can improve social-economic infrastructure. Nevertheless, to ensure long-term environmental sustainability of the project, institutional arrangements must be put into place for controlling the adverse impacts all during the life of the project.

It is recommended that the proponent should obtain an environmental approval (No Objection Certificate) from the Punjab-EPA before proceeding further into the construction activities as per regulatory requirements.

Scanned with CamScanner

1. INTRODUCTION

1.1.General

Paper is a thin substance that people use for writing, printing, wrapping, and numerous other purposes. Paper mills primarily are engaged in manufacturing paper from wood pulp and other fiber pulp. The paper and board industry in Pakistan has emerged over the years. The first paper unit was founded in 1952. These units now cater around 80 percent of the total domestic demand of Pakistan. Paper Industry in Pakistan is important as it has emerged and survived well over the years. About 70% of the paper units are in Punjab, 10% are in NWFP and the rest 20% are in Sindh. As one of the largest industrial sectors in the world, the pulp and paper industry has an enormous influence on global forests. The increasing population demands for greater educational facilities which lead to more demand of paper production.

1.2. Purpose of Report

This report has been prepared to conform to the requirements of the Punjab Environmental Protection Act (Amendment) 2012, which states that:

> ***No proponent of a project shall commence construction or operation unless he has filed with the 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 Provincial Agency"***

The purpose of report is to evaluate the impacts caused on the environment and on human health by the said project. It also describes the mitigation measures, monitoring plan that will be followed during construction and operational phase.

According to EPA a detailed information is provided in this report for the issuance of environmental approval in compliance with the Punjab Environmental Protection Act - 1997 (Amended 2012) Section 12.

1.3. Identification of Project & Proponent

Proponent name	Daniyal Azam Khilji
Address	House No 100-A, Gulgasht Colony, Multan
Designation	CEO

Scanned with CamScanner

Project title	Allah Khair Paper Mill
Project location	Industrial Estate Phase II, Plot # 05-A, near China Chowk, Multan

1.4. Consultant Details

Consultant Details	
Consultant name	Enviro Stewards Company (Pvt.) LTD.
Contact No.	+92-301-1199600
Address	1st floor Allied Bank A Block Commercial Market, Canal View Housing Society, Lahore.
Team Leader	
Name	Miss Sara Fatima
Designation	Senior Environmentalist
Contact No.	+92-301-1198600

1.5. Nature and Size of Project

The project deals with manufacturing of paper. The total area of project is approximately 14 Kanal and 15 Marla. Capacity of project is 8 ton per day. The land is industrial in nature. The current status of land is open area.

Schedule of Area	
Cover Machinery Hall G.F Block A	9038 Sq.Ft.
Cover G.F Tank no 1 to 6 Block B	1500 Sq.Ft.
Cover Paper waste area Block C	932.099 Sq.Ft.
Cover Kitchen and Dining Area Block D	949.358 Sq.Ft.
Cover Masjid area Block D	1222.500 Sq.Ft.
Cover Area Bath Block D	405 Sq.Ft.
Cover Area of office Block D	922.5 Sq.Ft.
Cover Area of S.W Room G.F Block E	91 Sq.Ft.
Cover Area of G. Room G.F. Block F	133 Sq.Ft.
Total Covered area	**15193.457 Sq.Ft.**

1.6. Location of Project

The project site is located at Industrial Estate Phase II, Plot # 05-A, near China Chowk, Multan. The coordinates of project site are **30.11805 N, 71.38239 E**. The map is attached with it.

Scanned with CamScanner

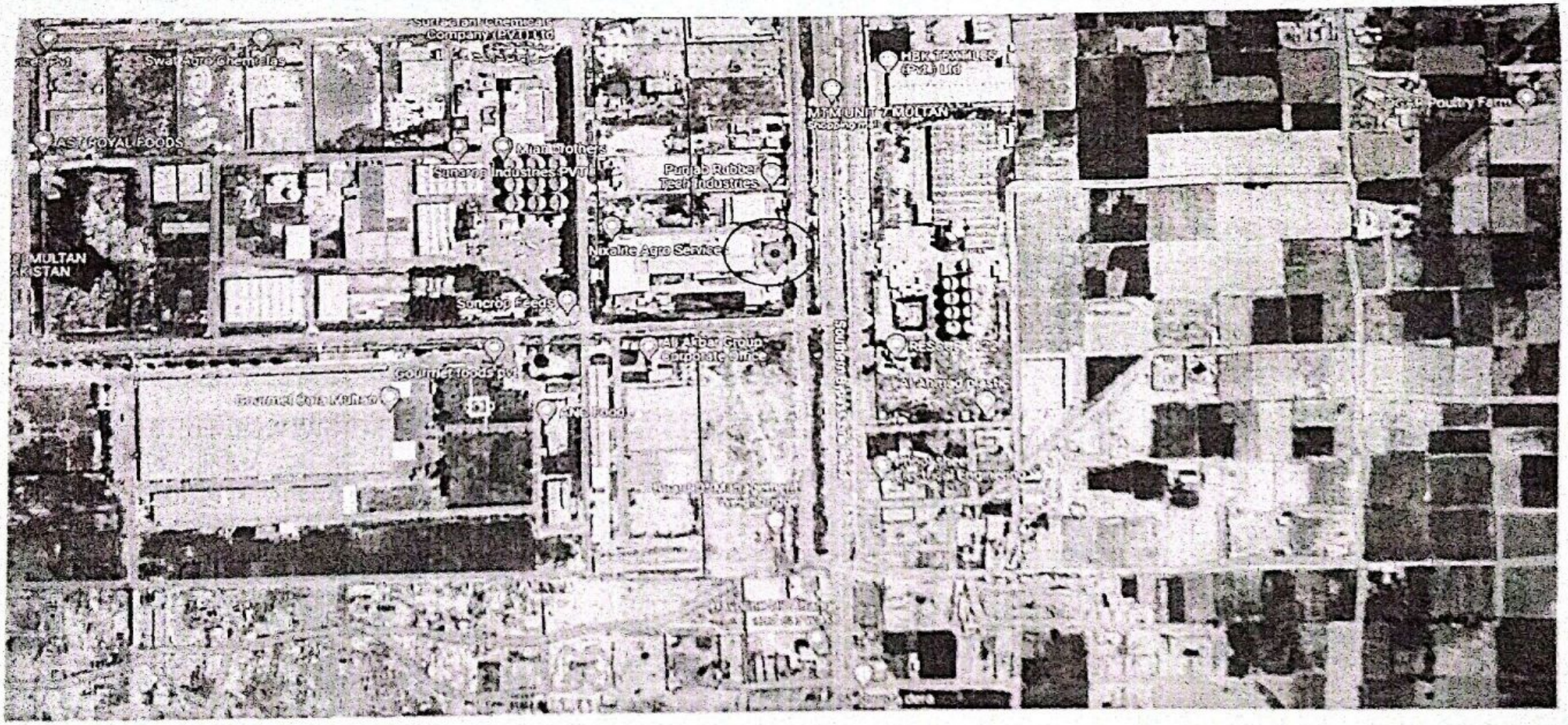


Figure 1 Project Location

Scanned with CamScanner

1.7.Extent of the EIA study, scope of the study, magnitude of the efforts

This EIA study has been accomplished following the requirements serial 2.3 of the "Guidelines for the preparation and review of Environmental Reports, October 1997". In compliance of PEPA, 1997(amended 2012) requirements, an EIA report has been prepared by the team of environmental experts. This document covers all environmental impacts, due to the proposed project, in and around the project area comprising the physical, ecological and socio-economic aspects together with identification of the potential positive and negative impacts. Any developmental activities outside the project area like rehabilitation of the road and establishment of the other factories outside the project vicinity have not been covered under this EIA study.

The EIA report covers the examination of the physical, biological and environmental, socioeconomic impact caused due to the following activities:

- Installation of machines for the construction purpose.
- Manufacturing process of paper.
- Transportation of raw material and goods.

Scanned with CamScanner

2. POLICY, LEGISLATION, LEGAL AND ADMINISTRATIVE FRAMEWORK

2.1. General

This section deals with the current policy as well as legal and administrative framework related to carrying out EIA (Environmental Impact Assessment) of various projects. A number of laws exist in Pakistan, containing a number of clauses concerning protection of the environment. Like other Projects, this project is also required to go through an Environmental Assessment for getting a NOC under Section 12 of the Punjab Environmental Protection Act – 1997 (Amended 2012).

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.

2.2. Screening

The proposed project is the paper manufacturing. It falls under **Schedule II** (list of projects requiring an EIA), **Category B** (Manufacturing and Processing), **Sub sector 5** (Paper and Paper board, Paper Pulping, Paints and Dyes) of the IEE / EIA Regulations 2012 made under section 12 of Punjab Environment Protection Act 1997 (Amended 2012). Details of the process description are given in Chapter 5 under heading process details.

2.3. Existing Regulation and Framework

This EIA study has been carried out in the light of the policy guidelines for the preparation of IEE/EIA Reports under the procedure and practices formulated by the Provincial Environmental Protection Agency (EPA).

2.4. Relevant Legal / Institutional Framework

The applicable laws for the environmental study of the project are briefly given below. The proponent of the project will abide by the applicable laws and regulations.

2.4.1. National Conservation Strategy, 1992

On March 1, 1992, the Cabinet of Pakistan approved the National Conservation Strategy. It describes the stark reality of the country's deteriorating resource base and its implications for what

Scanned with CamScanner

is still largely a natural resource-based economy. It sets forth the beginnings of a plan to integrate environmental concerns into virtually every aspect of Pakistani economic life. The strategy has three overriding objectives: conservation of natural resources, sustainable development, and improved efficiency in the use and management of resources.

2.4.2. PEPO 1983, PEPA 1997 (Amended 2012)

In 1983, the Government of Pakistan issued an Environmental Protection Ordinance (EPO), which was replaced by the Pakistan Environmental Protection Act (PEPA) 1997, through an Act of Parliament. Now the PEPA 1997 has been replaced by Punjab Environmental Protection Act 1997 (Amended 2012) on 18th April 2012.

Under Sec. 8 of Environment Protection Ordinance (EPO) 1983, it was necessary to carry out EIA/IEE for all development projects, but there were no EIA/IEE regulations under that ordinance.

Under section 12 of the Punjab Environmental Protection Act, 1997 (Amended 2012) it is mandatory to take an Environmental Approval Environmental Protection Agency for commencement of any construction of project.

2.4.3. National Environmental Policy 2005

The Government of Pakistan (GOP) has notified National Environmental Policy 2005, for different projects/aspects in which guidelines/priorities have been given to undertake the projects having significant environmental impacts.

2.4.4. Review of EIA and IEE Regulations 2022

The GOP has issued Review of Initial Environmental Examination and Environmental Impact Assessment Regulations 2022, to review the Initial Environmental Examination (IEE) / Environmental Impact Assessment (EIA) Reports.

2.4.5. Guidelines for the Preparation and Review of Environmental Reports, 1997

The GOP has also framed guidelines for the preparation and review of IEE/EIA of projects in various developmental sectors.

Scanned with CamScanner

2.4.6. Punjab Environmental Quality Standards (PEQS)

According to Punjab Environmental Protection Act, 1997 (Amended 2012), Punjab Environmental Quality Standards (PEQS) were established for municipal and industrial effluents and air emissions.

2.4.7. Guidelines for Sensitive and Critical Areas

GOP has issued Guidelines for Sensitive and Critical Areas in October 1997. The objective of the guideline is to provide guidance to project proponents and other stakeholders in the environmental assessment process, so that the projects are planned and sited in a way that protects the values of sensitive and critical areas.

2.4.8. Policy and procedures for the Filing, Review and Approval of Environmental Assessments, November-1997

Environmental Assessment is the Primary means of managing the approval of new development proposals in Pakistan. Environmental Assessment allows for the systematic examination of proposals, clear procedures which provide for the interests of relevant Government Departments and other stakeholders to carefully consider.

2.4.9. Guidelines for Public Consultation, Pakistan Environmental Protection Agency October 1997

This guideline is part of a package of regulations and guidelines which include:

- Punjab Environmental Protection Act, 1997 (Amended 2012)
- Policy and Procedures for filing, review and approval of environmental assessments
- Guidelines for the preparation and review of Environmental Reports
- Guidelines for sensitive and critical areas
- National Environmental Quality Standards (NEQS)

2.4.10. Punjab Wildlife Protection Act, 1974

This act was framed in 1974 by the province Punjab and is about of protection and conservation of Wildlife.

Scanned with CamScanner

2.4.11. Forest Act, 1927

This act was framed in 1927. The Forest Act, 1927 is still the basic charter for the forest departments in Pakistan. This law empowers provincial governments to manage forest areas.

2.4.12. Explosive Act, 1884

This act deals with explosives in prohibiting either absolutely or subject to conditions, the manufacture, possession or importation of any explosive which is so dangerous in character that, in the opinion of the appropriate Government, it is expedient for public safety to issue the notification.

2.4.13. Punjab Local Government Ordinance, 2022

Schedules 4 and 8 of this Ordinance pertain to environmental pollution. Under the Ordinance, the local councils are authorized to restrict projects causing pollution to air, water or land. They may also initiate schemes for improving the environment.

2.4.14. Pakistan Penal Code, 1860

This defines the penalties for violations concerning pollution of air, water bodies and land. Sections 268 to 291 are about offences affecting public health. The offences relating to public Health safety and environment are as under;

Sec 268: Public Nuisance

Sec 269: Negligent act likely to spread infection of disease dangerous to life

Sec 270: Malignant act likely to spread infection of disease dangerous to life

Sec 278: Making atmosphere noxious to health

Sec 284: Negligent conduct with respect to poisonous substance

Sec. 290: Punishment for public nuisance in cases not otherwise provided for

Sec. 291: Continuance of nuisance after injunction to discontinue

2.4.15. Punjab Land Use Rules 2009

In January 2009 the Punjab Government notified "Punjab Land Use Rules 2009" for the clarification of Lahore Master Plan. In these rules permissible land use according to area type is defined.

Scanned with CamScanner

2.4.16. Antiquities Act 1975

The law relates to protection of Antiquities, monuments, National &International heritage. The compliance of this Act is mandatory for the Installation of Generators. Under section 22 of the Act no development plan or scheme or new construction can be done within distance of 200ft from the boundary of the monuments/ National Heritage. There is no historical Site or monuments in the proximity of the project.

2.4.17. Solid Waste Management Rules 2005

The Solid Waste Management Department, CDGF has notified these rules for proper waste management.

2.4.18. Labor Law

The labor laws apply on child labor and measuring instruments.

2.4.19. Safety & Civil Defense Laws

The civil defense laws provide details about safety, fire protection and civil defense.

2.4.20. Guidelines for Critical and Sensitive Area

These guidelines have been prepared under section 12 of Punjab Environmental Protection Act 1997 (Amended 2012) for protection and safety of critical and sensitive localities.

Scanned with CamScanner

3. SCOPING

The scoping in Environmental Impact Assessment involves a comprehensive assessment of the potential impacts of a project or activity, including direct and indirect impacts, cumulative impacts, and potential long-term effects. This assessment is carried out by a team of environmental and social experts, who analyze the proposed project or activity in detail and identify potential risks and impacts on various aspects of the environment, such as air quality, water quality, biodiversity, and cultural heritage. In this Environmental Impact Assessment, a public consultation process is involved, where members of the public and other stakeholders can provide feedback and raise concerns about the proposed project or activity.

3.1. Spatial and Temporal Boundaries of Environmental Assessment

Due to installation of current project land use will change from open land to manufacturing unit of M/s Allah Khair Paper Mill. Within radius of 5-km, some industries and can be seen in below figure but current project will be installed by adopting proper mitigation measures to avoid disturbance to surrounding industries and local community. In current project significant emissions will be observed because in proposed unit manufacturing will be done, wastewater and air emissions will be significant. Wastewater will be treated before disposal to ensure PEQS. No environmental sensitive area is present within safe distance that could be impacted due to current project installation.



Figure 2 5-Km Radius from Project Site

Scanned with CamScanner

3.2. Important Issues and Concerns Raised during Consultation

During consultation it was observed that many people were in favor of the project but some of the issues and concerns were raised. During survey following concerns of local community, Government Departments, Environmental Practitioners and Experts, nearby industries were noted.

- Local should be preferred for the job opportunities.
- Proper training should be given to workers.
- Noisy activities should be confined.
- Air pollution should be controlled effectively.
- Wastewater should not dispose of without proper treatment.
- Solid waste must be collected timely.
- A proper wastewater treatment plant should be installed.
- Ensure the tree plantation in the vicinity of area.
- Health and safety of workers should be ensured.
- EMMP should be designed and enforced with great spirit
- Respective team officers should be responsible for the implementation of management plan and actions.
- Avoid the excessive use of groundwater. Limited amount of water should be use.
- Cleanliness of area should be ensured.
- To reduce or avoid air pollution transport vehicles should be covered in the construction phase.
- Proponent shall work for betterment of community

3.3. Significant Impacts and Factors to be Determined.

The factors and impacts to be determined around the project site are:

- Dust and Particulate emissions
- Wastewater generation and its treatment
- Control Air emissions
- Solid waste management
- Occupational Health and safety
- Site Security

Scanned with CamScanner

- Traffic Management
- Hygiene management
- Community impacts
- Job opportunities for locals
- Confined noisy activities.
- Resource conservation
- Avoid excessive water consumption.
- Energy efficient techniques must be adopted.
- Proper site restoration after construction
- Tree plantation at designated green areas
- Emergency preparedness

Scanned with CamScanner

4. ALTERNATIVE CONSIDERATION

Alternatives are examined to determine the best method of achieving project objectives and to reduce environmental impacts. Alternatives are recommended and examined to determine the best method of achieving project objectives, while minimizing environmental impacts (WB December 1996). The discussion and analysis of alternatives in an Environmental Impact Assessment (EIA) study should consider other practicable strategies that will promote the elimination of negative environmental impacts identified. Also, it is essential to develop most suitable technology or design option. This evaluation explains the selection of the most feasible alternative in terms of economics, environment and health & safety. It outlines the following options that were considered for this project: In particular most suitable options that were considered for this project are related to:

- Site alternative, their selection and rejection criteria
- Design / technology alternative, their selection and rejection criteria
- Environmental alternative, their selection and rejection criteria
- Economic Alternatives, their selection and rejection criteria

4.1. Site Alternative

The selected site is in **Industrial area,** and many industries are present around the project site. No project site alternative was considered as the proposed location is in industrial estate. The following factors are the main reason for selected land and **no alternative** is considered due to:

- Land is owned by Proponent
- There is no environmental sensitive area is present near the site
- No need of resettlement around the location
- Watercourse is not present near the area
- Easy road access to the market
- Site is at a safe distance from sensitive receptors
- Availability of basic facilities (road, power, water, telephone etc.)

Scanned with CamScanner

By considering these values the selected site is a source of development in the area. Also, away from protected and sensitive areas. So, site is suitable for establishment of said project.

4.2. Design/Technology Alternative

For development of current project state of art technology will be selected to avoid long term environmental impact. Proponent will use updated technology and new machinery to run the process. This system emits less emissions and can work properly. Proponent is doing heavy investment for this project so latest/state of art technology will be preferred to ensure good quality products. Water mitigation techniques also considered at their best including septic tanks for wastewater treatment process.

4.3. Environmental Alternative

The unit site is located in an area which is away from any biodiversity including forestry, wildlife, migratory birds, flora and fauna, fishery. There is no cultural or any other heritage in the project area. There is no environmental sensitivity in the project area. These factors are also strongly supportive of the proposed project site. After completion of construction, proper landscaping will be done. The proponent is going to install waste management facility and wastewater treatment facility. Moreover, the proponent is very concerned and conscious about the quality and equally about the environmental protection and resource conservation.

4.4. Economic Alternative

Currently selected design is economically efficient. Tree plantation will be done that will reduce temperature of the area and act as noise barrier. Building design will be such that maximum use of day light and LED lights will be installed to minimize electricity consumption. Job opportunities for the local person as well as for the skilled person. The economy rate of the project site will also increase. The cumulative effect of this types project would result in noticeable economic growth.

Scanned with CamScanner

5. PROJECT DESCRIPTION

5.1. Type and Category of Project

The project is establishment of paper manufacturing unit named as **Allah Khair Paper Mill** located at Plot no 5-A, Industrial Estate Phase II, Multan. The cost of the project is around 98 million. According to projects categorization for environmental assessment studies, the proposed project falls under **Schedule II** (list of projects requiring EIA), **Category B** (Manufacturing and Processing) and **sub sector 5** (Paper and Paper board, Paper pulping, Paints and Dyes) of the EIA Regulations 2022 made under section 12 of Punjab Environment Protection Act 1997 (Amended 2012) under which the Environmental Impact Assessment for (EIA) is mandatory for getting Environmental Approval.

5.2. Objective of Project

The main objectives for the establishment of said project unit are:

- To meet the demand of paper in market
- To ensure the supply of best quality product
- To create job opportunities for locals

5.3. Location and Site Layout

The location of project is Plot 05-A, Industrial Estate Phase II, Multan. The coordinates of project site are **30.11805N, 71.38239E**. Total area of project site is 80313.74 square feet out of which approximately 15193.457 square feet is covered area. Google map is attached with file.

5.4. Land Use On-Site

Project site land is industrial in nature and currently it is **open land** so no activity is going on. After the issuance of NOC construction will be start.

5.5. Road Access

The project site is near the major and main road i.e., Southern Bypass Link Road connected to Hamidpur road and N-70. At far, there is also Canal Road. Map is attached next.

Scanned with CamScanner

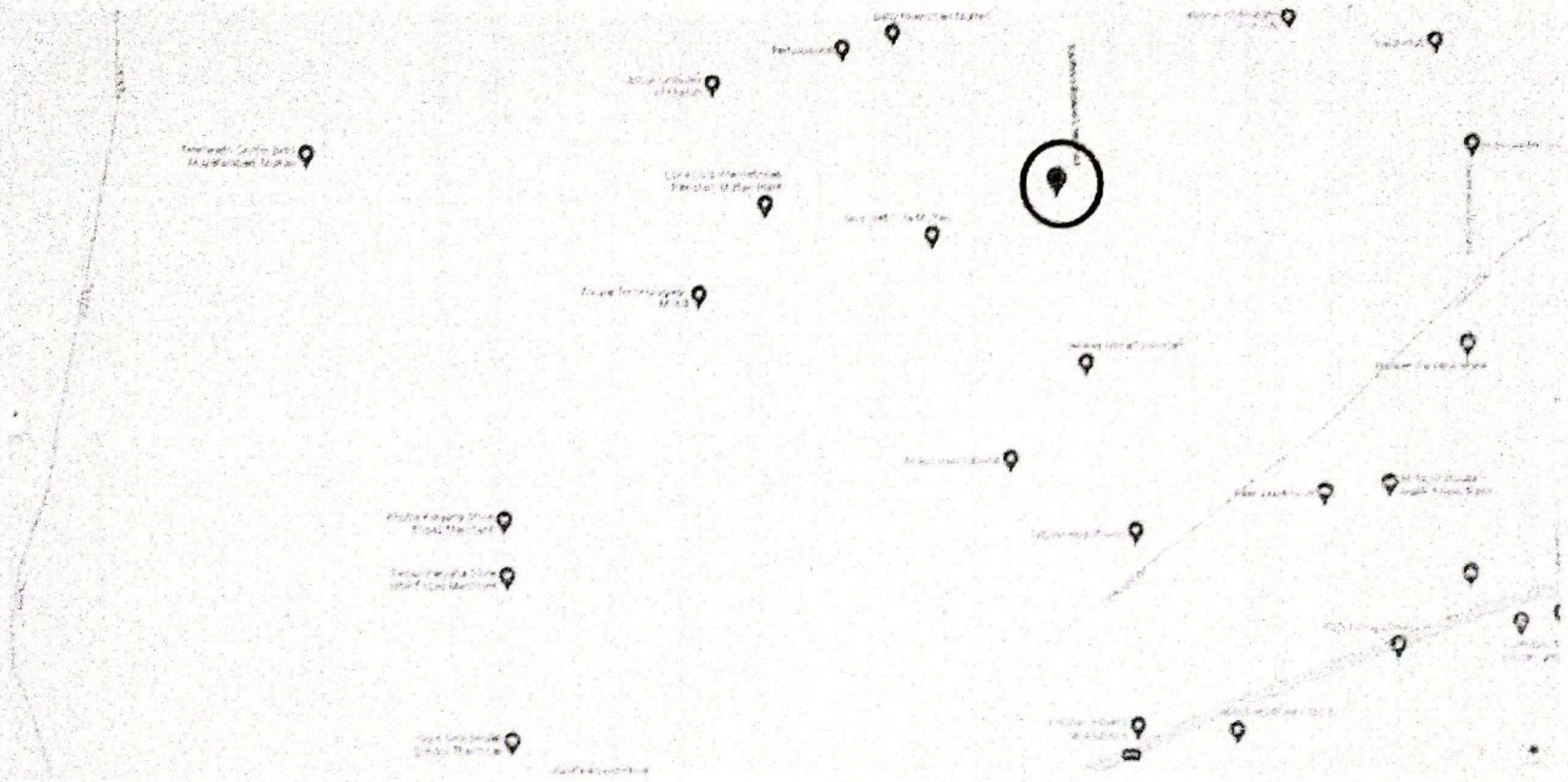


Figure 3 Road Access Map

Scanned with CamScanner

5.6. Vegetative Features of Site

As site is industrial in nature, no rare species of plant or tree is present near project site. Some common trees are present there.

5.7. Cost and Magnitude of Project

The total cost of project is 98 million and the coordinates **30.11805N, 71.38239E.**

Amenities	Cost
Land Cost	50 million
Infrastructure development, water supply, boundary walls, electric supply, roads etc.	39 million
Solid Waste Management	02 million
Wastewater Management	06 million
Tree Plantation	01 million
Total Cost	**98 million**

5.8. Proposed Schedule of Implementation

Project schedule (tentative) is described hereunder.

Stage I: The clearing of land, preparation of land for construction activity.

Stage II: During this phase machinery will be brought to the site and installed.

Stage III: In this phase all the outstanding activities will be completed, construction activities will be initiated.

Stage IV: after completing construction, employees will be hired, and staff will be assigned their respective work. The operation activities will be initiated.

Scanned with CamScanner

Activities	Times Frame				
	Four Week	Four Week	Four Week	Four Week	Four Week
Preliminary Phase and Acquiring etc.)					
Design Phase					
Pre-Construction ctivities Finalization					
Construction Phase					
Purchasing Phase					
lachinery Installation					
Commissioning Phase					
Recruiting Of Staff					
Operation Phase					

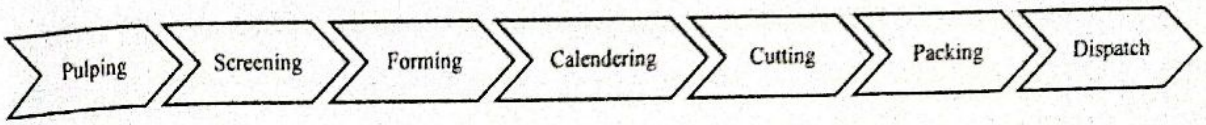
5.9. Process Description

The purpose of proponent is to establish a paper manufacturing unit to fulfill the basic needs of local community and to provide cost efficient products. The basic details of the process are given below:

Features	Description
Raw Material	Recycled fabric i.e., Used paper
Final Product	Paper
Production Capacity	8 ton per day

Scanned with CamScanner

The steps involved in paper production are following:



The detail of the process step is as under:

Raw Material: The material used for paper manufacturing is recycled fabric i.e., **used paper**. The used paper is collected and converted into pulp.

Pulping: The process of pulping involves the mixing of used/old paper with water and bleaching powder. This will help the paper to break down. The purpose of adding bleaching powder is to improve the whiteness of the pulp. This is achieved mainly through the role of chemical to remove the residual lignin in the pulp.

Screening: The screening process involves the passing of pulp through screens to remove fiber bundles, and other contaminants before the pulp is converted into paper. This process not only enhance the cleanliness of paper products but increase the flexibility and economy of the pulping processes. Pulp screens promote a higher level of paper recycling through their ability to remove a wide range of contaminants at relatively low cost.

Forming: Forming is a critical step in the paper manufacturing process that involves transforming the pulp into a continuous sheet of paper on a paper machine. After screening the water is drained off and fiber begin to bond together. In this the pulp speed will be consistent to ensure that pulp contain all properties like strength, smoothness and thickness of paper.

Calendering: Calendering is a post-processing step in the paper manufacturing process that is used to improve the surface properties of the paper, such as smoothness, printability. The calendering process involves passing the paper sheet through a series of heated rollers under high pressure. The rollers are typically made of steel or cast iron and are either smooth or embossed with patterns or textures.

Scanned with CamScanner

Cutting: After the paper is made it is in the form of large paper rolls that are several meters wide and long. The cutting blades are adjusted to produce the sheets of paper according to different lengths and widths according to the demand.

Packing: After the whole manufacturing process and cutting of paper, it is then packed in a wrapping to prevent it from any damage. The packing material consist of different information like its manufacturer, quality, size, weight. A proper record is maintained in this step. It will ensure that products packs are properly sealed.

Dispatch for market supply: When the packing is done, the orders will be taken and the product is dispatched for supply in the market to fulfill the market demand.

List of Machinery

The following equipment will be used:

- Pulper
- Screening Machine
- Paper Formation Machine
- Calendering Machine
- Rollers
- Cutters

Other facilities used in the manufacturing process are:

Electricity: The source of electricity supply is WAPDA (MEPCO).

Water Resource: The ground water will be used for water consumption.

Fire Fighting System: The firefighting system will also available in case of any emergency.

Wastewater Treatment System: For wastewater treatment, septic tanks will be installed and operated.

5.10. Restoration and Rehabilitation Plan

As the selected project location is in industrial area there is no local community there. There is no structure of significance that needs to be relocated or dismantled due the operation of the proposed

Scanned with CamScanner

project. No fresh land is to be occupied. Hence no relocation or restoration and rehabilitation are required. Project site notified by govt. as an industrial estate. Open area will be covered by trees and plants after the project completion.

Scanned with CamScanner

6. DESCRIPTION OF ENVIRONMENT

Environmental baseline data study is essential while preparing EIA reports. The basic purpose is to establish a clear understanding of existing environmental conditions in project area and to identify potential impacts of proposed project. It refers to the collection of baseline information on biophysical, social and economic aspects of project location.

A site visit was conducted to survey the field area for collection of relevant data. Interviews were conducted with the public and stakeholders of the project area to seek the public opinion on the implementation of the proposed project. Various Governmental and Non-Governmental Organizations (NGOs) were also visited for the collection of relevant data and their views on the proposed project were recorded for incorporation into the EIA report. The environmental impacts of any activity or process will be assessed based on deviation from the baseline or normal situation. The following components form part of the baseline: -

- Physical Environment
- Ecological Environment
- Socio-Economic Environment

6.1.Physical Environment

This part examines the physical resources such as topography, soil, climate, surface and ground water resources and quality, ambient air quality and geology of not only the project site but also the city to assess whether the project under assessment can or does have any impacts on any of these parameters. Multan is a city in the Punjab, Pakistan. The city consists of tehsils Multan Saddar, Jalalpur Pirwala and Shahabad and other. It is a well-known cotton-growing area. Its approximate height above Sea level is 500ft. The fauna and flora of the area include: Ukkan, Kikar, Beri, Jand, van, and Karil. No special species of animal's worth mention are to be found. The demographical profile of city shows that the total area of the district is 3,721 square kilometers (1,436 sq. mi). Its elevation is about 122 m. According to Census 2017, the population is about 1.872 million. (Census Report 2017).

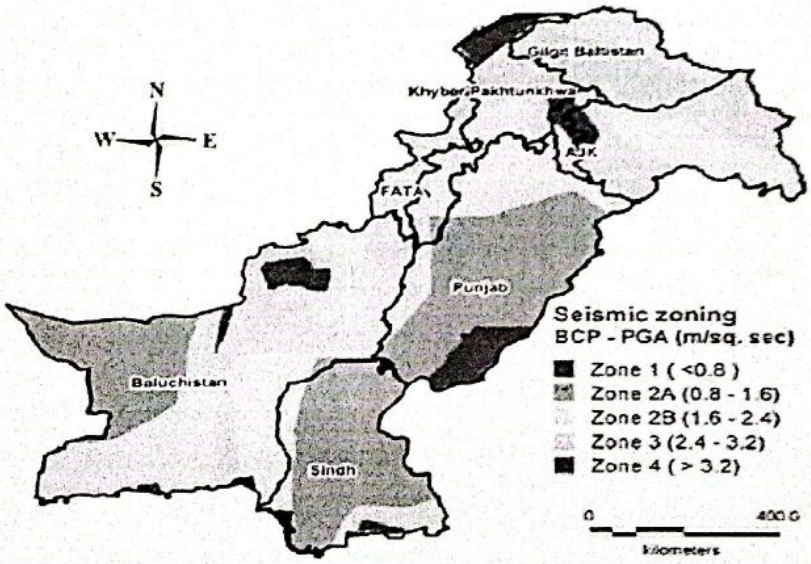
Scanned with CamScanner

6.1.1. Geological Formation

This part examines the physical resources such as topography, soil, climate, surface and ground water resources and quality, ambient air quality and geology of not only the project site but also the city to assess whether the project under assessment can or does have any impacts on any of these parameters. Development wise, it is more developed than the other tehsils of district Multan: Multan Saddar, Jalalpur Pirwala and Shujabad. City became more famous nationally and internationally after the General Elections of 2013 when allegations of rigging were put by the Pakistan Tehrik-e-Insaaf in National Assembly Constituency NA-154.

6.1.2. Seismicity

Pakistan lies on an active seismic belt of earth. Seismic observations indicate that hundreds of shocks originate every year. Mostly, these seismic waves are of low intensity and do not have significant effect. According to seismic zones of UN- Habitat the project area falls under Zone 2A. The seismic zoning is shown in the figure.



6.1.3. Climate

Climatically Multan is hot, arid, and very dry as it receives less than 125 mm of annual rainfall. May, June, and July are the hottest months and the mean maximum and minimum temperatures

Scanned with CamScanner

for these months are 42° C and 28 ° C respectively. Dust storms are a common occurrence in the city, and the monsoon rains, from June to September, can be severe.

Table 1 Climate of Project Area

Month	Mean temperature Max (Celsius)	Mean temperature Min (Celsius)	Precipitation (%)	Relative Humidity (%)
January	19.7	5.0	33.8	66.2
February	21.6	7.7	50.0	60.0
March	26.0	12.5	60.5	53.8
April	33.0	17.7	36.5	41.8
May	38.1	22.0	31.8	32.5
June	40.5	25.8	51.6	37.8
July	35.7	25.8	23.3	67.8
August	34.4	25.3	22.2	70.8
September	35.0	23.0	77.7	65.5
October	33.1	16.6	12.2	55.6
November	27.8	9.9	9.9	62.7
December	21.5	5.7	30.4	68.9
Annual mean	**30.6**	**16.4**	**36.6**	**56.4**

6.1.4. Season and Rainfall

Rainfall also varies markedly and it's predictably not certain from year to year. A wet year may be followed by a dry year. Rainfall in the regions mainly occurs in July and August when the monsoon depression travels westward. Precipitation has marked seasonal fluctuation. The average annual rainfall based on the 32 years observation is 125 mm (4.921 inches), almost all of which occurs in the two months of July and August (Reference: The 2004 Baseline Survey on Millennium Development Goals in AACs, Pakistan).

Scanned with CamScanner

6.1.5. Temperature

The project area is semi-arid and characterized by large seasonal variations of temperature. The summer season lasts from April to September with an average temperature of 31.25°C (88.25°F). The extreme maximum and minimum temperature in Summer being 42.0°C (112.4°F) and 9.6°C (48.5°F) respectively. During the winter months, the daytime temperature generally ranges between 19.4°C (67.02°F) to 33.9°C (93.02°F) and night temperatures are generally in the range of 4.8°C (40.64°F) to 17.7°C (63.96°F). Extreme minimum temperature sometimes reaches to -2°C (28.4°F). It generally begins to be active from mid-December and tends to concentrate over this region. In the fold of these disturbances sometimes well marked cold fronts are formed. (Reference: The 2004 Baseline Survey on Millennium Development Goals in AACs, Pakistan).

6.2.Environmental baseline modeling

6.2.1. Noise Level

Noise is described as an unwanted sound emitted from un-avoidable sources of anthropogenic activities. Daily based natural induced sources of noise are rare to none but human induced noise sources are plenty and un-avoidable. Physically, there is no distinction between sound and noise. Sound is sensory.

The perception and the complex pattern of sound waves is labeled noise, music, speech, low altitude aero plane flying etc. The noise pollution in the project area is source of pollution and nuisance. Among eight noise measurement locations in the cities, the study says, on average, the noise level ranged from 57-60 dB (A) in and around the project site.

6.2.2. Ambient Air Quality

Atmospheric pollution means the imbalance in the normal air chemistry. It can occur due to the addition of a new chemical into atmosphere or by the change in concentration of the chemicals already existing in the atmosphere. Atmospheric pollution particularly in urban area has a strong impact upon daily life. The reasons of such changes can both be natural as well as anthropogenic. Ambient air quality is a key to measure the concentration of the various chemicals in atmosphere; especially of the chemicals which pose detrimental effects on health, safety, and environment, to have a comparison with their safe concentrations, as established in WHO Standards and NAAQS.

Scanned with CamScanner

6.2.3. Surface Water and Ground Water

There are no surface water resources like canal or ponds, near the project area. The area surrounding the project site is poorly drained. Ground water is the principal source of municipal water supply. This is also the case in the immediate vicinity of the site. The City's drinking water is obtained from groundwater aquifer by means of tube wells located throughout the area. Groundwater is pumped from 60-65 ft. feet and is generally good for direct consumption.

6.3. Ecological Environment

In this section, the baseline environmental conditions pertaining to biological environment are described. These conditions have subsequently been used to identify the potential impacts on the biological environment that are likely to arise from the project activities.

6.3.1. Flora

There are no natural forest trees, grassland, or ecological important place. But the natural vegetation has been replaced by the agricultural crops. So, this sector consists generally of agricultural land irrigated by tube wells. Multan district is distinguished for its status in Agricultural production especially cotton and Mango. It has renowned Agricultural research institutes like i.e., Central Cotton Research Institute, Cotton Research Station, Mango Research Station, Agricultural College at Baha-ud-Din Zakria University.

Local Name	Fruiting Plant Specie
Mango	Mangifera Indica
Guava	Psidium guajava
Date Palm	Phoenix dactylifera

Local Name	Scientific Name
Kikar	Acacia nilotica
Sufaida	Eucalyptus camaldulensis
Albizia lebbeck	Siris
Peepal	Ficus religiosa
Tahli	Dalbergia sissoo
Beri	Ziziphus nummularia

Scanned with CamScanner

6.3.2. Fauna

The project area, on account of nature of vegetation and topography, is rich in vegetation and wildlife. Fauna of the project area consists of:

1. Mammals
2. Reptiles
3. Amphibians
4. Birds

The most common species are:

Local Name	Species
Quail	Coturnix coturnix
Owl Pigeon	Columbia Livia
Corvus splendens	House Crow
Ranatigrina	Frog

6.4.Socio Economic Environment

The project site is in industrial land; hence direct disturbance to communities will be minimum from the project activities. However, the physical extent of the study area extends up to 5km surrounding the proposed site (referred as project area) considering the physical, ecological, and socioeconomic boundaries beyond which the project is not likely to significantly influence local communities, and also with a view of covering a substantial sample size for collection of reliable and authentic socio-economic data.

6.4.1. Study objectives

The socio-economic study undertaken for the Environmental Impact Assessment (EIA) was designed and conducted to meet the following objectives:

- To assess the human environment of the area i.e., to determine the Quality of life of communities within the Region of Influence.
- To have an insight into the day-to-day activities of people especially focusing on their income generating activities viz., agriculture and labor.
- To access the vulnerabilities of the local communities and the effects of project activities on their Quality of Life and Consultation with communities regarding the proposed project activities and to find out their concerns and aspirations.

Scanned with CamScanner

6.4.2. Resettlement patterns

Different type of houses was observed in Multan during survey i.e., *katcha, pakka, semi pakka* etc having poor drainage system. Majority of people live within the village, a few in their farmhouses (Deras) while some make their homes on their agricultural land. So, there is no formal pattern of settlements. Family composition of both the villages is dominantly joint family system but a few nuclear families also exist in the area. Both the villages have the facility of electricity and Sui-gas. People use groundwater obtained via hand-pumps for drinking purposes without any treatment.

6.4.3. Indigenous people

People inhibiting the project area are of different castes and races. Most of the families have been living here in these villages from 20 to 25 years which has led to homogeneity of culture and the development of a closed economy. There is no danger or damage or elimination of indigenous community as the locals are steeped in their customs and have no intention of relocating.

6.4.4. Religion, ethnic group and Cast Patterns

99% communities of these villages are Punjabi speaking only 1% community belongs to other ethnic groups like Sraiki, Pashto etc. Religion plays an important role in the social structure of the society. Sunni Muslims is primarily inhibiting these two villages except a few families of Ahl-e-tasheh and Ahl-e-Hadees also lives here.

6.5.Quality of Life Value

Overall, the social and physical infrastructure is not up to the mark in the project area. However, the project area is better as compared to the other rural areas of the province. A brief account of the education, health, infrastructure, and markets of the area is as follows:

6.5.1. Education

The level of literacy is low as compared to the literacy rate of the district Multan i.e., 45%. Average education of the community is Primary. Though there are higher secondary government schools, private sector schools and colleges for girls and boys are also available near the vicinity of project area. People go to Multan and other cities of Pakistan for university education.

Scanned with CamScanner

6.5.2. Health facility

Basic Health Unit, Dispensaries and Private clinics exist in the surrounding villages of the project area. People also access to private hospitals in city and sometimes to nearby private dispensaries. Fever, malaria and chest congestion, Hepatitis-C were reported as the common diseases of the project area. In the project area, health conditions are much developed.

6.5.3. Economy of Area

District Multan is an industrial and commercial city having multi-occupations. The population of the area is having different occupation including government and private services as well as agriculture. The women also assist their men in the economic activity in different fields of business, service, education, and other institutions. Women mostly serve in schools, colleges, and hospitals.

Multan is generating many employment opportunities for its locals and outsiders. Industrial areas are using manpower, while nearby towns are providing business opportunities to the residents. In this semi urban area, people are involved in daily wages jobs, while some are involved in small business. They normally travel to adjacent areas for work. Some work in the industrial area and in the surrounding universities and colleges. People are also involved in agriculture. Area having access to irrigation water is another source of income. Similarly, livestock is a secondary source of income. It is safe to assume that livestock farming is practiced uniformly in both types of areas. Economy of the project area is dependent primarily on two occupations i.e., agriculture (maximum) and livestock (limited extent), while some locals are also involved in manual labor.

6.5.4. Agriculture

Agriculture is one of the most important economic activities in the project area. Major crops of the area are:

In **Rabi:** Wheat, Fodder, and some seasonal vegetables

In **Kharif:** Rice, Sugarcane, Fodder and Seasonal Vegetables

Irrigation in the area is primarily sustained through tube-well irrigation. Canals are the major sources of water supply for irrigation in the area.

Scanned with CamScanner

6.5.5. Livestock

Livestock ownership has also developed in the project area, especially among poor families who sell animals during emergency days as mostly unemployed people depend on livestock and sometimes agriculture. The people have livestock which include cows, goats, sheep, and donkeys. All the animals are of native breed. Milk and butter from the livestock are consumed by the household and are sometimes sold in the market

Good breeds of buffaloes and cows are found in the project area. Goats, horses, asses, and camels are also part of the livestock in these villages.

6.5.6. Archeology and Cultural Sites

There were no archaeological sites near the project area although nearest chaks do have mosques, graveyards and darbars.

Scanned with CamScanner

7. IMPACT ASSESSMENT

As the project relates to paper production it can impose impacts on water, land, air and on workers' health. The further detail is given under here:

7.1. Impact Assessment Method

The method used to evaluate the impacts of Paper Manufacturing Unit is **Checklist method**. This method has been used to identify the significance and magnitude of the impact as well as the nature, reversibility and extent. The impact assessment done on the basis of project phases from construction to operation.

7.2. Characteristics of Impact

Based on the nature of impacts further subdivisions can be as followed:

- Positive and Negative Impacts
- Long- and Short-Term Impacts
- Direct and Indirect Impacts
- Continuous and Intermediate Impacts
- Wide and Local Impacts
- Large, moderate and minor Impacts

Scanned with CamScanner

Basic Components	Impact Characteristics												
	Duration		Location		Frequency		Extent		Significant			Nature	
	Long	Short	Direct	Indirect	Continuous	Intermediate	Wide	Local	Large	Moderate	Minor	Positive	Negative
Soil Erosion		*		*		*		*			*		*
Air Quality		*	*			*		*			*		*
Ground Water Quality		*	*		*		*		*				*
Noise Level		*	*			*		*			*		*
Wastewater Generation	*		*		*		*		*				*
Solid Waste	*		*		*			*		*			*
Aesthetic		*		*		*		*			*		*
Flora		*		*		*		*			*		*
Fauna		*		*		*		*			*		*
Employment Rate		*	*			*	*			*		*	
Economic Uplift		*	*			*	*			*		*	
Health and Safety		*	*			*		*			*		*

Scanned with CamScanner

DURING OPERATIONAL PHASE

Basic Components	Impact Characteristics												
	Duration		Location		Frequency		Extent		Significant			Nature	
	Long	Short	Direct	Indirect	Continuous	Intermediate	Wide	Local	Large	Moderate	Minor	Positive	Negative
Soil Erosion		*		*		*		*			*		*
Air Quality		*	*			*		*			*		*
Ground Water Quality	*		*		*		*		*				*
Noise Level		*	*			*		*			*		*
Wastewater Generation	*		*		*		*		*				*
Solid Waste	*		*		*			*		*			*
Machine Installation	*		*		*			*		*		*	*
Generator Installation		*		*		*		*			*		*
Aesthetic		*		*		*		*			*		*
Flora		*		*		*		*			*		*
Fauna		*		*		*		*			*		*
Economic Uplift	*		*		*		*		*			*	
Employment Rate	*		*		*		*		*			*	
Health and Safety		*	*			*		*			*		*

Scanned with CamScanner

8. ANTICIPATED IMPACTS AND MITIGATION MEASURES

This section provides the analysis of the potential impacts during installation and operational phases of the proposed project of paper manufacturing unit on the physical, biological, and socioeconomic environment of the project area. Environmental sensitivity of the project area is described through a thorough review of the project activities. This chapter then suggests effective mitigation strategies to help combat the adverse nature of these impacts and delivers a monitoring scheme to manage them.

Impact Significance

As the project relates to paper production and can majorly impose impacts on water, land, air and on workers' health. The further detail is given under here:

8.1. Impact and mitigation measure related to Project Location

The location is well linked to the other parts of the city through a Southern bypass link road. There will be no enduring, high and adverse impact predicted due to the establishment of the proposed project at this location. The selected site is owned by the client and there is no clash associated with the ownership of the land. Moreover, the area is not inhabited by any ecologically important or protected flora and fauna specie as well as within 5.0 km vicinity of the project area. No archaeology and historically important site are located. Also, the site is in industrial area, residential area is far away the impact will not impose on local public due to site.

8.2. Impact and Mitigation Measure related to Project Design

All technical standards will be kept in mind while construction and operational activities. The solid waste will be generated due to process of packaging. The proper handling of waste will be ensured. The technology will be updated and new machines will be used for processing. Advance and comprehensive method will be followed. The fuel used in machinery is more eco-friendly and will emit less emissions. The design proposed is latest and can be used easily. The transportation activities will be done through the main road except through the road near residential areas.

Scanned with CamScanner

8.1. Impacts and Mitigation Measure During Construction Phase

The activities during construction phase will cause impacts on the factors like air, noise, land, water, health and on the economy. To reduce the adverse impacts the mitigation measures will be provided to meet better quality demand. The detail of impacts and mitigation measure is as follows:

Impact on Air Quality

Due to different activities during construction like leveling, compaction the dust particles raised and mix with air. Also, the increase in traffic load can emit the pollutant like CO_2, SO_x, NO_x, $PM_{2.5}$, CO. This pollutant will also contaminate the air and increase air pollution. The uncovered vehicles while transferring material like sand, mud, gravels on the construction site can spread out due to air/wind.

Mitigation Measure

The recommended mitigation measure to control air pollution are:

- Regular spray water on sand, mud to avoid spreading.
- Use the fuel that cause less pollution.
- The loaded trucks will be fully covered to reduce pollution.
- Turning of the vehicles to reduce toxic gas emissions.

Impact on Noise Quality

During construction process compaction and mixing of raw material process, use of heavy machinery for clearing of the site and trolleys and trucks used for the transportation of construction materials will create some noise and vibration as well.

Mitigation Measure

- Engines of vehicles visiting the project site will be properly tuned-up.
- Truck/tractor drivers will be instructed not to play loud music and stop use of horn.

Scanned with CamScanner

- Noise control measures will take such as provision of silencers on the heavy construction vehicles.

Impact related to Health and Safety

During construction, the installation of machines, laying of pipes can affect workers health. There are more chances of cuts on skin that wills cause damage to workers.

Mitigation Measure

- Proper training session will be provided before construction activity.
- Proper use of PPEs like gloves, shoe, and helmets can reduce the health risk and increase safety.
- Daily checking of workers is mandatory.
- Avoid all possible injuries during construction of the project.
- Be aware of emergency escape routes.
- Promptly report all accidents to the concerned environmental manager.
- Not smoke or produce flame in No Smoking Areas.

Impact on Solid Waste

If the solid waste of construction site will not be properly managed it can run into the drainage system and can block it. Also, it can contaminate the nearby areas and cause pollution. Leaching cause, the groundwater to contaminate.

Mitigation Measure

- Separate waste bins will be provided for solid waste collection.
- A proper waste management system will develop.
- Timely collection of solid waste.

Scanned with CamScanner

Impact on Drainage System

Construction activities required for infrastructure installation (lying of water/sewage pipes, electrical cables, etc.) may adversely impact the existing drainage patterns in the area.

Mitigation Measure

- Avoid the solid waste to spread in the drainage pipe.
- All activities will be done carefully without causing any damage.
- Keep the drainage system covered.

Impact on Land

Loss of topsoil due to soil erosion may remain a problem during clearing and construction phases of the project.

Mitigation Measure

- Site clearing activities will be conducted in stages to minimize the area of exposed soil at any given time.

Socio-Economic Impact

Several categories of employees will be required during the construction phase. This will include skilled and unskilled laborers, engineers, contractors, and a small number of other professionals. These levels of short-term employment would have a positive impact on the local economy and on regional unemployment.

Followed Measures

- In the construction process, un-skilled workers can also get the job.
- Sellers in the market, labors, transport drivers and many can earn.
- Unemployment rate decreases.

Scanned with CamScanner

5.4. Anticipated Impacts during Operational Phase

Impact on Air Quality

Transportation is cause of gas emission. Vehicles used for raw material emit the flue gases that after mixing with air can increase the acidic components in the atmosphere. Burning of fuel is also a source of air pollution. Generators are also a source of air pollution.

Mitigation Measure

- Use the new fuel in vehicle, black fuel emission will release high carbon concentration.
- Turned off vehicles timely to avoid emissions.
- Cyclones will be installed to control air pollution

Impact on Noise Quality

Due to operating machines, noise will be generated. The transport vehicles used for transporting raw material and products can cause noise pollution. Generators used at project site are also a source of noise pollution.

Mitigation Measure

- Avoid unnecessary use of horn on roads.
- Operate the machines in proper separate room so that the noise level may reduce.

Impacts related to Health and Safety

Due to sudden incident worker's health may affect. Improper use of machines during production, loading and unloading of raw material and product, any kind of negligence cause damage.

Mitigation Measure

- Proper use of personal protective equipment (PPE's) like gloves, goggles, mask, apron, shoe and other material.

Scanned with CamScanner

- Must have training about the machinery operating system.
- Worker must be able to read the safety signs and symbols.
- Regular monitoring and implementation of safety measures.

Impact of Solid Waste

The solid waste produced during the operational activities if mixed with surrounding material cause the pollution. Raw material and packaging waste is a source of solid waste generation and effect the environment.

Mitigation Measure

- Use special waste bins in case of disposal of packaging bags.
- Timely collection and disposal of solid waste.
- Proper space for solid waste collection far away from production unit and drainage system.

Impacts of Wastewater

Domestic wastewater will be produced. During operational phase a lot of wastewaters is produced. Direct dispose of can affect the drainage system. Improper or mismanagement of sewerage supply system can cause polluted water to spread out and can affect the land.

Mitigation Measure

- Provide proper drainage system.
- **Septic tanks** will be provided.
- A close loop system will be installed. The water from process activities can be reusable. Also treated waste water will be used to avoid more ground water consumption.
- Treatment plant will operate timely.
- Wastewater should meet the PEQS before discharging it to the drain.

Impact on Economy

Due to the production process, the employment rate increase. As job opportunities increase there will be the economic up-lift. The economy rate will also be increased by the supply of final product. Skilled and non-skilled workers both can get job.

Scanned with CamScanner

Impact on Flora and Fauna

No significant species present there. Nomie of common trees and animals found there. No adverse impact imposes on it.

Mitigation Measure

- After construction trees will be planted.
- Avoid unnecessary cutting and damage to habitats

Mitigation Measures for Water Quality/level

Water consumption for paper production is more that can affect the groundwater level. To avoid this condition septic tanks will be provided. The waste water will be treated and will be re-used in project operational activities.

5.5. Potential Environmental Enhancement measure

i. At workplace workers and employers have enough information, knowledge, and training regarding first aid treatment in case of any emergency. The project provides proper medical facilities to workers and staff to cope with any incidental accidents and tackle them.

ii. Workers and all the staff get proper training about the work and safety practices.

iii. Drugs and narcotics are strictly prohibited during working hours in working areas.

iv. To control any occupational health and safety impact a detailed planning for mitigation measures will be done.

v. All employees will be trained for EHS policies and practices. The management will follow the environmental management plan to implement the mitigation measures further. Institutional measures such as occupational health & safety planning and environmental compliance monitoring for environmental parameters will be strictly followed.

vi. The staff / attendants of the machinery will use proper protective gears.

Scanned with CamScanner

ENVIRONMENTAL MAAGEMENT AND MONITORING PLAN

chapter provides a detailed environmental management plan and strategies. The objective of environmental Management and Monitoring Plan (EMMP) is to address all the major environmental issues and provide a framework for the implementation of the proposed mitigation ures during the operational phases of the proposed project.

Objective of Environmental Management Plan

MP has been prepared with the objectives of:

defining roles and responsibilities of the project proponent for the implementation of EMP and identifying areas where these roles and responsibilities can be shared with other parties involved in the execution and monitoring of the project.

defining mitigation measures required for avoiding or minimizing potential impacts assessed in the EIA.

developing a monitoring mechanism and identifying requisite monitoring parameters to confirm effectiveness of the mitigation measures recommended in the EIA

defining the requirements for communication, documentation, training and monitoring, management, and implementation of the mitigation measures.

Proposed Mitigation Actions

gation planning is the process used by state, tribal, and local leaders to understand risks from ral hazards and develop long-term strategies that will reduce the impacts of future events on life, property, and the environment.

Scanned with CamScanner

S.#	IMPACT	MITIGATION MEASURE	RESPONSIBILITY IMPLEMENTATION	RESPONSIBILITY MONITORING
A	**CONSTRUCTION PHASE**			
1.	**AIR QUALITY**			
	Dust, SO_2, NO_x & CO emissions from trucks, cause health issues to workers. Particulate matter will be generated during the Construction.	• Spray by water trucks to minimize the dust. • Maintenance of construction machinery should be made mandatory to reduce emissions. • Haul-trucks carrying earth, sand, aggregate and other materials will be kept covered with tarpaulin to reduce dust pollution.	Contractor	Proponent through Consultant
2.	**NOISE**			
	The impact of noise generated during construction	• Engines of vehicles visiting project site should be properly tuned-up. The green zone of plants will also help decrease sound levels.	Contractor	Proponent through Consultant
3.	**OCCUPATION, HEALTH, AND SAFETY**			
	There will always be the possibility regarding hazard to health and safety of workers to occur during construction stage, lying of piles, and machines installation.	• First aid facilities should be readily available for the workers at the site. The contractor will ensure the availability of transport and driver to handle any misshape which may occur. • Relevant safety devices like belts, gloves and testers should be strictly used by the Labor force at the work site. • Implement training programs that support the achievement of the staff and personnel's competency in relation to HSE.	Contractor	Proponent through Consultant
4.	**DISPOSAL OF CONSTRUCTION DEBRIS**			

Scanned with CamScanner

	Each phase of the development shall produce solid waste, disposal of which, if not managed properly could have negative impacts on the site and surrounding area.	• A site waste management plan should be made the responsibility of the contractor. The wastes should be properly segregated and separated to encourage recycling of some useful waste materials. • Train or educate the involved stakeholders on the importance and means of waste management and handling.	Contractor	Proponent through Consultant
5.	**GROUND WATER QUALITY**			
	No appreciable impacts on the ground water quality are anticipated.	• Avoid accidental spills through good work practice.	Contractor	Proponent through Consultant
6.	**SOIL CONTAMINATION**			
	Any improper storage or handling of materials including paints, fuels, solvents, oil, cement, etc. would result in soil contamination.	• The contractor should be required to impart proper training to their workforce in the storage and handling of materials	Contractor	Proponent through Consultant
7.	**FLORA & FAUNA**			
	No negative impact on the ecological environment will take place on account of cutting of any trees in the project area and clearing of vegetation from the site.	• Trees and ornamental plants shall be planted along the project boundary which increase the aesthetic value of the site and will combat pollution. • Landscaping is deemed to be a powerful mitigation activity with a positive impact.	Contractor	Proponent through Consultant
8.	**SOCIO-ECONOMIC ENVIRONMENT**			
	Several categories of employees will be required during the construction phase. This would have a positive impact on the local economy and on regional unemployment.	• Socially responsible attitude of the project management towards local people and resources can make project people friendly. • Awareness and educational programs introduced by the project management or e area can reduce the fear among the people regarding non-local people.	Contractor & Proponent	SIE
B.	**OPERATIONAL STAGE**			
1.	**AIR QUALITY**			

Scanned with CamScanner

	Air pollution due to transport and vehicle. Due to some fumes of chemical the toxic particles mix in the air	• Proper maintenance and tuning of the vehicles can reduce it. • Contain the air tight bottles and pack in which chemicals will store.	Proponent	EPA
2.	**NOISE QUALITY**			
	Noise due to crushing activity, movement of vehicles, during traffic of materials	• Plantation along with boundary will make buffer zone to avoid noise.	Proponent	EPA
3.	**OCCUPATION, HEALTH, AND SAFETY**			
	There will always be the possibility regarding hazards to health and safety of workers to occur during the operational phase of the project.	• All the workers involved in transport of the materials will be suggested to wear boots, gloves, safety cap to avoid injury. • Plantation of trees along the boundary walls will help in reducing the noise levels to enough extent. All the vehicles should be properly tuned up and regular maintenance and periodic monitoring must be done.	Proponent	EPA
4.	**SOLID & HAZARDOUS WASTE**			
	The solid/chemical waste may negatively impact the site, the workers, the visitors, and the factory surrounding in different ways including aesthetically, occupationally as well as from health, safety and environment point of view.	• Domestic solid waste will be collected in waste bins. Hazardous waste will be stored in separate bins. • Must use protective gloves while carrying the containers to avoid any hazardous effect	Proponent	EPA
5.	**WASTEWATER QUALITY**			
	Domestic wastewater will be produced	• Domestic wastewater will be disposed of after treatment in septic tanks • Wastewater will meet PEQ's.	Proponent	EPA

Scanned with CamScanner

6.	**FLORA AND FAUNA**			
	Excessive plantation shall be done on the walls. This will act as buffer zone and bring healthy change in environment during operational phase of project.	• The process of plantation should be kept sustainable throughout project life.	Proponent	EPA
7.	**SOCIO-ECONOMIC ENVIRONMENT**			
	A few employees will be required in the operational phase, and this would have a positive impact on the local economy and on regional unemployment.	• The management of the project can capitalize the positive attitude of people of the study area towards this project by offering them maximum employment opportunities. • Measurements and steps should be taken to keep undisturbed the privacy of adjoining workplaces.	Proponent	EPA

Scanned with CamScanner

9.1. Schedule for Implementation and Environmental Budget

Schedule of Implementation

Project schedule (tentative) is described hereunder.

Stage I: The clearing of land, preparation of land for construction activity.

Stage II: During this phase machinery will be brought to the site and installed.

Stage III: In this phase all the outstanding activities will be completed, construction activities will be initiated.

Stage IV: after completing construction, employees will be hired, and staff will be assigned their respective work. The operation activities will be initiated.

Activities	Times Frame				
	Four Week	Four Week	Four Week	Four Week	Four Week
Preliminary Phase (Land Acquiring etc.)					
Design Phase					
Pre-Construction Activities Finalization					
Construction Phase					
Purchasing Phase					
Machinery Installation					
Commissioning Phase					
Recruiting Of Staff					
Operation Phase					

Scanned with CamScanner

Environmental Budget

Sr.no.	Environmental Components	Quantity	Pak. Rs.	Details/ Basis
1	Tree Plantation	100-500	01 million	Cost includes plantation and maintenance up to three years
2	Solid Waste Management/ Mortality Pits	L.S.	02 million	Lump sum
3	Wastewater management	L.S.	06 million	Lump sum
4	Health & Safety Measures	L.S.	25,000	Lump sum
5	Miscellaneous Cost	L.S.	12,000	Lump sum
6	Air Quality Monitoring	2	15,000	Lump sum
7	Water & Wastewater Quality Monitoring	2	12,000	2 samples @ 6000/Sample
8	Noise Level Monitoring	2	10,000	2 samples @ 5000/Sample
9	Soil Tests	2	10,000	2 samples @ 5000/Sample
10	Training		10,000	2 samples @ 5000/Sample
11	External Monitoring		50,000	Lump sum
	Total Environmental and Social Management Cost		Approx. 10 million PKR	

9.4. Environment Management Team

Responsibilities of Proponent

The project owner (proponent) will be responsible for the environmental management and supervisory affairs during the installation and operational phase of the proposed project. An environment personnel designated by the management of proposed project will look after the environment related issues during the operational phase. The responsibilities of environmental personnel are as follows:

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

Scanned with CamScanner

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
6. Reporting the status of EMP implementation to the management

Responsibilities of project contractor:

Contractor appointed for the commissioning of the project including the auxiliary facilities is responsible for:

- Implementation of all provisions of the EMMP and with any environmental and other codes of conduct required by the project.
- Provision of proper Personal Protective Equipment (PPE) to the workers and train them for their proper use.

9.5. Monitoring Program to Access Performance

Following functionaries will be involved in the implementation of EMP or to access output:

1. The project owner (proponent) as the project proponent and owner of the EMP.
2. Project excavation contractor(s) as executors of the EMP during installation phase of the project.
3. Transportation& Maintenance (O&M) and the health, safety and environment team of the proposed project as an executor of the EMP during the transportation phase of the project.

Scanned with CamScanner

Category	Impact	Project Activity	Monitoring Mechanism	Frequency	Monitoring Agency
Construction and Operational Phase					
Land Resource	Solid Waste	Implementation of Solid waste Management system	Record keeping and timely transfer of waste from bags to the disposal Site for disposal	Daily	Manager HSE, Project Proponent
	Soil Contamination	Implementation of Management Plan	Visual monitoring and complete soil analysis	Daily and annually	
Ecological	Flora	Uprooting of trees	Inventory of uprooted	During Baseline	
Air Resource	Air Emission	Dust emissions during Construction and Operation	Monitoring of the emissions as per applicable standards Water sprinkling will be done regularly to avoid dust emissions	Once before start of operation and after that as when required during operation	
	Dust				
Noise	Noise Pollution	Development/operational material transportation	As per applicable standards	Fortnightly	
Water Quality	Wastewater generation	Domestic wastewater, due to construction activities	Water quality testing	Monthly	
Health and Safety	Health risk	During construction and operational phase mainly due to more chemical usage	Keep record of workers as they use PPE's and follow safety signs and instructions	Daily	
Resource		During construction phase	Trees and vegetation during operation phase	Survey, once in a year and after the completion of the Project	

Scanned with CamScanner

8.5 Training Schedule

Proponent provides periodic Environmental and HSE trainings to workers working in their existing plants. The management of Proponent feels HSE is important for moral, legal, and financial reasons. The management of proponent has developed strict SOPs for Health and Safety of workers. These SOPs includes SOPs for Personal protective equipment's, Risk Assessment, permit to work, SOP for work at height, Fire Safety and Prevention, Confined Space entry etc. A comprehensive annual training calendar has also been developed for training on topics of HSE for management as well as labors. A training log will be maintained by Site engineer and contractors.

Participants	Date, Time & Location	Training Topics	Schedule	Responsible Authority
Staff of team management and contractor	As specified	• Introduction to the project and EMMP. • EMMP communication, documentation, monitoring and reporting requirements.	Every month	Project manager
All site personnel	As specified	• Site induction training on HSE system and requirements • Environmental sensitivities of the project area • Communication of environmental problems to corresponding officials • Waste disposal	After every week	Project manager
Drivers	As specified	• Road safety • Road restrictions • Vehicle restrictions • Waste disposal • Defensive driving	After every 3 months	Project manager
Camp Staff	As specified	• Camp operations • Waste disposal • Good housekeeping	Monthly	Project manager

Scanned with CamScanner

10. STAKEHOLDERS CONSULTATION

[illegible] acceptability of the project and the area is a key to success. Consultation with the [illegible] is a tool for managing two-way communication between the project proponent and [illegible] public. Its goal is to improve decision making and built understanding by actively [illegible] individuals, groups, and organizations, which have stake in the project. This involvement [illegible] project's long-term viability and enhances its benefits to locally affected people and other [illegible]

[illegible] the socioeconomic and environmental impacts, filed surveys are extremely essential. [illegible] to the surveys at the preliminary stage, consultation with the community and their active [illegible] plays a vital role in successful implementation of the project. To identify the different [illegible] of stakeholders and ascertain their perceptions about the project, an initial environmental [illegible] was conducted. Informal group discussions were also held as an additional tool for [illegible] feedback from the stakeholders that are being discussed in the following pages.

10.1. Objective of Consultation

[illegible] consultation plays a vital role in studying the effects of the project on the stakeholders [illegible] the successful implementation and execution of the proposed project. Public involvement [illegible] compulsory feature of environmental assessment, which leads to better and more acceptable [illegible] making. The objective of the consultation with stakeholders is to help verify the [illegible] and social issues that have been presumed to arise and to identify those which [illegible] known or are unique to the construction of the proposed unit.

Scanned with CamScanner

Proponent's Environment Management Team

Managers	Responsibilities
Contract Manager	• Implementation of EMP • Environmental issues identification during pre- construction phase. • Communication EMP to all employees.
Contractor	• Ensure that the control measures identified during environmental surveys are implemented as they are relevant to their work/visit. • Ensure that the project management team is notified of any non-conformance of control measures or environmental incident where the environment has been put at risk.
Site manager	• Ensure site material and safe handling of hazardous waste. • Controlled access arrangement to avoid hazards. • Emergency arrangements to avoid any unfortunate incident. • First aid facilities/services should be available on-site. • Ensure good standards of workmanship.
Site HSE advisor	• Management plan to be followed and implemented. • Daily checks & weekly checks. • Regular consultation with workers.
Site Environment advisor	• According to legislation and consent develop EMP. • Ensure application of EMP. • Carry out regular site inspection.
Public Contact Officer	• First point of contact for members of the public. • Arrange and manage public forums. • Maintain relation with stakeholders. • Door to door surveys as appropriate. • Coordination with work.

10.3. The responsible Authority

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 all HSE condition at the PEQS.

10.4. Other Department and Agencies

For the impact analysis detailed meetings were held with the management of said project, local community, education institutes, health institutes, hospital and NGOs. Issues were discussed

Scanned with CamScanner

...may affect the environment and the implementation of proposed project. All possible ...igation measures were considered and incorporated in the Environmental Management Plan.

Sr. No.	Designation	Concerns
	Environment Protection Department (EPD)	
	General Manager	To reduce environmental impacts following points are summarized: • Solid waste should be managed in Environmentally friendly manner • Wastewater should be treated effectively & approval should be acquired from concerned agency before disposing off in nearby drain • HSE* at the site should be managed effectively • No impact is being foreseen due to the selected location • Locals should be given job opportunity
	Environmental Inspector	
	Social Welfare Department (SWD)	
	Deputy Director Officer	Following comments are suggested by the Deputy Director on the behalf of SWD: • Final goods should be affordable for the locals • The proposed product should facilitate locals and they should be economical • Job opportunities should be given to the locals • Wages should be given according to the work assign to them • Life insurance of the workers should be given as well as all the facilities should be given as per labor laws
	Irrigation Department	
	Sub Division	Following comments were suggested: • Untreated wastewater should not be disposed of in the nearby drains without proper treatment • Beneficial as job opportunities will be available to the local residents.
	Executive Engineer	
	Forest Department	

Scanned with CamScanner

District Forest Officer	Following recommendation were suggested by the forest department. • Plantation and landscape activities should be carried out on broader scale • Proper drainage system must be available at site

Environmental Practitioners and Experts

S. No	Name	Designation	Comment/ Suggestions
	Sara Fatima	Senior Environmentalist	• She said that the project will have positive impact on economy but its construction should be done in environmentally friendly way • Basic facilities should be provided to local community
	Zia Ur Rehman Farooqi	Ph.D. Scholar Environmental Sciences	• Tree plantation in designated green zones should be carried out • Proper disposal of the solid waste • HSE management measures should be adopted and implemented effectively
	Kanza Fatima	Junior Environmentalist	• Waste must be collected and dispose of properly • Ensure the use of PPE's during the operational activities. • Wastewater should be treated • Ensure the tree plantation
	Akeeza Kanwal	Environmentalist	• Health and safety department and trained people should be there in case of any emergency • Periodic monitoring of every fire extinguisher (expiry date, type)
	Mr. Saffi Ahmed	Environmentalist	• He said that locals should be preferred for employment. • Value addition of area. Proper mitigation measures must be adopted while construction and operation of this project
	Engr. M. Bilal	Environmental Engineer	Following comments are summarized to control the air pollution generation during operational phase • It should be ensured that the pollution abatement technique

Scanned with CamScanner

10.6. Affected and Wider Community

There is no affected community present in the radius of our study area. Enviro Stewards Company (Private) Limited team has consulted with the inhabitants of the different areas. They provided positive remarks regarding the subject project and in the favor of the subject activity for the proposed plant.

Stakeholders' participation Performa's and socioeconomic questionnaire were get filled by the inhabitants to evaluate the project socio-economic impacts. List of respondents and socioeconomic questionnaires are attached as Annexure with the report.

The stakeholder category involves nearby resident, different industries, shopkeepers. The issues discussed with them are mostly related to the following:

- Activities of project.
- Impacts caused due to certain activities during construction and operational phase.
- The proposed mitigation measures.

Scanned with CamScanner



Figure 4 Project Site

Scanned with CamScanner

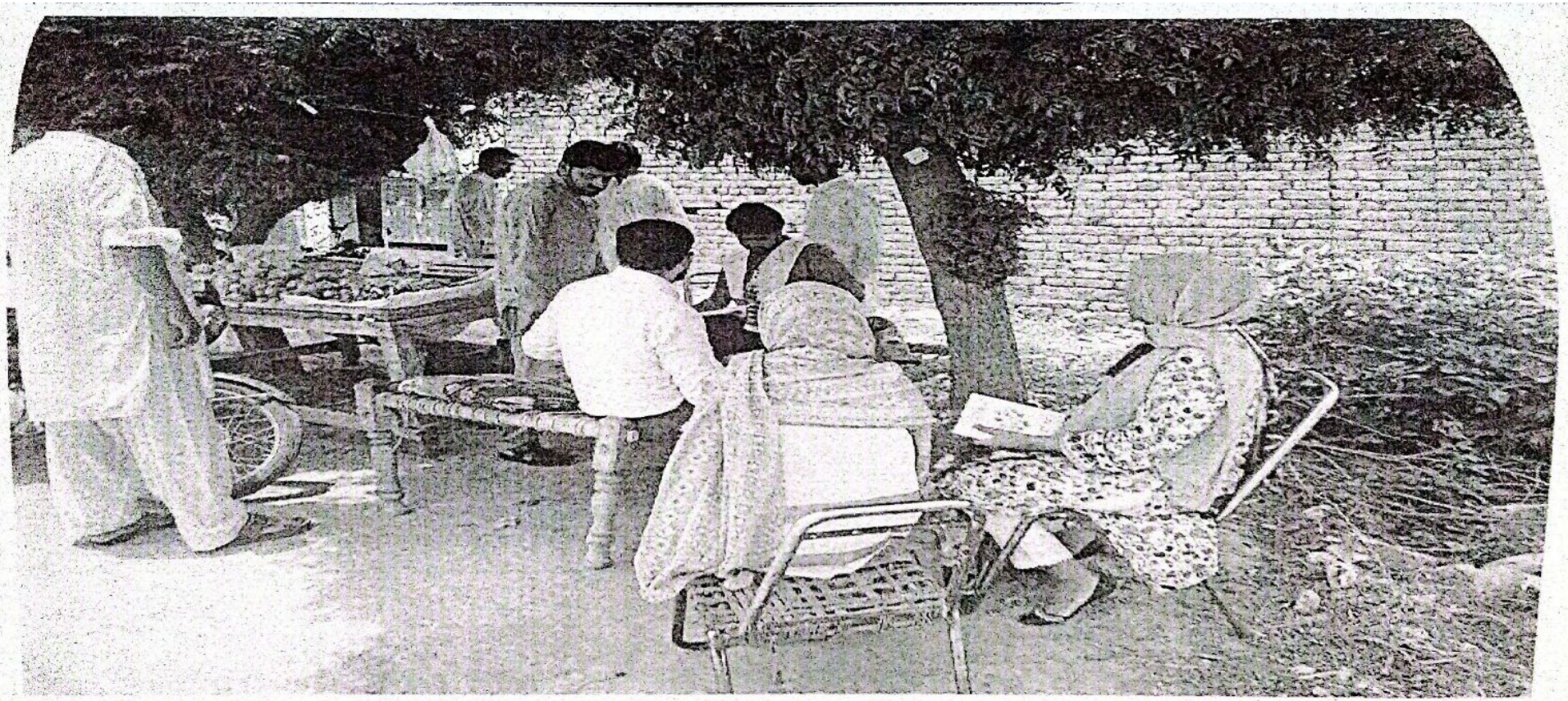


Figure 5 Public Consultation

Scanned with CamScanner

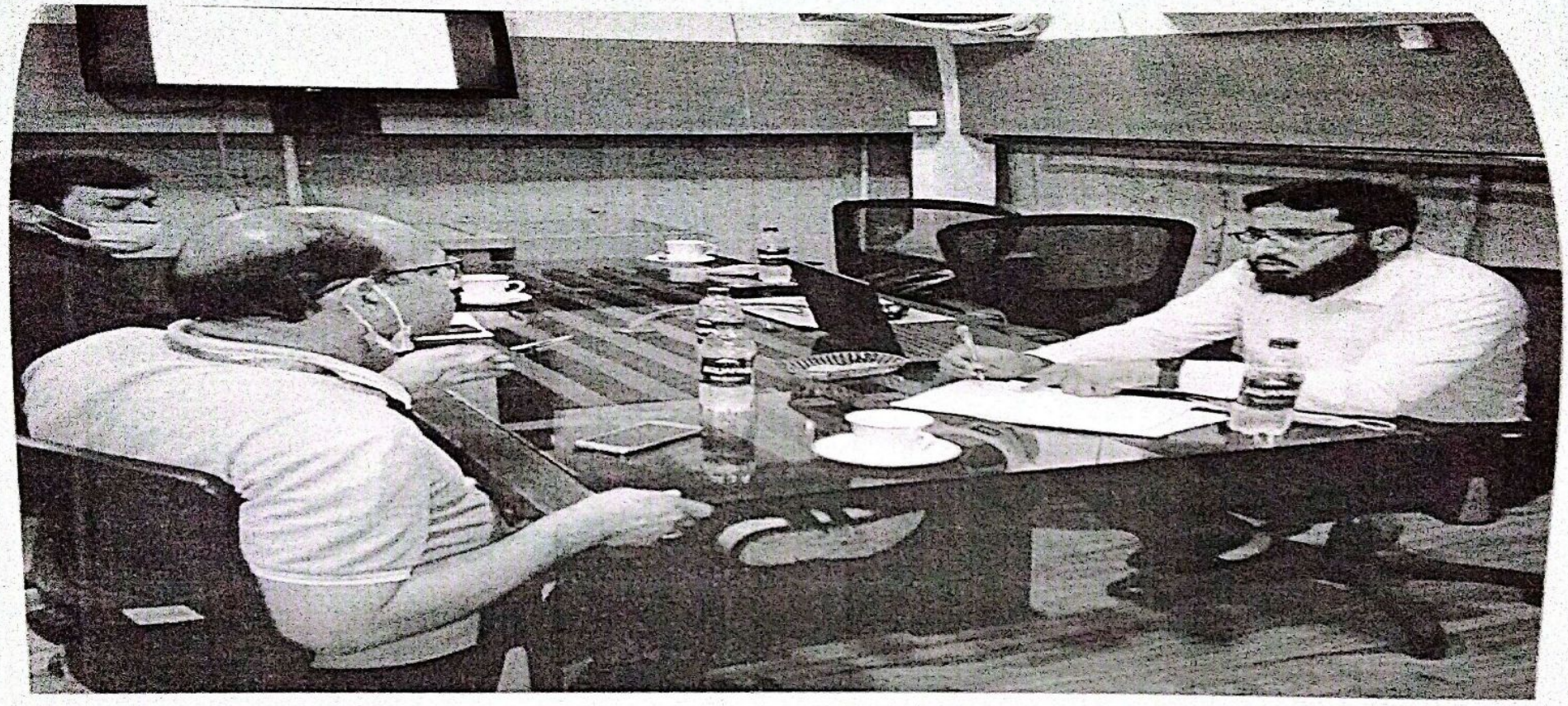


Figure 6 Consultation with nearby industry

Scanned with CamScanner

11. CONCLUSION

...ain of the project is to supply good quality product to end users. The project falls under the ...egory of environmental impact assessment.

...e end of study, it has been found that:

- Environmental monitoring by the project proponent and a third party will also ensure that the project runs in accordance with the legal requirements.
- There's no any sensitive area/element near the project site.
- The noise levels will be kept well within the required limiting values of the PEQS Pakistan.
- This project will create job opportunities during construction and operation stages leading towards reduction of poverty.
- EMP, as recommended in this EIA Report, is to be put in place during all constructional and operational stages of the project.
- All the protective measures for workers' health and safety will be followed.
- Availability of water for the project will be ensured without affecting the needs of the people around the project area.
- Wastewater treatment plant will be installed and treated wastewater will be disposed of.

Scanned with CamScanner

GLOSSARY

ccommodate	(Of a building or other area) provide lodging or sufficient space for. "The cottages accommodate up to six people
ssessment	The action of assessing someone or something. "The assessment of educational needs"
spects	A distinct feature or element in a problem
dverse	Preventing success or development; harmful; unfavorable. "Taxes are having an adverse effect on storage"
uthorized	Having official permission or approval. "An authorized dealer"
mendment	A minor change or addition designed to improve a text, piece of legislation, etc. "an amendment to existing bail laws
mbient Air	Ambient air quality refers to the quality of outdoor air in our surrounding environment. It is typically measured near ground level, away from direct sources of pollution
rchaeological	The scientific study of material remains (as fossil relics, artifacts, and monuments) of past human life and activities
nnunciation	A formal public statement
aseline	The existing conditions against which impacts of the proposed action and its alternatives can be compared.
rushing	Deform, pulverize, or force inwards by compressing forcefully. "You can crush a pill between two spoons"
ontainers	An object for holding or transporting something. "The cakes will keep for up to two weeks if kept in an airtight container"
mpliance	Acting according to certain accepted standards
screpancies	A difference between conflicting fact, claims or opinions
sposal	the action or process of getting rid of something
umped	Deposit or dispose of (rubbish, waste, or unwanted material), typically in a careless or hurried way

Scanned with CamScanner

Effluent	Any material in solid, liquid or gaseous form or combination thereof being discharged from industrial activity or any other source and includes a slurry, suspension or vapor
Environmental impact statement (EIS)	A document prepared to analyze the impacts on the environment of a proposed action and released to the public for review and comment. An EIS must meet the requirements of NEPA, CEQ, and the directives of the agency responsible for the proposed action.
Emission	The storage and discharge of something, especially gas, or radiation." The effects of lead emission on health"
Evaluated	Estimate or determine the nature, value, quality, ability, extent or significance
Graded	Arranged in a sequence of grades or ranks; "stratified areas of the distribution"
Generation	The storage or creation of something
Incinerator	A furnace or a container for burning waste materials
Inadequate	Not capable or competent; lacking
Implementation	The process of putting a decision or plan into effect; execution
Intends	To have in mind as something to be done or brought about; plan: to design or mean for a particular purpose, use, recipient, etc.
Landfill site	For the disposal of solid waste in which refuse is buried between layers of dirt so as to fill in or reclaim low-lying ground
Legislation	Law enacted by a legislative body
Mobilization	To release or make available, as cells or chemical substances
Mitigation	The action of lessening in severity or intensity
Noise	Loud, unpleasant, unexpected, or undesired sound that disrupts or interferes with normal human activities
Potential	Having or showing the capacity to develop into something in the future
Pedestrian	A person who goes or travels on foot; walker
Proponent	The person who proposes or intends to undertake a project

Scanned with CamScanner

Sanitary	Relating to the conditions that affect hygiene and health, especially the supply of sewage facilities and clean drinking water
Segregate	Set apart from the rest or from each other; isolate or divide. "Disabled people should not be segregated from the rest of society
Settlement	An official agreement intended to resolve a dispute or conflict. "Unions succeeded in reaching a pay settlement
Ton	A short or net ton is equal to 2,000 pounds; a long or British ton is 2,240 pounds; a metric ton is approximately 2 to 205 pounds
Transportation	The action of transporting someone or something or the process of being Transported. "The era of global mass transportation"
Ultimate	Being or happening at the end of a process; final. "Their ultimate aim was to force his resignation"
Violations	the action of violating someone or something
Working place	From the out by side of the last open crosscut to the face
Flora	All the plant life in a particular region or period
Fauna	All the animal life in a particular region or period
Demarcated	Separately clearly, as if by boundaries
Screening	The display of a motion picture
Substitutions	An event in which one thing is substituted
Smelting	extract (metal) from its ore by a process involving heating and melting
Regulations	An authorized rule
Recycling	process of converting waste materials into new materials and objects
Stakeholders	A person or organization with an interest or concern in something
Rehabilitation	The conversion of waste land into land suitable for use of habitation or cultivation

Scanned with CamScanner

LIST OF ABBREVIATION

AA	Ambient Air
APHA	American Public Health Association
AOI	Area Of Influence
BOD5	Biological Oxygen Demand
CMS	Convention On Migratory Species
COD	Chemical Oxygen Demand
dB(A)	Decibel
EA	Environmental Assessment
EHS	Environmental Health Safety
EIA	Environmental Impact Assessment
EPD	Environmental Protection Department
PEPA	Pakistan Environmental Protection Act
EPA	Environmental Protection Agency
ESIA	Environmental And Social Impact Assessment
ESA	Environmental And Social Assessment
ESMP	Environmental/Social Management Plan
EMP	Environmental Management Plan
GIS	Geographical Information System
GOP	Government Of Pakistan
GPS	Global Positioning System
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
HSE	Health Safety & Environment
HWMS	Hazardous Waste Management System
IEE	Initial Environmental Examination
IAIA	International Association for Impact Assessment
IWM	Industrial Waste Management
IUCN	International Union for Conservation of Nature

Scanned with CamScanner

KM	Kilometers
LGO	Local Government Ordinance
MEAS	Multilateral Environmental Agreements
MSDS	Material Safety Data Sheets
NEQS	National Environmental Quality Standards
PPE	Personal Protective Equipment
PEQS	Punjab Environmental Quality Standards
NEAP	National Environmental Assessment Plan
Q&EHS	Quality, Environment, Health & Safety
O & M	Operation And Maintenance
PKR	Pak Rupees
PPM	Parts Per Millions
PEPC	Pakistan Environmental Protection Council/Punjab
QA/QC	Quality Assurance/Quality Control
RAP	Resettlement Action Plan
SWM	Solid Waste Management
TDS	Total Dissolved Solids
UNFCCC	United Nation Frame Work Convention on Climate Change
UNCC	United Nation Convention to Combat Desertification
UNEP	United Nations Environmental Programs
GOP	Government Of Pakistan
WHO	World Health Organization
R&R	Rehabilitation And Resettlement
WWTP	Waste Water Treatment Plant

Scanned with CamScanner

LIST OF PEOPLE CONSULTED WITH WRITTEN FEEDBACK

Name	Concerns
Kamran Ali Khan	During the survey in the study area following concerns of the local community were noted: • Air pollution should be controlled effectively such as emissions generated from power generating activities. • Chemicals should be stored and handled properly only authorized persons should be allowed near the chemical storage area. • Locals should be preferred for the job opportunities. • Wastewater should be treated prior to final disposal in nearby drain. • Solid waste should be managed effectively by adopting the standard practices of the area. • An effective EMMP should be designed and enforced with true spirit. • Health of the workers should be ensured. • Planation should be carried out at extensive scale. • Construction activity should be carried out during day hours. • Noisy activities should be confined.
Muhammad Waqas	
Qaiser Farooq	
Ghulam Mujtaba	
Mehboob Alam Shahid	
Muhammad Latif	
Mazhar Hussain	
Shahbaz Khan	
Waseem Ahmed	
Rab Nawaz	
ALLAH Yar	
Ahmed Saeed	
Muhammad Jabbar	
Muhammad Ramzan	
Kamran Ali Khan	

Scanned with CamScanner

SOURCE OF DATA

- https://www.deskera.com/blog/paper-manufacturing-process-how-paper-is-made
- https://www.ijert.org/paper-and-pulp-industry-manufacturing-and-treatment-processes-a-review
- Punjab Environmental Protection (Amendment) Act 2012 (PEPA)
- Guidelines for the preparation and review of Environmental Reports, October 1997
- Review of IEE/ EIA Regulation, 2000
- The 2004 Baseline Survey on Millennium Development Goals in AACs, Pakistan
- World Weather Online.com
- Water and Sanitation Agency (WASA), Lahore.
- RED Data Book of IUCN
- Material Safety Data Sheet (MSDS) of chemicals
- /www.wsask.ca/Global/Water%20Programs/Water%20Conservation/SWA-Water_Efficiency_on_the_Farm_Booklet_WEB.pdf
- http://www.madehow.com/Volume-2/Lead.html
- http://www.ijirset.com/upload/2013/november/18_Disposal.pdf

Scanned with CamScanner

TERM OF REFERENCE

- According to regulation 7 of Review of IEE and EIA regulations, 2022 proponent shall pay, at the time of submission of IEE/EIA, a nonrefundable review fee to EPA, in accordance with rates specified in schedule-III.
- Proponent shall be responsible for paying any fines/ penalties levied by the EPA Punjab or Environment Tribunal.
- Provide all documents/details required for completion of IEA report
- Proponent shall be responsible correctness and validity of all information and documents provided to the consultant for onward submission to EPA Punjab and consultants will bear no responsibility.

M/S ALLAH KHAIR PAPER MILL

For Enviro Stewards Co. Pvt. Ltd

Mr. Zia ur Rehman

Ms. Sara Fatima

Scanned with CamScanner

...al names, qualifications and roles of team members carrying out the ...EIA study

Name	Qualification
Team Leader	
Miss. Sara Fatima	M.Phil. Environmental Sciences
Environmental Scientist	
Mr. Zia ur Rehman Farooqi	Ph.D. Environmental Sciences (Scholar)
Hafiz Zeeshan Safder	M.Sc. Analytical Chemistry
Mr. Saffi Ahmed	M.Phil. Environmental Sciences
Environmental Engineers	
Miss Misbah Ali	B.Sc. Environmental Engineering
Engr. Muhammad Bilal	B.Sc. Environmental Engineering
Sociologist	
Qazi Muhammad Ahmed Raza	M.Phil Sociology

Scanned with CamScanner