

ZOHAIB POULTRY PROTEIN

ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

Location:

Plot Bearing Khewat No. 129/127,
Khatooni No. 437 to 464, Sallam
Khatta, Rohi Nalla Road,
Mouza Mohlanwal, Lahore

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

LIST OF ABBREVIATIONS

CO ₂	Carbon Dioxide
°C	Degree Celsius
dB(A)	Decibel (Unit of Noise)
EMMP	Environmental Mitigation and Monitoring Plan
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
EP&CC	Environmental Protection and Climate Change Department
HSE	Health, Safety & Environment
m ³ /h	Cubic meter per hour
NOC	No Objection Certificate
NO _x	Oxides of Nitrogen
PM	Particulate Matter
PPEs	Personal Protective Equipment
PEPA 1997	Punjab Environmental Protection Act 1997
SOPs	Standard Operating Procedures
SO _x	Oxides of Sulfur

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

EXECUTIVE SUMMARY

The project titled “Establishment of Zohaib Poultry Protein” is proposed at Plot bearing Khewat No. 129/127, Khatooni No. 437 to 464, Sallam Khatta, Rohi Nalla Road, Mouza Mohlanwal, Lahore by Mr. Abdul Hameed Kambhoo S/o Wali Muhammad.

The proposed project involves the establishment of a new standalone industrial unit dedicated to the processing of leftover parts of hens (chicken by-products/waste). The collected leftover parts will be crushed and processed into poultry protein material, which will then be sold to rendering factories or other industries as per market demand. It is important to note that this facility will only handle poultry waste processing and will not be involved in live bird slaughtering or any other unrelated activities.

The project site is currently vacant, and construction activities will commence only after obtaining the required **Environmental Approval (Construction Phase NOC)** from the Punjab Environmental Protection Agency under Section 12 of PEPA, 1997.

SALIENT FEATURES OF THE PROJECT

SR. NO	SALIENT FEATURES	DESCRIPTION
i	Title of Project	Establishment of Zohaib Poultry Protein
ii	Location of Project	Plot Khewat No. 129/127, Khatooni No. 437 to 464, Sallam Khatta, Rohi Nalla Road, Mouza Mohlanwal, Lahore
iii	Nature of Project	Construction and operation of a poultry by-product processing unit involving collection, crushing, grinding, drying (if required), and packaging of hen leftover parts for sale to rendering factories.

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

SR. NO	SALIENT FEATURES	DESCRIPTION
iv	Total Area	18,000 Square Feet
v	Name of Project Proponent	Mr. Abdul Hameed Kambhoo S/o Wali Muhammad
vi	Type of Study	Environmental Impact Assessment (EIA) – Construction Phase NOC
vii	Capacity	Processing of 5–6 tons of poultry waste per day

BRIEF OUTLINE OF THE PROJECT

1. Area of Project The total land allocated for the project is **18,000 Square Feet** (including covered and open areas).

2. Nature of Area The proposed site is located in District Lahore within an industrial/rural setting. The site does not fall within any environmentally sensitive areas such as protected forests, wetlands, or archaeological zones.

3. Quantity of Wastewater Construction Phase:

- Negligible wastewater will be generated.
- Wastewater will mainly consist of domestic sewage from construction labor.
- Disposal will be managed through septic tanks or temporary sanitation arrangements.

Operational Phase:

- Wastewater will primarily originate from washing of equipment, floors, and processing areas.
- The wastewater is expected to have high organic load (BOD/COD) due to the nature of

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

poultry waste.

- Wastewater will be treated through appropriate treatment systems (e.g., screening, sedimentation, and further treatment if required) before disposal.
- All discharges will comply with Punjab Environmental Quality Standards (PEQS).

4. Quantity of Gaseous Emissions Construction Phase:

- Dust emissions from site preparation and material handling.
- Vehicle exhaust emissions from construction machinery.

Operational Phase:

- Odour emissions from poultry waste handling and processing.
- Dust/particulate emissions from crushing and grinding operations.
- Minor emissions from any drying or boiler operations (if installed).
- Exhaust emissions from standby diesel generator (if installed).
- Emissions and odour will be controlled through proper ventilation, bio-filters, enclosed systems, and standard emission control practices.

ENVIRONMENTAL IMPACTS ANTICIPATED DURING CONSTRUCTION PHASE

- Dust generation due to excavation and material handling.
- Noise and vibration from construction machinery.
- Exhaust emissions from vehicles and equipment.
- Generation of construction waste such as debris and packaging materials.
- Occupational health and safety risks to workers.
- Temporary traffic disturbances.

These impacts are short-term, localized, and manageable.

ENVIRONMENTAL IMPACTS ANTICIPATED DURING OPERATIONAL

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

PHASE

- Generation of high organic wastewater from processing and washing.
- Odour emissions from poultry waste storage and processing.
- Dust and particulate matter from crushing/grinding operations.
- Generation of solid waste (non-recyclable residue).
- Noise pollution from machinery (crushers, grinders, etc.).
- Occupational health risks including exposure to odour, dust, and mechanical hazards.
- Risk of soil/groundwater contamination in case of improper waste handling.

With proper mitigation measures, these impacts are not expected to be significant or unmanageable.

MITIGATION MEASURES

1. Construction Phase

- Regular water sprinkling to control dust emissions.
- Maintenance of machinery to minimize emissions and noise.
- Proper collection and disposal of construction waste.
- Provision of Personal Protective Equipment (PPE) to workers.
- Employment of local labor where possible.

2. Operational Phase

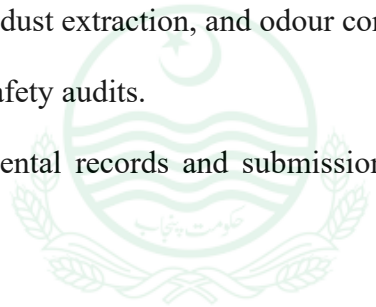
- Installation of proper wastewater treatment system to meet PEQS standards.
- Use of enclosed processing areas and odour control measures (e.g., bio-filters or covered storage).
- Installation of dust extraction systems for crushing and grinding areas.
- Proper segregation, storage, and disposal/recycling of solid waste.
- Implementation of noise control measures and provision of hearing protection.

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

- Strict housekeeping, regular cleaning, and pest control.
- Adoption of best practices for handling poultry waste to minimize odour and flies.
- Training of workers on environmental, health, and safety practices.
- Regular environmental monitoring and compliance with PEQS.

PROPOSED ENVIRONMENTAL MONITORING PLAN

- Regular monitoring of wastewater quality to ensure compliance with PEQS.
- Periodic monitoring of ambient air quality and odour levels.
- Noise level monitoring within operational areas.
- Inspection of waste storage, handling, and disposal practices.
- Monitoring of ventilation, dust extraction, and odour control systems.
- Occupational health and safety audits.
- Maintenance of environmental records and submission of reports to Punjab EPA as required.



EPA librarian.epa
110.38.160.195
31/8/2026 1:33:55 PM

TABLE OF CONTENTS

EXECUTIVE SUMMARY

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

PROJECT DETAILS

SALIENT FEATURES OF THE PROJECT

BRIEF OUTLINE OF THE PROJECT

I. AREA OF PROJECT

II. NATURE OF AREA

III. QUANTITY OF WASTEWATER

IV. QUANTITY OF GASEOUS EMISSIONS

ENVIRONMENTAL IMPACTS ANTICIPATED DURING CONSTRUCTION PHASE

ENVIRONMENTAL IMPACTS ANTICIPATED DURING OPERATIONAL PHASE

MITIGATION MEASURES

CONSTRUCTION PHASE

OPERATIONAL PHASE

PROPOSED ENVIRONMENTAL MONITORING



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110.38.160.195
31/8/2026 1:33:55 PM

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

CHAPTER NO 01 – INTRODUCTION

1.1 BACKGROUND OF THE PROJECT

1.2 PURPOSE AND OBJECTIVES OF THE IEE

1.3 LEGAL REQUIREMENT (SECTION 12 OF PEPA 1997)

1.4 OBJECTIVES OF THE IEE STUDY

1.5 PROPONENT DETAILS

1.6 NATURE, SIZE AND LOCATION OF PROJECT

1.7 NATURE OF PROJECT

1.8 SIZE OF PROJECT

1.9 LOCATION DESCRIPTION

1.10 SCOPE OF THE IEE STUDY

1.11 METHODOLOGY AND DATA COLLECTION

1.12 BASELINE ENVIRONMENTAL CONDITIONS

1.12.1 PHYSICAL ENVIRONMENT

1.12.2 BIOLOGICAL ENVIRONMENT

1.12.3 SOCIO-ECONOMIC ENVIRONMENT



EPA librarian.epa
110.38.160.195

18/2026 1:33 PM

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

1.13 ENVIRONMENTAL IMPACTS

1.13.1 IMPACTS DURING CONSTRUCTION PHASE

1.13.2 IMPACTS DURING OPERATIONAL PHASE

1.14 MITIGATION MEASURES

1.14.2 CONSTRUCTION PHASE

1.14.3 OPERATIONAL PHASE

1.15 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

1.16 ENVIRONMENTAL MONITORING PLAN

1.17 STAKEHOLDER CONSIDERATIONS

1.18 REPORT STRUCTURE

CHAPTER NO 02 – LEGISLATIVE FRAMEWORK

2.1 INTRODUCTION

2.2 PUNJAB ENVIRONMENTAL PROTECTION ACT (PEPA), 1997

2.2.1 LEGAL STATUS

2.2.2 KEY PROVISIONS RELEVANT TO THE PROJECT

2.3 PUNJAB ENVIRONMENTAL QUALITY STANDARDS (PEQS)

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

2.3.1 PEQS FOR AMBIENT AIR QUALITY

2.3.2 PEQS FOR INDUSTRIAL AND MUNICIPAL EFFLUENTS

2.3.3 PEQS FOR DRINKING WATER

2.3.4 PEQS FOR INDUSTRIAL GASEOUS EMISSIONS

2.3.5 PEQS FOR NOISE

2.4 SOLID WASTE MANAGEMENT RULES

2.5 OCCUPATIONAL HEALTH & SAFETY LAWS

2.6 HAZARDOUS SUBSTANCES HANDLING

2.7 LOCAL ZONING AND LAND USE REGULATIONS

2.8 INTERNATIONAL ENVIRONMENTAL CONVENTIONS RELEVANT TO
THE PROJECT

2.9 ENVIRONMENTAL COMPLIANCE STRATEGY FOR THE PROJECT

2.10 SUMMARY OF APPLICABLE LAWS

CHAPTER NO 03 – DESCRIPTION OF PROJECT

3.1 OBJECTIVES OF THE PROJECT

3.2 PARTICULARS OF THE PROJECT SITE

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

3.3 LOCATION AND LAYOUT OF THE PROJECT

3.4 SIZE AND MAGNITUDE OF THE PROJECT

3.5 AREA AND COST OF THE PROJECT

3.6 NATURE OF AREA AND LAND USE ON SITE

3.7 VEGETATIVE FEATURES ON SITE

3.8 RELOCATION AND REHABILITATION PLANS

3.9 STAFF/MANPOWER

3.10 ELECTRICITY AND UTILITIES

3.11 AIR EMISSIONS, WASTEWATER, AND SOLID WASTE

3.12 NOISE

3.13 SCHEDULE OF IMPLEMENTATION

3.14 MATERIALS FOR CONSTRUCTION AND EQUIPMENT

3.15 WORKING OF THE UNIT

3.16 POTENTIAL PICTORIAL VIEWS

CHAPTER NO 04 – DESCRIPTION OF THE ENVIRONMENT

4.1 DATA COLLECTION

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

4.2 PHYSICAL ENVIRONMENT

4.3 PHYSICAL RESOURCES

4.4 GEOGRAPHY AND GEOLOGY

4.5 TOPOGRAPHY

4.6 HYDROLOGY

4.7 CLIMATE

4.8 BIOLOGICAL ENVIRONMENT

4.8.1 FLORA

4.8.2 FAUNA IN THE AREA

4.9 SOCIO-ECONOMIC RESOURCES

4.10 DEMOGRAPHY

4.11 LITERACY RATE

4.12 INDUSTRIES

4.13 AMENITIES

CHAPTER NO 05 – STAKEHOLDER CONSULTATION

5.1 OBJECTIVES OF STAKEHOLDER CONSULTATION



EPA librarian.epa
110.38.160.195
31/8/2026 1:33:55 PM

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

5.2 METHODOLOGY OF STAKEHOLDER CONSULTATION

5.3 IDENTIFICATION OF STAKEHOLDERS

5.4 Consultation Process

5.5 KEY FINDINGS: CONCERNS AND SUGGESTIONS

5.6 INTEGRATION OF FEEDBACK INTO PROJECT DESIGN

5.7 CONCLUSION AND ONGOING ENGAGEMENT

CHAPTER NO 06 – POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

6.1 IDENTIFICATION OF POTENTIAL ENVIRONMENTAL IMPACTS

6.2 SCOPING CRITERIA FOR IMPACTS

6.3 METHODOLOGY FOR IMPACT ASSESSMENT

6.4 POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH PROJECT LOCATION

6.5 POTENTIAL IMPACTS DURING CONSTRUCTION PHASE AND MITIGATION MEASURES

6.5.1 DUST EMISSIONS AND AIR QUALITY

6.5.2 NOISE AND VIBRATION

ESTABLISHMENT OF ZOHAIB PROTEIN FARM

6.5.3 SOLID WASTE GENERATION

6.5.4 WASTEWATER GENERATION

6.5.5 SOIL CONTAMINATION AND EROSION

6.5.6 ECOLOGICAL IMPACTS

6.5.7 OCCUPATIONAL HEALTH AND SAFETY

6.5.8 SOCIOECONOMIC IMPACTS

6.6 POTENTIAL IMPACTS DURING OPERATIONAL PHASE AND
MITIGATION MEASURES

6.6.1 WASTEWATER IMPACTS

6.6.2 SOLID WASTE IMPACTS

6.6.3 AIR EMISSIONS AND ODORS

6.6.4 NOISE POLLUTION

6.6.5 WATER CONSUMPTION

6.6.6 OCCUPATIONAL HEALTH AND SAFETY

6.6.7 SOCIOECONOMIC IMPACTS

6.7 WAYS OF ACHIEVING MITIGATION MEASURES



ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

6.8 ENVIRONMENTAL ENHANCEMENT MEASURES

6.9 MONITORING AND COMPLIANCE

CHAPTER NO 07 – ENVIRONMENTAL MANAGEMENT & MONITORING PLAN

7.1 OBJECTIVES OF THE EMMP

7.2 COMPONENTS OF THE EMMP

7.3 INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

7.4 ENVIRONMENTAL MANAGEMENT PLAN

7.5 ENVIRONMENTAL MONITORING PLAN

7.6 SUPERVISION AND MONITORING

7.7 COMMUNICATION AND DOCUMENTATION

7.8 GRIEVANCE REDRESS MECHANISM (GRM)

7.9 ENVIRONMENTAL TRAINING

CHAPTER NO 08 – CONCLUSION AND RECOMMENDATIONS

8.1 CONCLUSION

8.2 RECOMMENDATIONS

CHAPTER NO 01

INTRODUCTION



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110.38.160.195
31/8/2026 1:33:55 PM

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER NO. 01 INTRODUCTION

The project titled “**Establishment of Zohaib Poultry Protein**” is proposed at **Plot bearing Khewat No. 129/127, Khatooni No. 437 to 464, Sallam Khatta, situated at Rohi Nalla Road, Mouza Mohlanwal, Lahore** by **Mr. Abdul Hameed Kambhoo S/o Wali Muhammad**.

This document presents the **Environmental Impact Assessment (EIA)** of the proposed project. The primary objective of this study is to ensure full compliance with the applicable environmental laws, rules, and regulations of Punjab, particularly under **Section 12 of the Punjab Environmental Protection Act (PEPA), 1997** (as amended), which requires prior environmental approval before initiation of construction or operation of prescribed projects.

The proposed project is a new standalone industrial unit dedicated exclusively to the processing of leftover parts of hens (chicken by-products). The collected leftover parts of hens will be crushed and processed into poultry protein material, which will then be sold to rendering factories or other industries as required. It is explicitly clarified that this facility will **not** involve live bird slaughtering, rendering operations, or any other unrelated activities.

The EIA study systematically identifies and evaluates the potential environmental impacts associated with both the construction and operational phases of the project. It further proposes practical and site-specific mitigation measures, along with an Environmental Management Plan (EMP) and Environmental Monitoring Plan, to ensure sustainable development with minimal environmental footprint.

Considering the nature of activities such as collection, crushing, grinding, drying (if required), and packaging of poultry waste, the project has been categorized under EIA requirements as per Punjab EPA guidelines due to its industrial scale and potential environmental aspects including odour emissions, high organic wastewater, dust generation, and solid waste.

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

1.2 PURPOSE AND OBJECTIVES OF THE EIA

The main purpose of this EIA Report is to fulfill the legal and regulatory requirements prescribed under:

1. Punjab Environmental Protection Act, 1997 (as amended).
2. Punjab Environmental Protection Agency (Review of IEE & EIA) Regulations, 2000, including subsequent amendments and categorization criteria.
3. Punjab Environmental Quality Standards (PEQS) for industrial effluents, emissions, noise, and odour control.

This EIA serves as the basis for obtaining the **Construction Phase NOC** from Punjab EPA and demonstrates that the proposed project is environmentally sound and sustainable.

1.3 LEGAL REQUIREMENT (SECTION 12 OF PEPA 1997)

As per Section 12 of PEPA, 1997: “No proponent of a project shall commence construction or operation unless he has filed with the Provincial Agency an Initial Environmental Examination (IEE) or Environmental Impact Assessment (EIA), and has obtained approval from the Provincial Agency.”

The proposed project qualifies for EIA due to:

- Its industrial nature involving processing of poultry by-products.
- Daily processing capacity of **5–6 tons** of hen leftover parts.
- Potential impacts related to odour, high organic wastewater, air emissions, noise, and solid waste generation.

1.4 OBJECTIVES OF THE EIA STUDY

The key objectives of the EIA are as follows:

1. To establish baseline environmental conditions of the project area including physical, biological, and socio-economic aspects.
2. To identify and evaluate environmental impacts associated with construction and

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

operational activities.

3. To assess the magnitude, duration, and significance of impacts on air, water, soil, odour, noise, and human health.
4. To propose effective mitigation measures to minimize or eliminate adverse impacts.
5. To develop a comprehensive Environmental Management Plan (EMP).
6. To design an Environmental Monitoring Plan in compliance with PEQS.
7. To ensure sustainable industrial development with minimal environmental footprint.
8. To facilitate informed decision-making by Punjab EPA.

1.5 PROPONENT DETAILS

- **Project Title:** Establishment of Zohaib Poultry Protein
- **Project Proponent:** Mr. Abdul Hameed Kambhoo
- **Father's Name:** S/o Wali Muhammad
- **Project Area:** 18,000 Square Feet
- **Location:** Plot bearing Khewat No. 129/127, Khatooni No. 437 to 464, Sallam Khatta, Rohi Nalla Road, Mouza Mohlanwal, Lahore
- **Project Phase:** Construction Phase NOC

1.6 NATURE, SIZE AND LOCATION OF PROJECT

1.6.1 Nature of Project

The proposed project involves:

- Construction of processing sheds, crushing/grinding units, storage areas, and ancillary facilities.
- Collection, crushing, grinding, and processing of leftover hen parts.
- Preparation and packaging of poultry protein material for sale to factories.

Important Note: This facility will only handle post-slaughter leftover parts/waste. No live poultry handling or slaughtering will be carried out at this site.

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

1.6.2 Size of Project

The project is categorized as a medium-scale industrial unit with a daily processing capacity of **5–6 tons** of poultry waste.

- **Total Plot Area:** 18,000 Square Feet
- **Total Covered Area:** 10,245 SFT (Ground Floor: 6,133 SFT + First Floor: 4,112 SFT)
- **Open Area:** 11,867 SFT

1.6.3 Location Description

The project is located in Mouza Mohlanwal, Lahore. The area has a mixed industrial/rural character with good road connectivity. The site is currently vacant land. No environmentally sensitive areas such as protected forests, wetlands, or archaeological sites exist in the immediate vicinity.

1.7 SCOPE OF THE EIA STUDY

The scope of the study includes review of project design, baseline assessment, identification of environmental aspects and impacts, impact evaluation, mitigation measures, preparation of EMP, and Environmental Monitoring Plan.

1.8 METHODOLOGY AND DATA COLLECTION

The methodology adopted includes:

- Site visits and field observations.
- Consultation with the project proponent.
- Review of architectural and submission drawings.
- Collection of primary and secondary data.
- Review of regulatory guidelines and PEQS.
- Impact identification using checklists and process flow analysis.

1.9 BASELINE ENVIRONMENTAL CONDITIONS

1.9.1 Physical Environment

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Climate: Semi-arid with hot summers and moderate winters.
- Air Quality: Moderate baseline.
- Noise Levels: Within acceptable limits for the area.
- Soil: Alluvial soil typical of Punjab region.
- Water Resources: Groundwater is the primary source.

1.9.2 Biological Environment

- Sparse vegetation present on site.
- No endangered species or protected habitats in the vicinity.

1.9.3 Socio-Economic Environment

- Availability of local labor.
- Positive impact through employment generation.
- No land acquisition or displacement issues.

1.10 ENVIRONMENTAL IMPACTS

1.10.1 Construction Phase

- Dust emissions from site preparation.
- Noise from construction machinery.
- Solid waste generation (construction debris).
- Temporary traffic disturbances.

1.10.2 Operational Phase

- High organic wastewater from washing and processing.
- Odour emissions from poultry waste handling and crushing.
- Dust from crushing and grinding operations.
- Noise from machinery.
- Solid waste (processing residue).

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Occupational health risks.

1.11 MITIGATION MEASURES

(Will be detailed in subsequent sections)

1.12 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

The EMP will include defined roles and responsibilities, implementation schedule, environmental compliance procedures, and reporting mechanisms to Punjab EPA.

1.13 ENVIRONMENTAL MONITORING PLAN

- Wastewater quality monitoring
- Odour and ambient air quality monitoring
- Noise level monitoring
- Solid waste management tracking
- Occupational health and safety monitoring

1.14 STAKEHOLDER CONSIDERATIONS

- Employment opportunities for the local population.
- Economic benefits to the area.
- No significant adverse impact on nearby communities with proper mitigation measures.

1.15 REPORT STRUCTURE

1. Introduction
2. Project Description
3. Existing Environment
4. Impact Assessment
5. Environmental Management Plan
6. Monitoring Plan

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

7. Institutional Arrangements
8. Conclusion



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CHAPTER NO. 02

LEGISLATIVE AND REGULATORY

FRAMEWORK



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31/8/2026 1:33:55 PM

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER NO. 02 LEGISLATIVE AND REGULATORY FRAMEWORK

2.1 INTRODUCTION

Pakistan is a signatory to various Multilateral Environmental Agreements (MEAs) and international environmental conventions related to environmental protection, sustainable development, climate change mitigation, occupational health and safety, and pollution control.

The country has established a comprehensive legal and institutional framework to address environmental issues such as:

- Industrial emissions and pollution
- Water contamination
- Air quality degradation
- Improper solid waste disposal
- Odour pollution
- Occupational health and safety risks
- Climate change impacts
- Resource conservation

Following the 18th Constitutional Amendment, environmental management became a provincial subject. Accordingly, the Government of Punjab is responsible for environmental regulation through the **Punjab Environmental Protection Agency (EPA Punjab)**.

This chapter presents the legislative, regulatory, and policy framework applicable to the proposed project of **Zohaib Poultry Protein**, involving collection, crushing, grinding, and processing of leftover hen parts (poultry by-products).

2.2 PUNJAB ENVIRONMENTAL PROTECTION ACT (PEPA), 1997

2.2.1 Legal Status

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

The **Punjab Environmental Protection Act, 1997** (as amended) is the principal environmental law governing environmental protection in Punjab. The Punjab Environmental Protection Agency (EPA Punjab) is responsible for:

- Implementation of environmental policies
- Monitoring environmental quality
- Reviewing and approving IEE/EIA reports
- Enforcing environmental standards

2.2.2 Key Provisions Relevant to the Project

The following provisions of PEPA 1997 are applicable to the proposed project:

I. Establishment of Punjab Environmental Protection Council **II.** Establishment of Punjab Environmental Protection Agency

III. Section 11 – Prohibition of Certain Discharges or Emissions No discharge of effluents, emissions, or noise exceeding PEQS limits is allowed. This is applicable to the project in terms of:

- Odour emissions from poultry waste handling
- Dust/particulate emissions from crushing and grinding
- Wastewater from washing and processing areas
- Noise from machinery

IV. Section 12 – IEE and EIA Requirement No project can commence construction without prior environmental approval. The proposed project requires **EIA approval** due to its industrial nature and daily processing of 5–6 tons of poultry waste.

V. Environmental Protection Orders (EPOs) **VI.** Environmental Tribunals

2.3 PUNJAB ENVIRONMENTAL QUALITY STANDARDS (PEQS)

The project will comply with all relevant **Punjab Environmental Quality Standards (PEQS)** for air, water, noise, and waste management.

2.3.1 PEQS for Ambient Air Quality

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

The project may generate dust from crushing/grinding operations and minor emissions from any auxiliary equipment. Compliance with ambient air standards is mandatory.

(Table 2.1: PEQS for Ambient Air Quality – Same as original with SO₂, NO₂, PM₁₀, PM_{2.5}, etc.)

2.3.2 PEQS for Industrial and Municipal Effluents

Wastewater generated from the project will mainly originate from washing of equipment, floors, and processing areas and is expected to have high organic load.

TABLE 2.2: PEQS FOR EFFLUENTS

Parameter	Standard Value
pH	6 – 10
BOD	≤80 mg/L
COD	≤150 mg/L
TSS	≤200 mg/L
Oil & Grease	≤10 mg/L
TDS	≤3500 mg/L

2.3.3 PEQS for Drinking Water

Water supplied to workers must meet drinking water quality standards.

2.3.4 PEQS for Gaseous Emissions

(Applicable to any boiler, generator, or processing equipment)

2.3.5 PEQS for Noise

TABLE 2.5: NOISE STANDARDS

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Area	Day (dB)	Night (dB)
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Industrial	75	65
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2.4 SOLID WASTE MANAGEMENT RULES

Solid waste generated from the project will include:

- Organic residue from processing
- Packaging waste
- Domestic waste from workers
- Construction debris (during construction phase)

TABLE 2.6: WASTE CLASSIFICATION

Waste Type	Nature	Disposal Method
Processing Residue	Organic	Authorized rendering / recycling
Packaging Waste	Non-hazardous	Recycling
Domestic Waste	Biodegradable	Municipal Disposal
Construction Debris	Inert	Approved Dump Site

2.5 OCCUPATIONAL HEALTH AND SAFETY LAWS

The project will comply with:

- Punjab Factories Act
- Punjab Occupational Health & Safety Guidelines
- Labour Laws of Pakistan

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

TABLE 2.7: EXPOSURE LIMITS

Parameter	Limit
Noise	85 dB
Dust	10 mg/m ³
Temperature	18–30°C
Illumination	300–500 lux

2.6 ODOUR AND HAZARDOUS SUBSTANCES MANAGEMENT

- Special emphasis will be given to odour control due to the nature of poultry waste.
- No major hazardous chemicals will be used.
- Proper storage, handling, and spill management procedures will be implemented for any cleaning agents or fuels.

2.7 LOCAL ZONING AND LAND USE

- The project site is located in Mouza Mohlanwal, Lahore.
- The site is currently vacant and suitable for industrial use.
- No protected or environmentally sensitive areas are affected.
- No land acquisition or displacement is involved.

2.8 INTERNATIONAL ENVIRONMENTAL CONVENTIONS

Pakistan is signatory to:

- Convention on Biological Diversity (CBD)
- UN Framework Convention on Climate Change (UNFCCC)
- Basel Convention on Hazardous Wastes

The project aligns with these commitments through proper waste management,

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

pollution control, and sustainable processing practices.

2.9 ENVIRONMENTAL COMPLIANCE STRATEGY

To ensure full compliance, the project will:

- Obtain Construction Phase NOC under Section 12 of PEPA 1997
- Implement a comprehensive Environmental Management Plan (EMP)
- Install odour control and wastewater treatment systems
- Conduct regular environmental monitoring
- Provide worker training on health, safety, and hygiene
- Maintain proper records and submit reports to Punjab EPA

TABLE 2.8: MONITORING FREQUENCY

Parameter	Frequency
Wastewater	Quarterly
Ambient Air & Odour	Quarterly
Noise	Biannually
Solid Waste	Monthly
Workplace Safety	Monthly

2.10 SUMMARY OF APPLICABLE LAWS

Law / Regulation	Relevance
PEPA 1997	Environmental approval & enforcement
PEQS	Pollution control (air, water, noise)

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Law / Regulation	Relevance
Punjab Factories Act	Worker safety & welfare
Solid Waste Management Rules	Waste handling & disposal
OHS Guidelines	Workplace health and safety



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER NO.3

SCREENING AND SCOPING



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER 3: SCREENING AND SCOPING

This chapter describes the screening process, project categorization, scoping exercise, project objectives, and analysis of alternatives conducted for the proposed **Zohaib Poultry Protein Unit**. The screening and scoping have been carried out in accordance with the requirements of the **Punjab Environmental Protection Act (PEPA), 1997 (amended 2012)** and the **Punjab Environmental Protection (Review of IEE & EIA) Regulations, 2022**.

3.1 TYPE AND CATEGORY OF PROJECT

According to Section 12 of the Punjab Environmental Protection Act, 1997:

“No proponent of a project shall commence construction or operation unless he has filed with the Provincial Agency an Initial Environmental Examination (IEE) or, where the project is likely to cause an adverse environmental effect, an Environmental Impact Assessment (EIA) and has obtained approval thereof.”

The Punjab Environmental Protection (Review of IEE & EIA) Regulations, 2022 classify projects into:

- **Schedule-I:** Projects requiring IEE
- **Schedule-II:** Projects requiring full EIA

The proposed project involves the **processing of poultry waste (leftover parts of hens)** through crushing operations and supply of processed by-products to rendering/related industries. The unit will handle approximately **5–6 tons/day of poultry waste**.

The main activities include:

- Collection and transportation of poultry waste
- Mechanical crushing and size reduction
- Temporary storage and dispatch to downstream industries

Although the project does not involve complex chemical processing, it has potential

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

environmental concerns such as:

- Odor generation from poultry waste
- Solid waste handling and hygiene issues
- Wastewater generation (washing/cleaning activities)
- Risk of biological contamination
- Traffic movement of raw material and finished by-products

Considering the **nature of organic waste processing**, potential odor nuisance, and public health sensitivity, the project falls under **Schedule-II (Waste Processing / Rendering / Organic Waste Handling Category or analogous industrial classification)** of the Regulations, 2022.

Therefore, a **detailed Environmental Impact Assessment (EIA)** is required. This report has been prepared to obtain the **Construction Phase Environmental Approval (NOC)** from Punjab EPA.

3.2 SCOPING

Scoping is an essential step in the EIA process that identifies key environmental issues requiring detailed study.

The scoping exercise for the Zohaib Poultry Protein project included:

- Review of project design, layout, and process flow (poultry waste handling and crushing operations)
- Assessment of raw materials (poultry by-products) and operational activities
- Site visit at **Rohi Nalla Road, Mouza Mohlanwal, Lahore**
- Analysis of surrounding land use and nearby receptors
- Identification of environmental sensitivities related to organic waste processing
- Consultation with the project proponent

Key Environmental Receptors Identified:

- Ambient air quality (especially odor)

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Soil and groundwater quality
- Surface drainage system
- Workers' health and safety
- Nearby communities and traffic routes

Scoping Outcomes:

i. **Spatial Boundary:** Project site and surrounding area within approximately 1–2 km radius

ii. **Temporal Boundary:**

- Construction Phase: Short-term
- Operational Phase: Long-term

iii. **Key Environmental Issues Identified:**

- Odor emissions from poultry waste handling
- Improper waste storage and hygiene risks
- Wastewater generation from washing activities
- Solid waste residues and sludge
- Vector attraction (flies, pests)
- Occupational health risks
- Traffic impacts

iv. **Priority Areas for Detailed Assessment:**

- Odor control and air quality management
- Waste handling and sanitation practices
- Wastewater management and disposal
- Biosecurity and public health considerations
- Worker safety and PPE usage

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Since the project is limited to **mechanical crushing and handling of poultry by-products**, without rendering or chemical processing, the environmental impacts are **localized and manageable** with proper mitigation measures.

3.3 OBJECTIVES OF THE PROJECT

The primary objective of the project is to establish a **poultry waste processing unit** for efficient handling and utilization of poultry by-products.

The project aims to:

- Process poultry waste (5–6 tons/day) into usable crushed material for supply to relevant industries
- Promote **resource recovery and waste minimization**
- Improve **sanitary disposal of poultry waste**
- Reduce environmental pollution caused by improper dumping of poultry by-products
- Generate employment opportunities for local workforce
- Support circular economy practices in the poultry and allied industries

The facility will incorporate:

- Proper waste handling systems
- Covered storage areas
- Cleaning and sanitation measures
- Odor control practices
- Safe working environment for labor

The project is designed to comply with **Punjab Environmental Quality Standards (PEQS)** and relevant environmental regulations.

3.4 ALTERNATIVES

3.4.1 No-Project Alternative

Under this scenario, the project would not be established.

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Consequences include:

- Continued improper disposal of poultry waste
- Increased environmental pollution (odor, pests, contamination)
- Loss of opportunity for resource recovery
- No employment generation

Given the environmental benefits of proper waste management, the “No-Project” option is **not favorable**.

3.4.2 Site Alternatives

The selected site at **Rohi Nalla Road, Mouza Mohlanwal, Lahore** is considered suitable because:

- It has adequate accessibility for transportation
- Located away from dense residential settlements (as per available information)
- Availability of sufficient open space for waste handling
- Suitable for small-scale industrial activity

Alternative sites were considered but found less suitable due to:

- Proximity to residential areas
- Limited accessibility
- Higher land cost or inadequate infrastructure

The selected site minimizes environmental and social impacts.

3.4.3 Technological / Process Alternatives

The project adopts **simple mechanical crushing technology**, which is:

- Energy-efficient
- Low emission compared to rendering processes
- Easy to operate and maintain

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Alternative technologies such as full rendering (high temperature processing) were not selected due to:

- Higher cost
- Increased air emissions
- Complex environmental controls required

Thus, the chosen method is **environmentally safer and economically viable**.

3.4.4 Environmental Alternatives

The project design includes environmental protection measures such as:

- Covered storage of poultry waste
- Regular cleaning and sanitation
- Odor control practices (lime/chemical sprays if required)
- Proper wastewater disposal system
- Solid waste management and timely disposal
- Use of PPE for workers
- Pest and vector control

With these measures, environmental impacts will remain within acceptable limits under PEQS.

3.5 CONCLUSION OF SCREENING AND SCOPING

The screening process confirms that the project falls under **Schedule-II**, requiring a full EIA.

The scoping exercise has identified key environmental concerns including:

- Odor emissions
- Waste handling and sanitation
- Wastewater management
- Public health and safety

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

These aspects have been addressed in detail in subsequent chapters.

The selected site, simple processing technology, and proposed mitigation measures make the project **environmentally manageable and sustainable**.

This EIA ensures that the project will proceed in compliance with environmental regulations while delivering **economic and environmental benefits**.



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**CHAPTER 4: DESCRIPTION OF THE
PROJECT**



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER 4: DESCRIPTION OF THE PROJECT

This chapter provides a detailed description of the proposed **Zohaib Poultry Protein Unit**. The chapter primarily focuses on the **construction phase**, while also outlining key operational aspects for context. The project is promoted by **Mr. Abdul Hameed Kambhoo**.

The facility is a **small to medium-scale standalone unit** located at **Rohi Nalla Road, Mouza Mohlanwal, Lahore**. The unit will specialize in the **processing of poultry waste (leftover parts of hens)** through mechanical crushing and supply of processed material to rendering and related industries.

The main operations will include:

- Collection and receiving of poultry waste
- Mechanical crushing and size reduction
- Temporary storage
- Loading and dispatch to required factories

All activities will comply with the **Punjab Environmental Protection Act (PEPA), 1997 (amended)** and relevant environmental regulations. An **Environmental Impact Assessment (EIA)** is being prepared to obtain the **Construction Phase Environmental Approval (NOC)** from Punjab EPA.

The construction phase is expected to be **short-term (6–12 months)** and will include site preparation, building construction, installation of machinery, utilities setup, and basic infrastructure development.

Environmental impacts during construction are expected to be **temporary, localized, and manageable**, mainly arising from:

- Earthworks
- Construction machinery

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Material transport
- Minor waste generation

Key objectives during construction include minimizing dust, controlling noise, ensuring sanitation, and maintaining worker safety.

4.1 OBJECTIVES OF THE PROJECT

The primary objective of the project is to establish an efficient facility for **processing poultry waste into reusable by-products**.

Key objectives include:

- Processing **5–6 tons/day** of poultry waste through mechanical crushing
- Promoting **safe disposal and utilization of poultry by-products**
- Reducing environmental pollution caused by improper waste dumping
- Maintaining hygiene and sanitation standards
- Ensuring compliance with **Punjab Environmental Quality Standards (PEQS)**
- Generating employment opportunities for local workers
- Supporting allied industries through supply of processed material

The project is designed to operate with **minimal environmental footprint** through proper waste handling, odor control, and sanitation practices.

4.2 PARTICULARS OF THE PROJECT

TABLE 4.1: PARTICULARS OF THE PROJECT

Sr. No.	Particulars	Details
1	Name of Project	Proposed Plan of Zohaib Poultry Protein
2	Name of	Mr. Abdul Hameed Kambhoo

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Sr. No.	Particulars	Details
	Proponent	
3	Location	Rohi Nalla Road, Mouza Mohlanwal, Lahore
4	District	Lahore
5	Land Details	Khewat No. 129/127, Khatooni No. 437-464
6	Nature of Area	Semi-industrial / peri-urban area with open land
7	Road Access	Accessible via Rohi Nalla Road

4.3 LOCATION AND LAYOUT OF THE PROJECT

The project site is located at **Mouza Mohlanwal, Lahore**, with good accessibility for transportation of raw poultry waste and processed material.

Proposed Layout:

- Raw material receiving area
- Poultry waste storage area (covered)
- Crushing/processing section
- Temporary storage area for processed material
- Loading/unloading zone
- Administrative area
- Workers' facilities (rest area, washrooms)
- Utilities (water, electricity)

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Waste management area
- Open area for movement and sanitation

The site is currently vacant, which minimizes environmental disturbance during construction.

4.4 SIZE AND MAGNITUDE OF THE PROJECT

This is a **small to medium-scale poultry waste processing unit** with a handling capacity of **5–6 tons/day**.

- Total Plot Area: **18,000 SFT**
- Covered Area: **10,245 SFT**
- Open Area: **11,867 SFT**

The scale of the project is manageable with localized environmental impacts.

4.5 AREA AND COST OF THE PROJECT

- **Land Area:** 18,000 Square Feet
- **Estimated Cost:** To be finalized (includes civil works, machinery, utilities, and environmental controls)

4.6 NATURE OF AREA AND LAND USE ON SITE

The site consists of **vacant land** with flat terrain.

- Current land use: Empty / unused
- Future land use: Poultry waste processing unit
- Surroundings: Open land, scattered settlements, and small industrial activities

No environmentally sensitive areas are reported nearby.

4.7 VEGETATIVE FEATURES ON SITE

- Minimal vegetation (grass/small shrubs)
- No trees or protected species present
- No ecological sensitivity observed

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

4.8 RELOCATION AND REHABILITATION PLANS

- No settlements or structures on site
- No relocation required
- No trees need to be removed

4.9 STAFF / MANPOWER

Construction Phase:

- Approx. **20–40 workers**
- Includes skilled and unskilled labor

Operational Phase:

- Approx. **15–30 staff**
- Includes machine operators, labor, supervisors, and admin staff

4.10 ELECTRICITY AND UTILITIES

- **Electricity:** WAPDA connection with generator backup
- **Water:** Tube well or tanker supply
- **Wastewater:** Minimal; disposed through septic tank or proper system
- **Other:** Basic drainage and sanitation facilities

4.11 AIR EMISSIONS, WASTEWATER, AND SOLID WASTE

Construction Phase:

- Dust from earthworks and vehicle movement
- Minor emissions from machinery
- Construction debris

Operational Phase:

- Odor emissions from poultry waste
- Wastewater from washing/cleaning

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- Solid waste (organic residues)

Proper management measures will be implemented.

.12 NOISE

- Construction noise from machinery and vehicles
- Operational noise from crushing machines

Noise will be controlled through:

- Proper scheduling
- Maintenance of equipment
- Use of PPE

4.13 SCHEDULE OF IMPLEMENTATION

Construction duration: **6–12 months**

TABLE 4.2: PROJECT SCHEDULE

Sr. No.	Activities	Months 1-3	Months 4-6	Months 7-9	Months 10-12
1	Site preparation & approvals	✓			
2	Civil works	✓	✓		
3	Machinery installation		✓	✓	
4	Finishing & commissioning			✓	✓

4.14 MATERIALS FOR CONSTRUCTION AND EQUIPMENT

- Civil materials: Cement, sand, steel, bricks
- Machinery: Poultry waste crushing machines
- Utilities: Water tanks, piping, electrical systems
- Other: Cleaning and sanitation equipment

4.15 WORKING OF THE UNIT (OPERATIONAL OVERVIEW)

The unit will operate as a **simple mechanical processing facility**:

1. Poultry waste is received from suppliers
2. Waste is unloaded and stored in covered area

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3. Material is fed into crushing machine
4. Crushed material is collected
5. Processed material is stored temporarily
6. Loaded and transported to required factories

The process is **non-chemical**, making it environmentally manageable with proper hygiene and odor control.



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**CHAPTER 5: DESCRIPTION OF THE
ENVIRONMENT**



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CHAPTER 5: DESCRIPTION OF THE ENVIRONMENT

This chapter describes the baseline environmental conditions of the project area, covering the **physical, biological (ecological), and socio-economic environment**. The information is based on **secondary data** (Punjab Environmental Protection Department, Pakistan Meteorological Department, Pakistan Bureau of Statistics, Punjab Irrigation Department, and relevant studies), **field visits**, and **consultations with local stakeholders**.

For the proposed **Zohaib Poultry Protein Unit** located at **Rohi Nalla Road, Mouza Mohlanwal, Lahore (Proponent: Mr. Abdul Hameed Kambhoo)**, the baseline focuses on **site-specific peri-urban conditions**. This helps assess impacts from the **construction phase** (dust, noise, minor waste) and **operational phase** (odor emissions, wastewater from washing, organic waste handling).

Since the unit involves **mechanical processing of poultry waste (5–6 tons/day)**, environmental impacts are **localized and manageable** with proper mitigation.

5.1 DATA COLLECTION

Primary Data:

- Site visits and field observations
- Assessment of land use and surrounding environment
- Observation of vegetation and nearby settlements
- Informal consultations with local community

Secondary Data Sources:

- Punjab Environmental Protection Department (EPD)
- Pakistan Meteorological Department (PMD)
- Pakistan Bureau of Statistics (PBS)
- Punjab Irrigation Department
- Hydrogeological and environmental studies

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

This combined approach ensures a **reliable baseline for environmental assessment**.

5.2 PHYSICAL ENVIRONMENT

The project area lies in **Lahore District**, part of the **alluvial plains of the Indus Basin**, influenced by the **Ravi River system**.

The area is characterized by:

- Mixed land use (peri-urban, agricultural, and small industrial units)
- Moderate environmental quality
- Absence of major water bodies directly adjacent to the site

However, proper management is required to avoid:

- Contamination of soil and groundwater
- Improper disposal of poultry waste

5.3 PHYSICAL RESOURCES

The surrounding area includes:

- Agricultural lands (wheat, vegetables, fodder crops)
- Alluvial soils (clay, silt, sand)
- Local road infrastructure

The project site is **vacant**, minimizing conflicts with existing resource use. Proper practices will be applied to avoid:

- Soil contamination
- Water pollution
- Land degradation

5.4 GEOGRAPHY AND GEOLOGY

Lahore District lies in the **Indo-Gangetic alluvial plains**.

Key features:

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- Thick alluvial deposits (clay, silt, sand)
- Fertile soil
- No significant geological hazards
- Seismic Zone: **2B (moderate risk)**

The geology is suitable for **light industrial construction** such as the proposed unit.

5.5 TOPOGRAPHY

- Flat terrain
- Slight natural slope for drainage
- Elevation: approx. **200–220 meters above sea level**

The flat land is suitable for construction and does not pose flood risks with proper drainage planning.

5.6 HYDROLOGY

Groundwater:

- Main source of water (tube wells)
- Depth: approx. **10–40 meters (shallow)**
- Quality may vary due to agricultural and urban influence

Surface Water:

- Nearby drains/nullahs in the region
- Ravi River (regional influence)

Key Considerations:

- Avoid contamination from poultry waste
- Proper wastewater management required

TABLE 5.1: HYDROLOGICAL PARAMETERS (LAHORE REGION)

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Parameter	Details
Groundwater Depth	10–40 m (variable quality)
Aquifer Type	Alluvial
Recharge Sources	Rainfall, canal seepage
Annual Rainfall	~600 mm
Pollution Risk	Organic contamination, nitrates

5.7 CLIMATE

The project area has a **subtropical semi-arid climate**.

Key Characteristics:

- Hot summers (up to 45°C)
- Mild winters (7–10°C)
- Monsoon rainfall (July–August)
- Annual rainfall: **~600 mm**

Implications for Project:

- Dust during dry season
- Odor dispersion affected by wind
- Drainage required during monsoon

TABLE 5.2: CLIMATE DATA (REPRESENTATIVE)

Month	Avg. High (°C)	Avg. Low (°C)	Rainfall (mm)
Jan	19–20	7–9	20

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Month	Avg. High (°C)	Avg. Low (°C)	Rainfall (mm)
Apr	35–37	20–22	25
Jun	40–42	28–30	60
Jul	36–38	27–29	180
Aug	35–37	26–28	150
Dec	21–23	8–10	15

5.8 BIOLOGICAL ENVIRONMENT

5.8.1 Flora

- Sparse vegetation on site
- Common species in area:
 - Kikar
 - Neem
 - Eucalyptus
 - Grasses and shrubs

No protected or endangered plant species found.

5.8.2 Fauna

Common fauna includes:

- Birds (crow, sparrow, pigeon)
- Small animals (rats, stray dogs, cats)
- Reptiles (lizards)

No endangered species recorded.

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Due to existing human activity, **biodiversity is low.**

5.9 SOCIO-ECONOMIC RESOURCES

The area has:

- Availability of labor
- Mixed economy (agriculture + small industries)
- Good road connectivity

Project Benefits:

- Employment generation
- Improved waste management
- Support to poultry-related industries

5.10 DEMOGRAPHY

- Lahore District population: **~13 million (approx.)**
- Dense urban and peri-urban settlements
- Availability of workforce

5.11 LITERACY RATE

- Approx. **70–75%**
- Higher in urban areas
- Suitable for semi-skilled and skilled labor

5.12 INDUSTRIES

Nearby activities include:

- Small industries
- Poultry-related businesses
- Workshops and warehouses

The project fits within the **existing industrial pattern.**



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5.13 AMENITIES

Available infrastructure includes:

- Road access (Rohi Nalla Road)
- Electricity (WAPDA)
- Water supply (tube wells)
- Nearby health and education facilities

The project will not significantly burden existing infrastructure.

CONCLUSION

The baseline environment indicates that:

- The site has **low ecological sensitivity**
- No protected areas or species are affected
- Environmental conditions are suitable for the project

With proper mitigation, the **Zohaib Poultry Protein Unit** can operate **safely and sustainably** with minimal environmental impact.

If you want next, I can prepare:

- **Chapter 6: Impact Assessment (VERY IMPORTANT for EPA)**
- **EMP (Environmental Management Plan)**
- **Mitigation Tables (EPA format)**

**CHAPTER 6: STAKEHOLDER
CONSULTATION**



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER 6: STAKEHOLDER CONSULTATION

Stakeholder consultation is a systematic process of engaging relevant individuals, communities, institutions, and government departments who may have an interest in or be affected by the environmental, social, economic, or operational aspects of the proposed project. This engagement ensures that concerns are identified early, incorporated into project planning and design, and adequately addressed to achieve sustainable development outcomes.

For the proposed **Zohaib Poultry Protein Unit** located at **Rohi Nalla Road, Mouza Mohlanwal, Lahore (Proponent: Mr. Abdul Hameed Kambhoo)**, consultations were carried out in accordance with the requirements of the **Punjab Environmental Protection Act (PEPA), 1997 (as amended)** and the **Punjab Environmental Protection (Review of IEE & EIA) Regulations, 2022**.

The consultation process followed guidelines of the **Punjab Environmental Protection Department (EPD)**, emphasizing public participation and inclusive engagement. Special focus was given to environmental issues related to **poultry waste processing**, including:

- Odor generation
- Waste handling and sanitation
- Wastewater from cleaning activities
- Solid waste management
- Worker health and safety
- Traffic movement

Since the project involves **mechanical crushing of poultry waste (5–6 tons/day)**, the environmental impacts are **localized and manageable** with proper controls.

6.1 OBJECTIVES OF STAKEHOLDER CONSULTATION

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Stakeholder consultation sessions were conducted to obtain feedback from local communities, officials, and other stakeholders.

Key objectives include:

i. To share project details including:

- Site location and layout (18,000 SFT plot)
- Construction timeline (6–12 months)
- Process flow (collection → storage → crushing → dispatch)
- Environmental safeguards (odor control, sanitation, waste management)

ii. To discuss potential impacts on:

- Physical environment (odor, minor dust, wastewater)
- Biological environment (minimal vegetation disturbance)
- Socio-economic environment (employment generation, minor traffic increase)

iii. To identify stakeholder concerns regarding:

- Odor emissions
- Waste handling practices
- Water usage and wastewater disposal
- Public health and hygiene
- Traffic and transportation

iv. To collect suggestions for:

- Improved waste management
- Odor control measures
- Worker safety practices
- Local employment opportunities
- Establishment of Grievance Redress Mechanism (GRM)

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

v. To understand community perception about:

- Benefits (employment, improved waste handling)
- Risks (odor, sanitation issues)

vi. To ensure compliance with **Punjab Environmental Quality Standards (PEQS)**

vii. To promote transparency and sustainable development

viii. To establish communication channels with stakeholders

Consultations covered an **Area of Influence (AOI)** of approximately **1–2 km radius**.

6.2 METHODOLOGY OF STAKEHOLDER CONSULTATION

The consultation process followed Punjab EPD guidelines and best practices.

Approach:

- Initial scoping discussions
- Detailed consultations
- Follow-up verification

Methods Used:

- One-on-one interviews
- Focus Group Discussions (FGDs)
- Community meetings (15–40 participants)
- Structured questionnaires
- Informal discussions

Additional Measures:

- Use of Urdu and Punjabi language
- Separate discussions with women (where possible)
- Documentation through attendance records and notes

This ensured **inclusive, transparent, and culturally appropriate engagement**.



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

6.3 IDENTIFICATION OF STAKEHOLDERS

Stakeholders were categorized as follows:

Primary Stakeholders:

- Local residents within 1–2 km radius
- Nearby farmers
- Potential workers/laborers
- Local transporters and small businesses

Secondary Stakeholders:

- Punjab EPA
- Local government departments
- Irrigation Department
- Labour Department
- Local NGOs and community groups

6.4 CONSULTATION PROCESS

Consultations were conducted through multiple sessions at and around the project site.

- Several community meetings were held
- FGDs conducted with different groups
- Informal discussions with residents and workers
- Total participants: approximately **50–100 individuals**

All discussions were documented.

TABLE 6.1: SAMPLE CONSULTED STAKEHOLDERS

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Sr. No.	Name	Area	Key Discussion
1	Muhammad Aslam	Near site	Odor and sanitation
2	Abdul Rehman	Nearby area	Waste handling
3	Fatima Bibi	Adjacent area	Employment opportunities
4	Ali Hussain	Local road	Traffic issues
5	Sana Ullah	Local business	Waste transport

6.5 KEY FINDINGS: CONCERNS AND SUGGESTIONS

Environmental Concerns:

- Odor from poultry waste
- Improper waste storage
- Wastewater disposal
- Fly and pest issues

Suggested Measures:

- Covered storage of waste
- Regular cleaning and sanitation
- Use of disinfectants/lime
- Proper wastewater disposal system

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Social & Health Concerns:

- Community hygiene
- Worker safety
- Traffic safety

Suggestions:

- Priority for local employment
- Use of PPE for workers
- Controlled transportation timings

Positive Feedback:

- Employment generation
- Improved waste management system
- Support to poultry-related industries

6.6 INTEGRATION OF FEEDBACK INTO PROJECT DESIGN

The following measures have been incorporated:

- Covered and hygienic waste storage
- Regular cleaning and sanitation plan
- Odor control practices
- Wastewater management system
- Worker safety measures (PPE, training)
- Priority local hiring
- Establishment of **Grievance Redress Mechanism (GRM)**
- Environmental monitoring

6.7 CONCLUSION AND ONGOING ENGAGEMENT

Stakeholder consultations indicated **overall support for the project**, provided that

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

proper environmental controls are implemented.

A **Stakeholder Engagement Plan (SEP)** has been developed, including:

- Regular communication with community
- Monitoring of environmental performance
- Complaint handling system (GRM)
- Periodic reporting to Punjab EPA

This ensures that the project will operate in a **socially acceptable and environmentally sustainable manner**.



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**CHAPTER 7: POTENTIAL
ENVIRONMENTAL IMPACTS AND
MITIGATION MEASURES**



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER 7: POTENTIAL ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This chapter presents a systematic identification, assessment, and mitigation of potential environmental impacts associated with the proposed Zohaib Poultry Protein Unit. The assessment is based on the nature, scale, location, and activities of the project.

The project involves establishment of a poultry waste processing unit on a plot located at Rohi Nalla Road, Mouza Mohlanwal, Lahore, promoted by Mr. Abdul Hameed Kambhoo.

The process is limited to:

- Collection of poultry waste (leftover parts of hens)
- Mechanical crushing and size reduction
- Temporary storage
- Dispatch to required industries

The project handles approximately 5–6 tons/day of poultry waste and does not involve chemical processing, making the environmental footprint relatively localized and manageable.

The impact assessment follows:

- Punjab Environmental Protection Act (PEPA), 1997 (amended)
- Punjab Environmental Protection (Review of IEE & EIA) Regulations, 2022
- Punjab Environmental Quality Standards (PEQS)
- Best practices for organic waste handling and processing units

Both adverse (negative) and beneficial (positive) impacts have been assessed for construction and operational phases.

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

7.2 SCOPING CRITERIA FOR IMPACTS

Impacts were scoped using the following criteria adapted from Punjab EPD guidelines:

- Alignment with baseline environmental conditions (Chapter 5)
- Compliance with PEQS (e.g., noise ≤ 75 dB(A) daytime in industrial areas, ambient air quality standards, effluent standards if wastewater is generated)
- Stakeholder concerns (dust, noise, waste management, local employment)
- Spatial extent: Local (<1 km), moderate (1–5 km), regional (>5 km)
- Temporal extent: Short-term (construction phase), long-term (operational phase)
- Reversibility: Most impacts are reversible with proper mitigation
- Intensity: Low, moderate, or high based on magnitude and receptor sensitivity
- Nature: Adverse, beneficial, or neutral

7.3 METHODOLOGY FOR IMPACT ASSESSMENT

Impacts were evaluated using a matrix approach that considers the **severity** (magnitude) and **likelihood** (probability) of each impact. Significance was determined as Insignificant, Low, Moderate, High, or Beneficial.

TABLE 7.1: IMPACT SIGNIFICANCE CRITERIA

Level	Severity of Impact	Likelihood
High	Significant or irreversible harm	High / Continuous
Moderate	Measurable but manageable damage	Moderate / Periodic
Low	Minor or negligible harm	Low / Rare

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Beneficial	Positive contribution (e.g., employment)	—
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7.4 POTENTIAL ENVIRONMENTAL IMPACTS ASSOCIATED WITH PROJECT LOCATION

The selected site at 27/28 km Lahore-Sheikhupura Road offers several advantages that minimize inherent risks:

- Located in an established industrial corridor with compatible land use.
- Flat vacant land with no dense residential areas in the immediate vicinity.
- Good road access for logistics without requiring major new infrastructure.
- No protected ecological sites, endangered species, or archaeological/cultural heritage resources nearby.
- Sufficient space (84 Kanal 18 Marla) for production halls, green buffer, and waste management.

Overall, the site is environmentally suitable for a dedicated fender manufacturing unit, with low location-specific adverse impacts when standard mitigation measures are applied.

7.5 POTENTIAL IMPACTS DURING CONSTRUCTION PHASE AND MITIGATION MEASURES

The construction phase is expected to last **12–18 months**. Main activities include site preparation, heavy foundations for stamping presses, erection of industrial sheds, installation of machinery and utilities, and landscaping. Impacts during this phase are temporary, localized, and largely reversible.

7.5.1 Dust Emissions and Air Quality

- **Potential Impact:** Generation of PM10/PM2.5 from earthworks, material handling, and vehicle movement. Significance: Moderate (short-term).
- **Mitigation Measures:** Regular water sprinkling (3–4 times daily), covering of

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material stockpiles, use of tarpaulin on trucks, speed limits (≤ 20 km/h on site), and provision of dust masks to workers. Ambient air monitoring will be conducted during peak activities.

7.5.2 Noise and Vibration

- **Potential Impact:** Elevated noise (85–100 dB at source) and vibration from excavators, compactors, and foundation work. Significance: Moderate (temporary).
- **Mitigation Measures:** Restrict noisy activities to daytime (7 AM–7 PM), use of silenced equipment where possible, installation of temporary noise barriers, and provision of ear plugs/muffs to workers. Vibration monitoring near sensitive foundations.

7.5.3 Solid Waste Generation

- **Potential Impact:** Construction debris (concrete, steel offcuts, packaging waste). Significance: Low.
- **Mitigation Measures:** Segregation of waste at source, recycling of usable materials, and disposal of remaining debris at approved municipal or industrial waste sites. No open burning will be allowed.

7.5.4 Wastewater and Runoff

- **Potential Impact:** Minor site runoff, equipment washing, and domestic wastewater from labor camp. Significance: Low.
- **Mitigation Measures:** Construction of sedimentation traps, use of portable septic tanks or approved disposal, and reuse of treated water for dust suppression wherever feasible.

7.5.5 Soil Contamination and Erosion

- **Potential Impact:** Minor risk from fuel/oil spills or exposed soil. Significance: Low.
- **Mitigation Measures:** Spill containment kits, proper storage of fuels and lubricants, slope stabilization, and re-vegetation immediately after completion of civil works.

7.5.6 Ecological Impacts

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- **Potential Impact:** Negligible (sparse grass/scrub on vacant land). Significance: Insignificant.
- **Mitigation Measures:** Minimize clearing footprint and develop a green belt with native trees and shrubs along the site boundaries after construction.

7.5.7 Occupational Health and Safety

- **Potential Impact:** Risk of accidents, dust inhalation, and heat stress. Significance: Moderate.
- **Mitigation Measures:** Mandatory use of PPE (helmets, safety shoes, masks, gloves), daily safety briefings, first-aid facilities, and comprehensive insurance coverage for all workers.

7.5.8 Socio-economic Impacts

- **Potential Impact:** Temporary increase in traffic; positive generation of 50–100 jobs during peak construction. Significance: Overall beneficial.
- **Mitigation Measures:** Preparation of a traffic management plan and priority hiring of local labor from Sheikhpura area.

7.6 POTENTIAL IMPACTS DURING OPERATIONAL PHASE AND MITIGATION MEASURES

Operational impacts are long-term but can be effectively controlled through engineering and management measures.

7.6.1 Air Emissions and Dust/Particulates

- **Potential Impact:** Dust from stamping/pressing and minor emissions from painting/powder coating booths. Significance: Moderate.
- **Mitigation Measures:** Installation of dust extraction and collection systems, enclosed painting/powder coating booths with proper filtration (bag filters or wet scrubbers), regular maintenance of equipment, and ambient air quality monitoring.

7.6.2 Noise Pollution

- **Potential Impact:** Noise from stamping presses, welding, and finishing machines

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(80–95 dB inside the facility). Significance: Moderate.

- **Mitigation Measures:** Acoustic enclosures or isolation of noisy machinery, use of ear protection by workers, regular lubrication and maintenance, and boundary noise monitoring to ensure compliance with PEQS (≤ 75 dB(A) daytime in industrial areas).

7.6.3 Solid Waste Generation

- **Potential Impact:** Steel scrap/offcuts (highly recyclable) and minor paint-related waste. Significance: Low to Moderate.
- **Mitigation Measures:** Segregation at source, sale/recycling of all metal scrap to authorized recyclers, and proper storage and disposal of any hazardous paint waste through licensed contractors.

7.6.4 Wastewater Generation

- **Potential Impact:** Minor wastewater from surface preparation or equipment cleaning (if generated). Significance: Low.
- **Mitigation Measures:** Efficient water use, recycling of process water where possible, and treatment (if required) to meet PEQS before any discharge. No untreated discharge will be allowed.

7.6.5 Water Consumption and Resource Use

- **Potential Impact:** Moderate demand for industrial and domestic use. Significance: Moderate.
- **Mitigation Measures:** Installation of water-efficient systems, recycling of rinse water, and rainwater harvesting for non-process uses.

7.6.6 Occupational Health and Safety

- **Potential Impact:** Risk from machinery operation, noise exposure, and painting fumes. Significance: Moderate.
- **Mitigation Measures:** Comprehensive training programs, mandatory PPE, proper ventilation in painting areas, periodic medical check-ups, and emergency response plans.

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

7.6.7 Socio-economic Impacts

- **Potential Impact:** Creation of 80–150 permanent jobs, skill development in sheet metal work, and contribution to the local automotive supply chain. Significance: Beneficial.
- **Mitigation Measures:** Priority for local hiring, worker training programs, and implementation of Corporate Social Responsibility (CSR) initiatives.

7.7 WAYS OF ACHIEVING MITIGATION MEASURES

Mitigation will be achieved through:

- Incorporation of control measures into the detailed engineering design (e.g., dust extraction, acoustic enclosures, green belt).
- Implementation of a comprehensive **Environmental Management Plan (EMP)** with clear responsibilities and budgets.
- Appointment of a dedicated Health, Safety & Environment (HSE) officer.
- Use of Best Available Techniques (BAT) for painting and waste management.
- Regular internal and third-party monitoring.

7.8 ENVIRONMENTAL ENHANCEMENT MEASURES

- Development of a green belt with native trees and shrubs around the boundary for dust and noise buffering.
- Promotion of energy efficiency (LED lighting, efficient motors).
- Full recycling of steel scrap.
- Fire safety systems and regular emergency drills.
- Community support through local employment and safety awareness programs.

7.9 MONITORING AND COMPLIANCE

- Appointment of an HSE officer responsible for day-to-day implementation.
- Allocation of adequate budget (approximately 2–3% of project cost) for environmental monitoring.

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Third-party laboratory testing for air quality, noise, and wastewater (if any).
- Submission of periodic compliance reports to Punjab EPA as per approval conditions.
- Internal audits and corrective actions where required.

TABLE 7.2: SUMMARY OF KEY ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

Potential Impact	Phase	Significance	Key Mitigation Measures
Dust / Particulates	Construction & Operation	Moderate	Water sprinkling, dust extraction, covered handling, filtration in paint booths
Noise & Vibration	Both	Moderate	Daytime restriction, acoustic enclosures, ear protection, maintenance
Solid Waste (Steel Scrap)	Both	Low-Moderate	Segregation, recycling, authorized disposal
Wastewater (if generated)	Operation	Low	Efficient use, recycling, treatment to PEQS if needed
Occupational Health & Safety	Both	Moderate	PPE, training, ventilation, medical surveillance
Socio-economic (Employment)	Both	Beneficial	Local hiring priority, skill training, CSR

With the implementation of the proposed mitigation measures and the Environmental Management Plan (EMP), all potential adverse impacts will be reduced to acceptable levels. The project will operate in an environmentally sustainable manner while delivering significant socio-economic benefits to the Sheikhpura region.

**CHAPTER 8: ENVIRONMENTAL
MANAGEMENT & MONITORING PLAN
(EMMP)**



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CHAPTER 8: ENVIRONMENTAL MANAGEMENT & MONITORING PLAN (EMMP)

This chapter presents the **Environmental Management and Monitoring Plan (EMMP)** for the proposed **Zohaib Poultry Protein Unit** located at **Rohi Nalla Road, Mouza Mohlanwal, Lahore**, promoted by **Mr. Abdul Hameed Kambhoo**.

The EMMP covers both:

- **Construction Phase (6–12 months)**
- **Operational Phase (long-term)**

The purpose of this plan is to ensure that the project operates with a **minimal environmental footprint** and remains fully compliant with:

- **Punjab Environmental Protection Act (PEPA), 1997 (amended)**
- **Punjab Environmental Protection (Review of IEE & EIA) Regulations, 2022**
- **Punjab Environmental Quality Standards (PEQS)**

The project involves **processing of poultry waste (5–6 tons/day)** through mechanical crushing. Therefore, the EMMP focuses on key environmental aspects associated with **organic waste handling**, including:

- Odor management
- Waste handling and sanitation
- Wastewater management
- Pest and vector control
- Occupational health and safety
- Resource consumption (water and electricity)

Since the process does **not involve chemical treatment or rendering**, environmental impacts are **localized and manageable** with proper controls.

The EMMP incorporates:

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- Punjab EPD guidelines
- Mitigation measures tracking
- Monitoring mechanisms
- Performance indicators
- Corrective action procedures
- Stakeholder feedback integration

8.1 OBJECTIVES OF THE EMMP

The primary objectives of the EMMP are:

i. Implementation of Mitigation Measures

To ensure proper implementation of all mitigation measures identified in **Chapter 7**, including:

- Odor control
- Proper waste storage and handling
- Wastewater management
- Noise and dust control (construction phase)

ii. Environmental Monitoring

To establish a monitoring system to track:

- Odor levels
- Sanitation conditions
- Waste disposal practices
- Compliance with **PEQS standards**

This will help in early detection of any environmental issues.

iii. Institutional Responsibilities

To define clear roles and responsibilities for:

- Project management

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Site supervisors
- Environmental staff

Ensuring compliance with **Punjab EPA requirements**.

iv. **Adaptive Management**

To allow continuous improvement through:

- Monitoring results
- Inspection reports
- Stakeholder feedback

v. **Resource Efficiency**

To promote:

- Efficient water use
- Controlled electricity consumption
- Minimization of waste generation

vi. **Health and Safety**

To ensure:

- Safe working conditions
- Use of PPE (gloves, masks, boots)
- Hygiene and sanitation practices

vii. **Community Protection**

To minimize impacts on nearby areas by:

- Controlling odor
- Maintaining cleanliness
- Managing traffic

viii. **Regulatory Compliance and Reporting**

To ensure:



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- Full compliance with environmental laws
- Proper documentation and reporting to Punjab EPA

8.2 COMPONENTS OF THE EMMP

The EMMP consists of the following interconnected components:

- Environmental Management Plan (EMP)** — Detailed mitigation actions, Standard Operating Procedures (SOPs), responsibilities, and timelines.
- Environmental Monitoring Plan** — Parameters, methods, frequency, locations, and responsible parties.
- Communication, Reporting, and Documentation** — Protocols for record-keeping and reporting.
- Institutional Arrangements and Capacity Building** — Organizational structure, roles, and training programs.
- Grievance Redress Mechanism (GRM)** — Structured process for handling complaints.
- Budget and Resources** — Cost estimates and funding sources.
- Auditing and Adaptive Management** — Procedures for periodic review and improvement.

8.3 INSTITUTIONAL ARRANGEMENTS AND RESPONSIBILITIES

A clear institutional framework will be established to ensure effective implementation of the EMMP.

TABLE 8.1: ROLES AND RESPONSIBILITIES

Entity / Role	Key Responsibilities
Project Proponent (Mr. Faheem Anwar / Company)	Overall leadership and accountability; appoint HSE/Environmental Officer; ensure budget allocation; submit required reports to Punjab EPA; respond to grievances and regulatory queries.
HSE / Environmental Officer (full-time during	Day-to-day implementation and supervision; coordinate monitoring; organize training;

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Entity / Role	Key Responsibilities
operation; part-time during construction)	maintain records; prepare internal and compliance reports; liaise with Punjab EPA and third-party laboratories.
Contractor (Construction Phase)	Execute site-specific mitigation measures (dust suppression, noise control, waste segregation, safety); report incidents immediately; ensure worker compliance.
Third-Party Accredited Laboratory	Conduct sampling and analysis of air, noise, wastewater (if any), and other parameters; issue certified reports.
Punjab EPA (Sheikhupura / Lahore Office)	Review reports; conduct site inspections and audits; enforce approval conditions.
Local Community / Stakeholders	Participate in GRM; provide feedback during consultations.

8.4 ENVIRONMENTAL MANAGEMENT PLAN

The EMP translates the mitigation measures from Chapter 7 into practical, trackable actions with clear responsibilities and performance indicators. Standard Operating Procedures (SOPs) will be developed for key activities such as dust control, painting booth operation, scrap handling, and emergency response.

TABLE 8.2: MITIGATION MANAGEMENT MATRIX (SUMMARY)

Impact Area	Key Mitigation Measures	Phase	Responsibility	Performance Indicator / Target	Frequency
Dust & Particulates	Water sprinkling, dust	Construction & Operation	HSE Officer / Contractor	No visible dust beyond	Daily (construction);

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	extraction systems, covered material handling, filtration in paint booths			boundary; PM10/PM2.5 within PEQS	Quarterly (operation)
Noise & Vibration	Acoustic enclosures, restricted working hours, ear protection, equipment maintenance	Both	HSE Officer / Contractor	Noise ≤ 75 dB(A) at perimeter; worker exposure logs	Bimonthly
Solid Waste (Steel Scrap)	Segregation at source, recycling of all metal scrap, proper storage	Both	HSE Officer	>90% recycling rate; zero illegal dumping	Monthly audits
Wastewater (if generated)	Efficient water use, recycling where possible, treatment to PEQS before discharge	Operation	HSE Officer / Operator	Compliance with PEQS; reuse where feasible	Quarterly lab tests
Occupational Health & Safety	Mandatory PPE, training, ventilation in painting areas, machinery guarding, emergency plans	Both	HSE Officer	Zero lost-time incidents; 95%+ training attendance	Monthly inspections
Traffic & Community Disturbance	Traffic management plan, local hiring priority	Construction	Contractor / HSE Officer	No major complaints; local employment target	As required

8.5 ENVIRONMENTAL MONITORING PLAN

Monitoring will verify the effectiveness of mitigation measures and ensure early detection of any issues. It includes visual inspections, instrumental measurements, and laboratory analysis.

TABLE 8.3: ENVIRONMENTAL MONITORING PLAN (SUMMARY)

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

Environmental Component	Parameters to be Monitored	Applicable Standards (PEQS)	Monitoring Frequency	Location(s)	Responsibility	Method / Equipment
Ambient Air Quality	PM10, PM2.5, dust/particulates	PEQS limits	Bimonthly (construction); Quarterly (operation)	Site boundaries & downwind	Third-party lab / HSE Officer	High-volume samplers
Noise Levels	Equivalent continuous sound level dB(A)	≤75 dB(A) industrial daytime	Bimonthly (construction); Quarterly (operation)	Site perimeter & nearby receptors	HSE Officer / Lab	Sound level meter
Solid Waste Management	Quantity, segregation, recycling rate	Zero illegal dumping	Monthly	Waste storage area	HSE Officer	Waste logs & visual audits
Wastewater (if any)	pH, TSS, BOD, COD, TDS (if generated)	PEQS effluent standards	Quarterly	Any discharge point	Third-party accredited lab	Grab / composite sampling
Occupational Health & Safety	Incident records, PPE compliance	Internal + PEPA standards	Monthly	Work areas	HSE Officer	Checklists & medical logs
Water Consumption	Daily/weekly usage & recycling rate	Internal efficiency targets	Monthly	Metered sources	HSE Officer / Operator	Flow meters & logs

All laboratory analyses will be carried out by Punjab EPA-approved accredited laboratories. Baseline data from Chapter 5 will be used for comparison where relevant.

8.6 SUPERVISION, AUDITING AND CORRECTIVE ACTIONS

- The HSE Officer will conduct daily/weekly site supervision during construction and regular inspections during operation.
- Non-compliances will trigger immediate corrective actions (within 7–14 days depending on severity).
- Annual third-party environmental audits will be conducted.
- Punjab EPA will be notified immediately of any major non-compliance.
- Adaptive management will be applied based on monitoring results and audit findings.

8.7 COMMUNICATION AND DOCUMENTATION

All environmental records (monitoring data, lab reports, training records, incident logs, grievance registers, and photographs) will be maintained in both digital and

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

physical formats.

- Internal monthly reviews will be held.
- Quarterly and annual compliance reports (including Semi-Annual Environmental Monitoring Reports where required) will be submitted to Punjab EPA.
- Relevant information will be shared with stakeholders during periodic consultations.

8.8 GRIEVANCE REDRESS MECHANISM (GRM)

A simple, accessible, and transparent GRM will be established:

- **Level 1:** Site-level resolution by HSE Officer (within 7 days).
- **Level 2:** Escalation to Project Proponent (Mr. Faheem Anwar) (within 15 days).
- **Level 3:** Referral to Punjab EPA if still unresolved (within 30 days).

The GRM will be publicized through site signage, community meetings, and contact details (phone/email). Anonymous complaints will be accepted, and resolution rates will be tracked (>90% target within defined timelines).

8.9 ENVIRONMENTAL TRAINING AND CAPACITY BUILDING

Training programs will be conducted to ensure all personnel understand their roles in EMMP implementation.

TABLE 8.4: TRAINING SCHEDULE (SUMMARY)

Target Personnel	Key Topics	Frequency	Trainer
Management & Proponent Staff	EMMP overview, compliance, reporting	Induction + Quarterly	External expert / HSE Officer
All Workers & Operators	PPE usage, safety,	Induction + Bimonthly	HSE Officer

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Target Personnel	Key Topics	Frequency	Trainer
Machine & Painting Operators	waste segregation, emergency response	refreshers	
	Dust/fume control, machinery safety, painting booth operation	Monthly / On-the-job	HSE Officer / External trainer
	Construction safety, dust & noise control	At mobilization + Monthly	HSE Officer

Attendance and effectiveness will be evaluated through quizzes and practical drills.

8.10 BUDGET AND RESOURCES FOR EMMP IMPLEMENTATION

An adequate budget will be allocated for successful implementation of the EMMP (approximately 2–3% of the project cost).

Indicative Annual Budget (Operational Phase):

- Environmental monitoring & laboratory analysis: PKR 800,000 – 1.2 million
- Training & capacity building: PKR 300,000 – 500,000
- PPE, safety equipment & maintenance: PKR 400,000
- Green belt maintenance & waste handling: PKR 200,000

ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

- GRM & community engagement: PKR 100,000
- Contingency (10–15%): As required

The proponent will ensure timely release of funds from project operational expenditure. The budget will be reviewed annually and adjusted based on actual needs and audit recommendations.

This EMMP provides a comprehensive, practical, and enforceable framework for managing environmental aspects throughout the project lifecycle. Full implementation of this plan will be a mandatory condition of the Punjab EPA Environmental Approval / NOC and will ensure the New Fender Manufacturing Unit operates sustainably while delivering economic benefits to the region.



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**CHAPTER 9: CONCLUSION AND
RECOMMENDATIONS**



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ESTABLISHMENT OF ZOHAIB POULTRY PROTEIN

CHAPTER 9: CONCLUSION AND RECOMMENDATIONS

9.1 CONCLUSION

The Environmental Impact Assessment (EIA) findings demonstrate that the proposed **Zohaib Poultry Protein Unit** located at **Rohi Nalla Road, Mouza Mohlanwal, Lahore**, promoted by **Mr. Abdul Hameed Kambhoo**, is an **environmentally feasible, socially beneficial, and economically viable project**.

The proposed unit is a **standalone facility** focused exclusively on the **processing of poultry waste (leftover parts of hens)** through mechanical crushing and supply to relevant industries. The process includes collection, storage, crushing, and dispatch of approximately **5–6 tons/day of poultry waste**. The project does **not involve chemical processing**, rendering, or hazardous industrial operations.

Baseline environmental studies (Chapter 5) confirm that the project site:

- Is located on **vacant land** with no ecological sensitivity
- Has **no endangered flora or fauna**
- Contains **no protected areas, wetlands, or archaeological sites**
- Lies within a **peri-urban setting with compatible land use**

Potential Environmental Impacts

The identified impacts are limited and manageable:

Construction Phase (6–12 months):

- Temporary dust generation
- Noise from construction machinery
- Minor construction waste
- Temporary traffic increase

These impacts are **short-term and localized**.

Operational Phase:

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- **Odor emissions** from poultry waste handling
- Wastewater from cleaning activities
- Solid waste (organic residues)
- Pest and vector attraction (flies, insects)
- Occupational health risks

These impacts are **moderate but controllable** through proper management practices.

With full implementation of mitigation measures and the **Environmental Management and Monitoring Plan (EMMP)**, all adverse impacts can be reduced to **low or insignificant levels**, ensuring compliance with:

- **Punjab Environmental Quality Standards (PEQS)**
- **Punjab Environmental Protection Act (PEPA), 1997**

Project Benefits

The project will provide significant benefits:

- Employment generation (15–30 workers during operation)
- Improved **poultry waste management practices**
- Reduction in **environmental pollution from improper disposal**
- Support to allied industries through supply of processed material
- Contribution to **local economic development**

Overall Assessment

The benefits of the project clearly outweigh the potential negative impacts. Compared to the **No-Project alternative**, this project is preferable as it ensures:

- Proper handling of poultry waste
- Reduced environmental contamination
- Organized and controlled processing