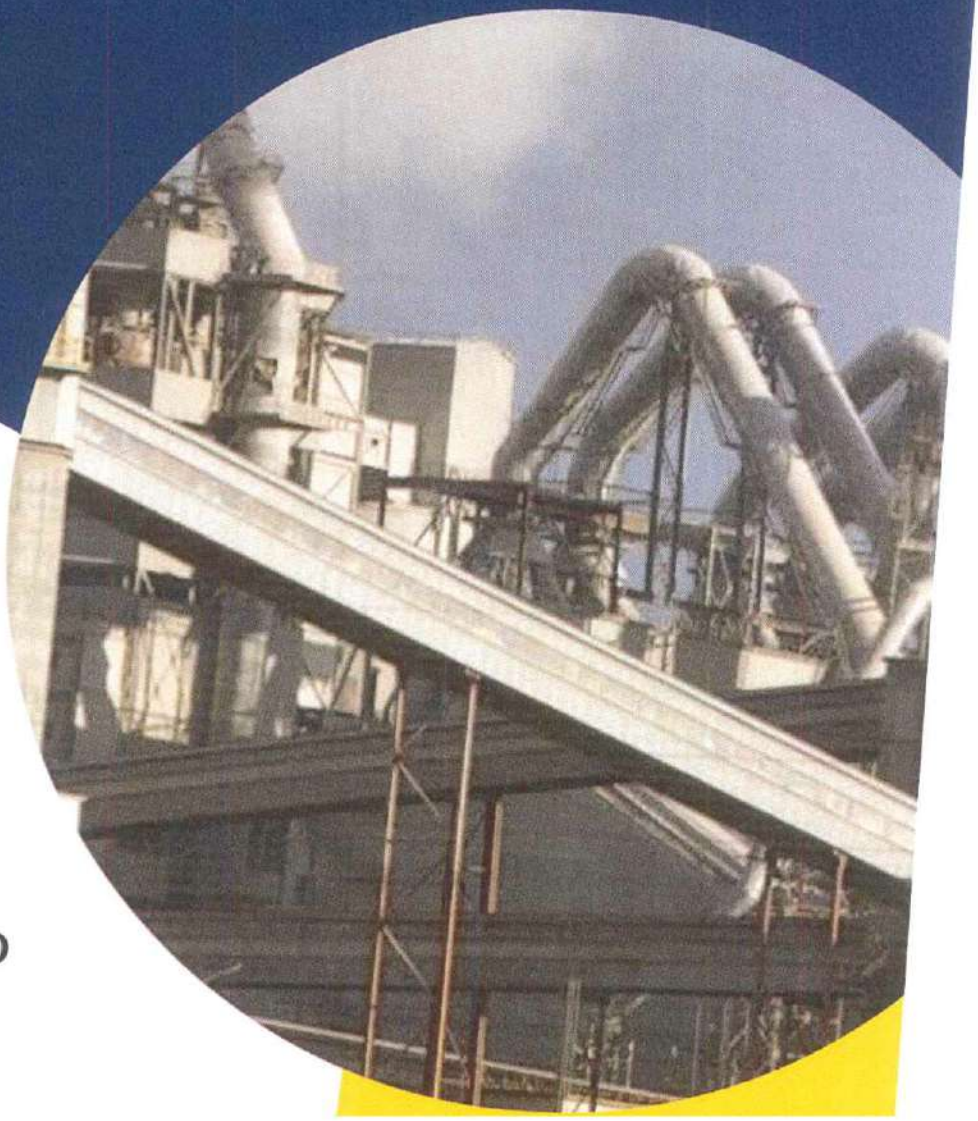
ENVIRONMENTAL IMPACT ASSESSMENT REPORT

HIMALAYA CEMENT (PVT) LTD

2025



PREPARED BY

PAK GREEN ENVIRO ENGINEERING (PVT.) LTD

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PROJECT SUMMARY

Section	Parameter	Details
1. Project Identification	Name of Project / M/S	Establishment of Limestone and Clay Mining site for new Cement Plant M/S Himalaya Cement (Private) Limited
	Project Location	Near Katha Sagral District Khushab.
	Geographical Coordinates	3165652.8, 932870.88
2. Proponent Information	Proponent Name	Mr. Yousaf Khan
	CNIC	35201-2109195-7
	Proponent Address	House No. 05, Muhalla Burj Colony, Lahore Cantt, District Lahore.
3. Project Overview	Total Project Cost	Cement Plant Project – Rs 30 billion Mining Project – Rs 01 billion
	Project type	Establishment of new Cement Plant
	Project Capacity	10,000 Tons/Day
	Process Description	The proposed project involves the surface mining of non-metallic minerals (limestone, Clay) through controlled blasting, drilling, and excavation, with proper safety and environmental precautions.
	Land Area and Ownership	5796.91 Acres (For Limestone and Clay Mining) – Lease 120 Acres (Required for the setup of new Cement Plant)
	Allied Facilities	Haul roads, weighbridge, crushing unit, water and power supply, explosive storage, workshops, admin buildings, environmental management systems, and safety infrastructure.
	Types of Waste	Iron Scrap, Packaging Waste

4. Waste Management	Estimated Waste Generation	Approx. 06 Tons per Month
	Waste Handling Measures	Source segregation, Interim Storage, Transport to disposal site
5. Rainwater Harvesting	Harvesting Infrastructure	Pits and Storage Tanks
	Implementation Status	Planned
6. Plantation & Green Development	Proposed Green Area	10 % - 12 % of Allocated Area
	Tree Types and Numbers	Kikar, Peelu, Beri
7. CSR & Community Welfare	CSR Budget	1% -2% of Total Project Cost
	Activities	• Health & Safety • Environment & Sustainability

EXECUTIVE SUMMARY

M/S Himalaya Cement (Private) Limited has proposed the establishment of a limestone mining site. The Mines and Minerals Department has approved a lease area of 5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation. The proposed mining site is located at **near Katha Sagral, District Khushab**, with coordinates **3165652.8, 932870.88**. The proponent seeks **environmental approval for limestone and clay mining** in compliance with **Section 12 of PEPA 1997 (Amended 2012)**.

This project falls under **Category C (Mining and Mineral Processing)** of **Schedule II of PEPA Regulations 2000**, due to its estimated Total cost for the Cement Plant is Rs 30 billion and mining project is 01 billion. Terms of Reference (ToRs) for the EIA study under the policy and procedure for filing, review, and approval of environmental assessment. The proponent requires environmental approval for mining activity in order to proceed with limestone and clay extraction in the approved lease area.

Project Proponent

- **Name:** Mr. Yousaf Khan
- **CNIC:** 35201-2109195-7
- **Address:** House No. 05, Muhalla Burj Colony, Lahore Cantt, District Lahore.

Environmental Consultant

- **Company:** Pak Green Enviro-Engineering (Pvt.) Ltd.
- **Address:** 46-M, Gulberg-III, Lahore
- **Contact:** 042-35441444 | 0303-4442335

Project Outline

The proposed project involves the surface mining of non-metallic minerals (limestone and clay) through controlled blasting, drilling, and excavation, with proper safety and environmental precautions. Prior to commencement, the proponent is required to obtain necessary NOCs from concerned departments.

A baseline environmental study has been conducted within a 4-5 km radius of the mining site, covering air, water, soil, and noise levels through an **EPA-certified laboratory** (reports attached as *Annexures*).

Resource Requirements

- **Water:** To be sourced from the **Jhelum River**, subject to approval from the Irrigation Department, mainly for road sprinkling, dust suppression, drilling, and domestic use.
- **Power:** Supplied through **WAPDA connection** with a **130 kVA transformer** installed at site.

Major Environmental Impacts

Table 1: Major environmental Impacts in project site

Aspect	Potential Impacts
Land Use and Soil	• Loss of vegetation and disturbance of natural ecosystem. • Landscape scarring, undulated patches, and aesthetic degradation. • Particulate matter pollution from excavation and blasting.
Air Quality (Dust and Gaseous Emissions)	• Fugitive dust emissions from blasting, drilling, excavation, and transport. • Vehicular exhaust and machinery emissions contributing to air pollution.
Noise and Vibration	• Noise from blasting, drilling. • Vibrations from blasting potentially affecting nearby structures and fauna.
Solid Waste	• Waste rock, loose stones, and mining residues. • Domestic waste from workers and staff.
Water	• Domestic wastewater potentially polluting surface water
Health and Safety	• Occupational hazards from dust, noise, explosives.
Socioeconomic Impacts	• **Positive:** Employment opportunities, uplift in local economy, and improved living standards.

	• **Negative:** Possible cultural changes, resettlement issues, and gender inequality.

Mitigation Measures (Summary)

- **Land Rehabilitation:** Restoration and reclamation plan; plantation of native species; fencing of mining site.
- **Dust Control:** Regular water sprinkling, vehicle emissions checks, speed limits, and PPE provision.
- **Emission Control:** Maintenance of vehicles, generators, within PEQS limits.
- **Noise and Vibration:** Controlled blasting, PPEs (ear muffs/plugs), soundproofing of generator rooms, HSE training.
- **Soil and Water Protection:** Safe storage of fuels/chemicals, paved storage areas, tarpaulin sheets under leaching substances, wastewater reuse for sprinkling.
- **Solid Waste:** Utilization of mining residues for quarry restoration and road filling; proper domestic waste disposal.
- **Health and Safety:** Implementation of HSE policy, first-aid facilities, safe drinking water, fencing, signage, and strict explosive handling protocols.
- **Socioeconomic:** Preference to local labour, health and education support programs, and cultural preservation efforts.

Environmental Monitoring Plan

To ensure compliance with **PEQS and legal obligations**, an environmental monitoring program will be implemented:

Table 2: Environmental Monitoring Plan

Parameter	Monitoring Activity	Frequency	Responsible Authority
Ambient Air Quality (PM, Dust, Gaseous Emissions)	Sampling and lab analysis of PM, SO_2, NOx, CO, CO_2	Quarterly	EPA Certified Lab
Noise Levels	Noise measurement at site boundary and nearby receptors	Quarterly (During blasting events)	HSE Manager
Vibration	Monitoring during blasting (PPV levels)	At each blasting activity	HSE Manager
Water Quality (Drinking and Wastewater)	Sampling and lab analysis of surface, groundwater, and wastewater	Bi-annually	EPA Certified Lab
Soil Quality	Inspection for contamination from oil, fuel, chemicals	Quarterly	EPA Certified Lab
Solid Waste Management	Record of collection, disposal, and reuse (domestic and mining residues)	Monthly	Site Manager
Health and Safety	Inspection of PPE use, first aid, signage, explosive handling, training records	Monthly	HSE Manager
Socioeconomic Measures	Community feedback, employment records, CSR initiatives	Annually	Site Manager

Record Keeping	Maintain monitoring logbook (air, noise, water, soil, waste)	Continuous	Site Manager

EPA-certified lab results confirm that current baseline conditions are within prescribed PEQS limits.

CHAPTER-1: INTRODUCTION

This section of the report presents an overview of the rationale of the project, its objectives, the justification for its installation, and the purpose of the study. It also outlines the approach adopted to conduct a single-stage Environmental Impact Assessment (EIA) for the proposed mining project of M/S Himalaya Cement (Private) Limited, located near Katha Sagral, District Khushab.

The subject project is mining for over a total area of **5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation for M/S Himalaya Cement (Private) Limited.** EIA study is being carried out for the mining project prior to start mining activity in the area. Project proponent intends to obtain approval for the mining activity by submitting the Environmental Impact Assessment EIA report to concerned Environment department.

1.1 Purpose of the Report

This section defines the central objective of the Environmental Impact Assessment (EIA) report, which is to assess the potential environmental impacts associated with the proposed establishment of a limestone and clay mining site by M/S Himalaya Cement (Private) Limited. The project site is located near Katha Sagral, District Khushab, Punjab Province. The company operates a single kiln with an **installed capacity of 10,000 tons per day**, based on modern dry process technology.

The Mines and Minerals Department has formally approved a lease area of 5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation, for limestone and clay extraction, as confirmed by the offer letter (attached as Annexure). The primary purpose of this EIA is to ensure full compliance with the **Pakistan Environmental Protection Act (PEPA) 1997** and all relevant **Punjab Environmental Quality Standards (PEQS)** and regulations. The report identifies environmental risks and proposes mitigation measures necessary for environmentally responsible planning and execution during both the mining development and operational phases of the project.

This assessment adheres to the following applicable environmental regulations and procedural guidelines:

- Evaluates key environmental aspects of the project, including physical, biological, and socio-economic conditions of the site and surrounding areas.
- Assesses baseline parameters and identifies potential impacts during the development, extraction, and operational phases of limestone and clay mining.
- Recommends mitigation measures and outlines a comprehensive Environmental Management Plan (EMP).
- Ensures compliance with relevant national and provincial environmental laws, regulatory requirements, and international best practices for sustainable mining.

1.1.1 Technology Description

It is a Japanese plant supplied by IHI Japan. The plant is completely redesigned and re-engineered by Ishikawajima-Harima Heavy Industries Company Limited, Japan ("IHI"), Japan. Ishikawajima Harima is the supplier and technical advisor of the company. IHI is manufacturing and facilitating in the following sectors;

- Space Development
- Jet Engines Storage
- System & Process Plants

1.2 Identification of Project and Proponent

The project titled "Establishment of Limestone Mining Site by M/S Himalaya Cement (Private) Limited" is located near Katha Sagral, District Khushab, Punjab Province. The project encompasses an area of approximately 5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation. The mining site will be developed with supporting infrastructure to facilitate safe and efficient operations. This includes access roads, controlled blasting arrangements, material handling systems, site offices, workshops, power supply, and water management facilities. Environmental safeguards such as dust suppression systems, controlled waste disposal practices, and safety mechanisms will be integrated to ensure compliance with national environmental regulations and sustainable mining practices.

1.3 Project Proponent

Detail	Proponent

Name	Mr. Yousaf Khan
CNIC	35201-2109195-7
Address	House No. 05, Muhalla Burj Colony, Lahore Cantt, District Lahore

1.4 Details of Consultant

Detail	**Consultant**
Company	Pak Green Enviro-Engineering (Pvt.) Ltd.
Address	46-M, Gulberg-III, Lahore
Contact	042-35441444 | 0303-4442335

1.5 Nature, Size and Location of the Proposed Project

The subject project is for the purpose of mining for limestone deposits. The area required for the proposed mining activity is 5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation. The subject project involves the mining limestone deposits which are located in close proximity to the plant site. Other minerals or ores as Iron Ore 200 tons/day and Gypsum 250 tons/day will also be used in the production of cement.

Mining for Limestone and clay deposits will be done over an area of 400 SFT on daily basis through surface mining by controlled blasting at the depth of 100 ft for limestone.

Table 1.1: Major Features of the project

Parameter	**Details**
Total Area	5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation.
Mining Method	Open Cast Surface Mining with Drilling and Controlled Blasting
Use	Limestone and Clay Extraction for Cement Production, by M/S Himalaya Cement (Private) Limited)
Estimated Cost	Cement Plant Project – Rs 30 billion Mining Project – Rs 01 billion

Production Capacity	10,000 Tons per day

1.3.1 Project Location

The subject proposed mining site is located at near Katha Sagral, District Khushab.

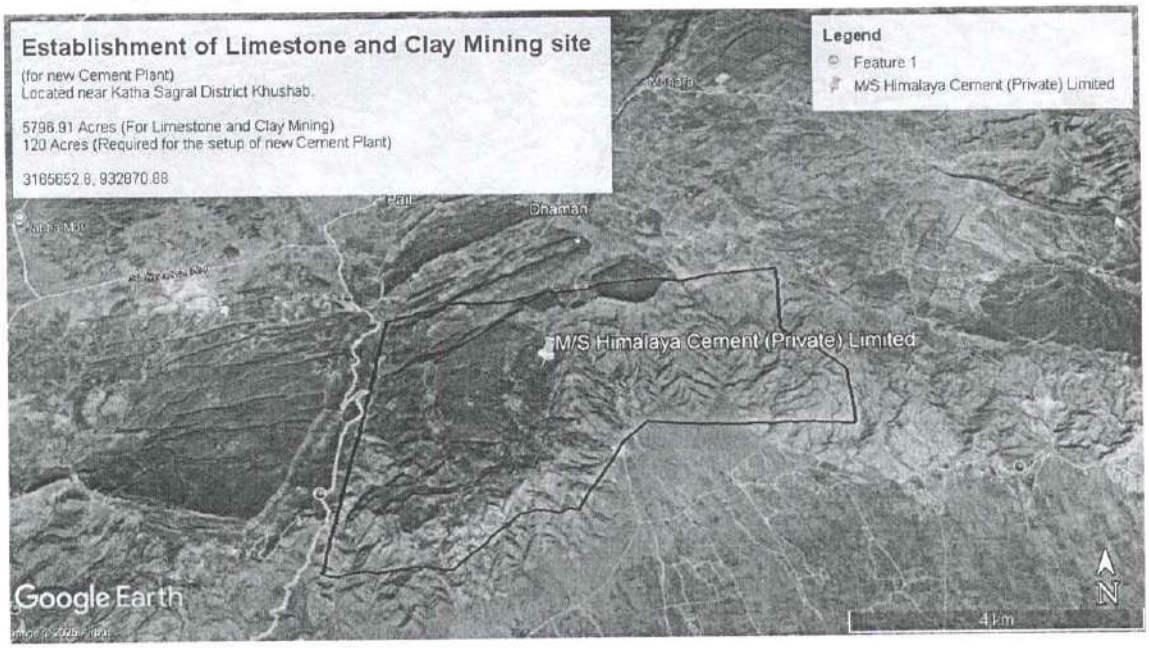
1.3.2 Land Coordinates

The geographical coordinates are;

Latitude: 32°35'13.82"N

Longitude: 72°29'6.17"E.

1.3.3 Google Map



1.4 Extent of the Study

The extent of the study includes a thorough review of project plans, physical inspection of the site, collection of baseline environmental data, impact analysis, stakeholder consultation, and formulation of mitigation strategies. It also involves examining relevant environmental regulations and best practices for sustainable construction and operation.

1.5 Structural Methodology

A structured methodology was followed in the preparation of the EIA report, which includes:

Table 1.2: Structural methodology of EIA of the project

Step	Description
Regulatory Document Review	Studied relevant laws, NEQS, building by laws, and previous and EIA reports for similar urban projects
Site Visit	Visited the proposed site to assess land use, accessibility, utilities, and surroundings
Environmental Baseline Study	Gathered data on air quality, noise levels, soil, water availability, and vegetation at the site
Stakeholder Engagement	Consulted local residents, business owners, and municipal bodies for concerns and suggestions
Impact Identification & Evaluation	Assessed environmental impacts using qualitative tools and expert input
Preparation of EMP	Designed mitigation measures, monitoring plans, and institutional roles to minimize identified impacts

1.6 Labor Force

Table 1.3: Labor Force

Phase	Estimated Workforce
Construction	50-60 Persons
Operational	100-120 Persons

SCREENING

Regulatory Basis for Screening

Environmental Screening is a preliminary assessment step used to determine the level of environmental review a proposed project must undergo, as per the provisions of the **Pakistan Environmental Protection Act (PEPA), 1997 (Amended 2022),** and the Pakistan Environmental Protection Agency (Review of Initial Environmental Examination and Environmental Impact Assessment) Regulations, 2000 (Amended 2022). The main objective of screening is to classify the project into one of two categories:

- **Schedule I** projects, which require an **Initial Environmental Examination (IEE).**
- **Schedule II** projects, which require a more comprehensive **Environmental Impact Assessment (EIA).**

The classification is based on the nature, size, and location of the project and its potential environmental impacts.

Screening Determination for the Proposed Project

After a detailed review of the proposed project characteristics, it is determined that the falls under Schedule II, specifically under the following clause:

Schedule II, Category C (Mining and Mineral Processing), Clause 1: "Mining and processing of major non-ferrous metals"

Additionally, projects involving effluent treatment plants, high-volume water abstraction, chemical handling, and solid or liquid waste generation also fall within this schedule due to their potential environmental footprint.

Justification for EIA Requirement

Scale of Operation

An Environmental Impact Assessment (EIA) is essential to identify, predict, and evaluate the potential environmental and socio-economic impacts associated with large-scale mining and mineral processing activities. Such projects typically involve drilling, blasting, excavation, transportation, and material handling, which may generate dust, noise, vibrations, hydrological

changes, and landform alterations. These activities can also pose risks to local biodiversity, natural habitats, and community health and safety if not properly managed. Conducting an EIA ensures that these impacts are thoroughly assessed and that appropriate mitigation measures are incorporated into project planning and execution. Beyond regulatory compliance, the EIA process promotes sustainable development by balancing economic benefits with environmental protection, ensuring that industrial growth does not come at the cost of ecological degradation or social well-being.

Resource Utilization

The proposed mining operations will require the careful and efficient utilization of natural, human, and technological resources to ensure sustainable and environmentally responsible extraction. The primary resource to be utilized is limestone, which will be systematically extracted from the lease area through drilling, blasting, and excavation techniques. The extraction process will generate both usable limestone and overburden, with the latter to be managed according to the Environmental Management Plan (EMP).

Land resources will be utilized for quarrying, haul roads, site offices, storage areas, and related infrastructure. Given the large lease area, land use planning will be implemented to ensure progressive development and rehabilitation of mined-out zones.

Water resources will be required mainly for dust suppression, equipment cooling, and domestic needs of workers at the site. Efficient water management practices, including recycling where possible, will be adopted to minimize wastage and avoid stress on local water sources.

Energy resources will include the use of electricity and fossil fuels to power drilling machinery, loaders, excavators, haul trucks, and other mining equipment. Efforts will be made to optimize fuel consumption and reduce greenhouse gas emissions through proper equipment maintenance and operational efficiency.

Human resources will play a vital role in mining operations, with employment opportunities generated for both skilled and unskilled labour. Technical staff will manage drilling, blasting, and hauling activities, while support staff will oversee maintenance, safety, and environmental monitoring.

Overall, the utilization of resources will be guided by principles of efficiency, sustainability, and compliance with national environmental regulations, ensuring that mining operations contribute to industrial growth while minimizing ecological and social impacts.

Waste Generation

The proposed mining operations will generate different types of waste during both the development and operational phases. The primary form of waste will be overburdening material (soil and rock removed to access limestone), which may accumulate in significant quantities. This material, if not properly managed, can lead to land degradation, dust emissions, and surface runoff issues. In addition, drilling and blasting activities will produce fine rock particles and dust, contributing to air quality concerns.

Solid waste in the form of scrap metal, packaging materials, and general domestic refuse from workers' facilities will also be generated on-site. Furthermore, used oils, lubricants, and maintenance-related wastes from vehicles will fall under hazardous waste, requiring safe handling and disposal in compliance with National Environmental Quality Standards (NEQS).

Wastewater may arise from vehicle washing, dust suppression, and sanitary use by the workforce, necessitating proper collection and disposal to avoid contamination of soil and nearby water bodies. Effective waste management practices, including segregation, recycling, reuse, designated storage areas, and environmentally sound disposal, will be implemented to minimize adverse environmental impacts.

Location Considerations

The selected site was found highly suitable for mining due to its rich limestone reserves, which ensure a reliable and long-term raw material source for cement production. Its location offers logistical advantages, being in close proximity to existing cement manufacturing facilities and connected through a network of regional roads that facilitate efficient transport to the plant and nearby markets. Environmental screening of the area indicates that the project site does not support any significant or rare flora and fauna, and no critical habitats are present within the project boundary. Therefore, the proposed mining activities are not expected to cause adverse ecological impacts, making the location appropriate for sustainable mineral extraction.

Legal and Regulatory Compliance

Under **Schedule II of the EIA Regulations (2000)**, pharmaceutical manufacturing units with significant water use, effluent discharge, and chemical handling are **legally required** to conduct an EIA prior to construction and operation. The EIA ensures compliance with:

- National Environmental Quality Standards (NEQS)
- Water quality and effluent discharge limits
- Waste management protocols

Regulatory Consultation and Confirmation

The need for conducting a full EIA for this project was confirmed through a formal screening process in consultation with the Punjab Environmental Protection Agency (Punjab-EPA). The regulatory authority confirmed that the project falls under Schedule II and must follow the complete procedure under the EIA Regulations 2000 (Amended 2022).

Accordingly, this EIA report has been prepared in compliance with:

- Section 12 of the PEPA 1997 (Amended 2022)
- Rule 4 and Rule 5 of the EIA/IEE Regulations 2000 (Amended 2022)
- Terms of Reference (TORs) provided or accepted by the Punjab-EPA for projects of this type and scale.

Summary of Screening Outcome

Table 1.5: Summary of Screening Outcome

Parameter	Description
Project Type	Limestone and Clay Mining and Extraction
Activity Nature	Mining, Quarrying, and Material Handling
Schedule Classification	Schedule II
Regulatory Clause	Category C (Mining and Mineral Processing)
Screening Decision	Requires Full Environmental Impact Assessment (EIA)

This screening outcome has guided the preparation of the full Environmental Impact Assessment report that follows, including baseline studies, impact analysis, mitigation planning, and stakeholder engagement strategies.

SCOPING

Scoping is a critical component of the Environmental Impact Assessment (EIA) process, aimed at identifying key environmental and social concerns that must be addressed. It establishes the spatial and temporal boundaries, identifies major concerns raised by stakeholders, and defines the significant impacts and factors to be examined during the study.

Spatial and Temporal Boundaries of Environmental Assessment

The project is located in District Khushab, area characterized by barren land with no significant vegetation or ecological sensitivity. The region is naturally rich in **limestone reserves**, making it highly favourable for large-scale mining activities. This zone already hosts multiple mining operations, reflecting its industrial suitability for mineral development. Furthermore, the presence of an existing cement plant operated by Himalaya Cement (Private) Limited. nearby ensures that the extracted raw material can be transported efficiently, thereby reducing logistics costs and supporting sustainable cement production.

Important Issues and Concerns Raised During Consultation

Important issue and concerns raised by the community during consultation include the dust and gaseous emission due to blasting while quarrying operation. However, the residential areas are quite from the center of project activity hence the impact will be low to insignificant. The community was also concerned about employment to local people. The proponent made sure that maximum job opportunities will be provided to the residents.

Significant Impacts and Factors to be Determined

Significant Impacts to be determined include the dust and smoke from blasting operation during mining. The health and safety of workers during mining operations should be top priority of the proponent. The proponent ensured the provisions of PPEs and job rotations to reduce exposure of worker from dust and fumes generated during mining.

Air Emissions and Ambient Air Quality

Air emissions will primarily result from drilling, blasting, excavation, material loading/unloading, and vehicular movement on unpaved haul roads. Dust (particulate matter) will be the main pollutant, along with minor emissions from fuel combustion in mining equipment. Mitigation measures include water sprinkling on haul roads, controlled blasting, plantation belts, and regular maintenance of vehicles to minimize impacts on ambient air quality.

Noise Pollution and Acoustic Impact

Sources of noise will include drilling machines, blasting activities, crushers, and heavy vehicles. Blasting may also generate short-term vibrations. Noise control strategies will involve the use of mufflers, silencers, controlled blasting schedules, and provision of PPE (earplugs/earmuffs) to workers. The site is located away from major settlements, reducing the likelihood of significant community disturbance.

Solid and Hazardous Waste Management

The primary solid waste will be overburden and waste rock generated during mining. This material will be stored in designated dumping areas with stabilization measures. Domestic solid waste from workers' facilities will be collected and disposed of through local municipal services. Hazardous waste, such as used oil, lubricants, and machine maintenance residues, will be stored in lined containers and handed over to licensed contractors for safe disposal in compliance with NEQS and Punjab EPA guidelines.

Energy Consumption and Climate Considerations

Energy consumption will mainly involve diesel and petrol, haul trucks, and support equipment. Electricity will be required for site offices and workshops. Efficient fuel use, and energy conservation practices will be implemented to minimize greenhouse gas emissions. Plantation programs will also help offset carbon impacts and contribute to climate resilience.

Socio-Economic Impacts

The project will generate direct and indirect employment opportunities for skilled and unskilled labour, supporting the local economy. Improved road infrastructure and business opportunities for local suppliers and contractors will bring additional socio-economic benefits. No significant displacement or loss of agricultural land is anticipated, as the site lies in a barren zone. With proper environmental safeguards, the project is expected to positively contribute to the socio-economic development of District Khushab.

CHAPTER-2: DESCRIPTION OF THE PROJECT

This chapter characterizes the project detail, project salient features, a general description of the raw materials the facility will use, the products they make, and the markets they serve, general description of mineral deposits, mining activity, description of the process of mining, its benefits, mining equipment, project utilities, mining impacts on environment, project waste products and safe handling and disposal.

2.1 Title of Project

Establishment of Limestone Mining site by M/S Himalaya Cement (Private) Limited

2.2 Objectives of the Project

Under this project, M/S Himalaya Cement (Private) Limited has proposed the establishment of a limestone mining site at Katha Sagral, District Khushab. For the purpose of the proposed cement plant, mining for Limestone is required. An Environmental Impact assessment report is being submitted to Environmental Protection Department for the issuance of NOC for subject mining project.

Present Project has following objectives;

- It is expected to benefit local population of the area
- To provide job opportunities to local public and to improve their living standards
- To improve the economic activities
- To provide better infrastructure
- It will fulfill the cement requirement in the country
- Private investment will be beneficial for the national economy and GDP as well
- Project will function in a sustainable way for the mining of limestone and clay deposits.

The other objectives of the study are,

- To identify and quantify significant impacts due to the proposed mining project on various environmental components through prediction of impacts.
- To evaluate the beneficial and adverse impacts of the proposed mining project.
- To assess and describe the mitigation measures taken by M/S M/S Himalaya Cement (Private) Limited management

- To evaluate and check the Environmental Management Plan (EMP) detailing control technologies and measures to be adopted for mitigation of any adverse impacts as a consequence of the proposed mining project.
- To propose monitoring plan to ensure the compliance with emission standards

2.3 Location and Site Layout of Project

2.3.1 Location

The study site is situated in the near *Katha Sagral, District Khushab.*

Project land coordinates are as follows:

2.3.2 Site Layout of the Project

The proposed project site is situated in a barren and rocky terrain, free from significant vegetation, flora, or fauna, making it suitable for large-scale mining operations without ecological disruption.

The northern boundary of the site extends towards **Pail and Dheri Aja villages**, while the southern side connects with the road network leading to **Daiwal and Mangwal Khushab**, facilitating easy transportation of raw material to the cement plant and nearby markets. The western side is marked by the **Chambal Waterfall and reserved forested patches**, which remain outside the project boundary to avoid environmental disturbance. The eastern boundary gradually merges with agricultural land patches at the foothills, though no settlements fall within the immediate project area.

Access to the site is ensured through existing regional roads connecting Khushab city with Mangwal and Katha Sagral, providing logistical efficiency for the movement of mining machinery and raw material. The project layout includes designated zones for excavation, overburden dumping, haulage routes, and buffer zones, ensuring that mining activities are confined within the approved lease limits while maintaining compliance with environmental safety standards.

Table 2.1: Salient Features of the Project

Feature	Details
Project	M/S Himalaya Cement (Pvt.) Ltd.
Location	Katha Sagral, District Khushab

Lease Area	5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation.
Mineral	Limestone
Mining Method	Open-pit surface mining with controlled blasting
Explosives	Emulite, Detonators (stored/handled per SOPs)
Blasting Type	Controlled
Plant Capacity	10,000 Tons/day
Machinery	Excavators, drillers, haul/load/dump trucks, bulldozers, compressors

2.4 Land Use on the Site

The study site is situated in the near *Katha Sagral, District Khushab*. Land required for the proposed mining project is surrounded by hilly area. Land selected for the proposed project is barren only some grasses & shrubs are present in scattered quantity. Mostly area is covered by the mountains. Fertile land is rare in the study area. Small patches of the soil are present that are used by the house hold for the vegetable harvesting and grazing. Hard rocks are present all over the upper layer.

2.5 Road Access

The project site at Katha Sagral, District Khushab, is well-connected through a network of regional and local roads, ensuring smooth transportation of raw materials and finished products.

2.6 Vegetation Features of the Site

The proposed study area is barren and has scattered amount vegetation/flora. Mainly grasses and shrubs like Parenthanium are present on site and about 5-10 trees or big plants like Acccia modesta *(Kikar)* present in the area that will be cut off during the proposed mining/extraction activity and will be restored with native plants. Mostly the land is barren so the project will not cause any major adverse impacts on the surrounding.

2.7 Cost and Magnitude of Operation

The current status of the project is proposed; activity will be start after the environmental approval from EPD. Total area of the project is 5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation. A complete layout map of the area is annexed

(**Annexure-**). Total cost for the Cement Plant Project is Rs 30 billion and mining Project is 01 billion.

2.8 Schedule of Implementation

M/S Himalaya Cement (Private) Limited has acquired the grant of lease for limestone mining from Department of Mines & Minerals Punjab. Also, proponent has applied to the concerned Environment Department for Environmental Approval for the subject proposed mining project. Mining activity for non-metallic minerals would be started when Cement Plant will come in operation after obtaining the Environmental Approval.

2.9 Description of The Project

The subject project involves the mining of extensive limestone reserves located in close proximity to the proposed cement plant site at Katha Sagral, District Khushab. The total lease area allocated for mining activities is 5796.91 acres for limestone and clay extraction, 120 acres for plant and machinery installation, suitable for long-term and sustainable extraction. Limestone and clay deposits are available within a distance of 1-2 km from the proposed plant site, ensuring reliable raw material availability and reduced transportation costs. The plant site has been selected on relatively level ground, which is advantageous for construction and operational efficiency.

2.9.1 Project Activities and Key Components in Blasting Process

The blasting process for limestone extraction will be carried out in a controlled and systematic manner to ensure efficiency and safety. Key activities include drilling blast holes using hydraulic drills, charging them with suitable explosive material (such as emulite) and detonators, and executing controlled blasting to fragment the limestone. Post-blast activities will involve excavation, loading, and hauling of the fragmented rock using heavy machinery. Strict adherence to safety standards and Standard Operating Procedures (SOPs) will be maintained to minimize risks to workers, nearby communities, and the environment.

Step 1: Drilling

- Cleaning of bushes & grasses with the help of bulldozer
- Marking of bore holes in singular or multiple rows
- Drilling with the help of DOWN THE HOLE (drill machine)
- Model selected for this drilling is Flaxy Roc D45 (Atlas Copco)

- This machine is equipped with sophisticated dust collector for collection of representative samples and keeping the environment cleaner and friendly.

Step 2: Blasting

Blasting includes the following steps:

Stemming

Stemming prevents the loss of explosives energy from blowouts by plugging the end of the drill hole which produces better result from the blasts).

Fragmentation

- Improved fragmentation will be achieved by giving the time lag between the shot holes.
- This will be done by applying short delay detonators or detonating relays.
- Short delay blasting also controls the ground vibration.

Blasting feature

Scheduled blasting will be followed i.e. Schedule of blasting will be in day time and 2-3 Days blasting per week will be done. Also, SOPs for safe blasting will be followed in which controlled blasting using millisecond delay electric detonators (blasting material) will be employed and as a result big piles of rocks and fragments will be pulled down in a single action preventing the formation of dust clouds, also by installing the dust collectors on drill rigs.

After blasting, fragmented rocks/stones will be transferred to cement plant site with help of Dump trucks.

The environmental damage caused by surface mining is related to the large amount of surface material that humans remove during mining operations. The environmental effects of surface mining include

- Habitat destruction
- Soil erosion
- Air pollution from dust particulates
- Water pollution
- Pollution (especially from sediments)
- Noise and vibration also may disturb the surrounding environment, and it is necessary to place a safety zone around the pit to protect people and equipment from fly rocks.

Controlled blasting method is used to control adverse impacts such as:

- Over break
- Reduce ground vibration
- Reduce fractures within remaining rock walls
- Reduce Noise
- Reduce dilution/waste of ore etc.
- Environmental impacts of surface mining

2.9.2 Water supply & treatment for proposed mining project

Water requirement for the proposed mining project will be fulfilled by underground water by Jhelum River and will be used during mining activity for the purpose of sprinkling on road, for domestic and for drilling. The proponent will apply for permission for the extraction of water from Jehlum river from irrigation department. There will be no hazardous effluents release form the mining activity so there will be no chances for ground water contamination by the subject project. Waste water generated from the mining activity will be used as sprinkling on the quarry area or for restoration of the land.

Potable water plant location

In the mining area drinking water requirement is fulfilled by underground water by wells. 2000 gallon/day drinking water will be required for the labor in the area. Water analysis has been conducted for this by the team of Pak Green Laboratories (EPA Certified) and lab results are incorporated within this report.

2.9.3 Solid Waste Management

Solid waste generated from mining activities, domestic sources, and plant operations will be managed through a structured Solid Waste Management Division, supervised by the HSE Manager, Solid Waste Manager, and other relevant staff. Mining and extraction activities will produce solid waste in the form of loose rocks, stones, and residues that cannot be used in cement production. These materials will be reused where possible, particularly for road filling, quarry restoration, and construction of check dams, thereby minimizing environmental impacts.

Solid waste from domestic and process sources within the plant will be disposed of in accordance with agreed arrangements with licensed contractors. To ensure cleanliness and proper upkeep of the site, a contractor will be engaged to maintain a workforce of approximately 20 sweepers, while another contract will be awarded to M/S Himalaya Cement

(Pvt.) Limited for landscaping and horticulture activities. Around 25 gardeners will be employed for maintaining lawns, planting trees, and cultivating flowers to enhance the site's green cover. The detail final extent of the dumps cannot be described at this stage, for this proper solid waste management plan will be formulated with detailed study if this project got approval.

2.9.4 Plantation

Green landscaping will be carried out both within and around the facility, using native and low-maintenance plant species. This will improve air quality, reduce heat absorption, and enhance the site's ecological value.

2.10 Occupational Health and Safety

First Aid facility

At workplace workers and employers should have enough information, knowledge and training regarding first aid treatment in case of any emergency. The subject project will provide proper medical facilities to workers and staff to cope with any incidental accidents and proper training about first aid will be provided to workers and staff.

Safety Trainings

Workers and all the staff will be provided with proper training about the work and safety practices.

Use of Drugs and Narcotics

Drugs and narcotics are strictly prohibited during working hours in working area. Smoking will be only allowed in rest timings at properly isolated places.

Security

The mining site will be fenced properly to avoid any damage to nearby settlements. Safety signs & boards should be placed at during mining activity. At the time of extraction activity proper SOPs will be followed like pre-announcement in the loud speaker and others.

Personal Protective Equipment (PPEs)

Workers will be provided with PPEs as Masks, Gloves, Helmets, Safety shoes, Ear plugs, Ear muffs & other personal protective equipment during the working hours and blasting to insure personnel health & safety. Implementation of PPEs will be ensured by the proponent for the proposed project.

Risk Assessment and Disaster Management Plan

Risk Assessment study for the proposed subject project was carried out. According to the studies and local people of the area the subject area is not natural disaster prone. Project proponent will develop Disaster Management Plan (DMP) in place for onsite emergency.

Fire Protection System

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

Emergency Exits: Emergency exit points will be available for easy evacuation in case of any emergency.

Security: The proposed industry will be constructed along with the presence of security guards round the clock which will improve the security of the project site and also in its vicinity.

Personal protective equipment: Workers will be provided with dust mask, ear plug, ear muffs, safety boots, safety gloves, safety belt, helmet and goggles etc. during the working hours to ensure personnel health & safety. Implementation of PPEs will be ensured by the proponent for the proposed project also.

Power sources and transmission: Power requirements for the project will be fulfilled by the WAPDA.

2.11 Restoration and Rehabilitation Plan

Land rehabilitation is the process of restoring disturbed land to a stable and productive condition after industrial activities such as mining. Mining operations often cause land degradation; therefore, rehabilitation is an essential component of sustainable resource management. Upon completion of mining, the affected area will undergo systematic restoration in line with best practices and the **National Mineral Policy 2013 (Clause 7.16: "Restoration and Rehabilitation")**, which obligates mineral-title holders to carry out adequate restoration, landscaping, and reclamation.

Key measures to be implemented include:

- Contouring waste dumps to stabilize them against erosion.
- Covering sulphide-bearing ores with clay to prevent acid mine drainage.

- Applying topsoil and planting vegetation over landfills and dumps to consolidate materials.
- Installing fencing around dumps and open pits to restrict access and protect vegetation.
- Allowing the open pit to gradually refill with groundwater, with safety fencing around its perimeter.
- Stabilizing tailings dams by covering with waste rock, clay, and topsoil, followed by plantation.

In addition, M/S Himalaya Cement (Pvt.) Limited will adopt the following rehabilitation practices during and after mining:

- Minimize land disturbance during drilling and excavation.
- Contain drill cuttings and mud within designated sumps.
- Limit clearing for drill platforms and preserve vegetative cover wherever possible.
- Properly plug drill holes to prevent hazards and artesian flow.
- Re-contour mined benches and re-vegetate disturbed land with native species.
- Develop a plant nursery and garden to promote ecological restoration and biodiversity.

At project site, limestone will be extracted through the open-pit mining method. Successive benches will be developed through drilling and controlled blasting. Benches will be wide enough to allow future land use, including potential cultivation and plantation, ensuring the long-term ecological and socio-economic value of the rehabilitated area.

Restoration & Rehabilitation Plan

Mining plans are typically long-term in nature, as the extraction of mineral deposits often extends over several decades. For the proposed project at Katha Sagral, **M/S Himalaya Cement (Pvt.) Limited** has developed a comprehensive reclamation and restoration strategy to ensure sustainable land use after mining activities. The plan includes the following measures:

- **Topsoiling of benches**: After limestone extraction, benches will be covered with topsoil to make them suitable for cultivation and plantation.
- **Afforestation and plantation**: Native trees and shrubs will be planted to restore vegetation and improve ecological balance.

- **Pasture and forestry development**: Portions of the reclaimed land will be used for establishing pasture and commercial forestry to benefit local communities.
- **Ecological succession**: Natural re-colonization will be allowed, enabling the land to gradually return to its original grazing and pasture functions.
- **Rainwater recharge**: Check dams will be constructed to facilitate rainwater percolation into subsoil and groundwater reserves.
- **Progressive rehabilitation**: It is estimated that approximately 3.5-4 acres of land will be quarried annually, while 2-2.5 acres will be restored each year as part of progressive rehabilitation.
- **Stakeholder consultation**: Restoration activities will be carried out in consultation with local landowners and the Forest Department to ensure ecological and socio-economic benefits.
- **Landowner agreements**: The restoration plan will be incorporated into agreements with landowners, and compensation will be provided as per the Mining Concession Rules 2002.
- **Alternative land use**: Selected patches of restored land will be converted into agricultural use through sustainable techniques such as drip irrigation.
- Plantation in the area will be done comprising local species restoration named as:
    - *Olea cuspidata* (Kau)
    - *Acacia modesta* (Phulai)
    - *Dodonaea viscosa* (Sanatha)
    - *Ziziphus mauritiana* (Bair Tree)

Note: These plants will be planted at the boundary wall of the restored agriculture patches and on the clear area.

2.12 Government Approvals Required by the Project

All the necessary approvals and clearances from relevant authorities will be obtained following the formal approval of the Environmental Impact Assessment (EIA) by the Environmental Protection Agency (EPA) Punjab. The EPA's clearance serves as a prerequisite, demonstrating

that the project will meet the environmental compliance requirements set forth under national and provincial environmental laws. Once this approval is secured, the project proponent will proceed to obtain the remaining permissions required for construction, utilities, operations, safety compliance, and other regulatory aspects. This stepwise process ensures that all aspects of the project are aligned with legal, environmental, and technical standards before execution begins.

RAINWATER HARVESTING SYSTEM

A rainwater harvesting (RWH) system will be implemented at the project site in District Khushab as an environmentally sustainable initiative. The system is designed to capture rainwater from mining benches, haul roads, paved yards, and open storage areas, directing it into recharge pits and check dams constructed within the project boundary. This system will efficiently manage stormwater, minimize soil erosion, reduce surface runoff from mining zones, and enhance groundwater recharge particularly significant in Khushab were limestone and clay rich soils support infiltration.

System Design and Components

1. **Catchment Area:** Rainwater will be collected.
2. **Conveyance Network:** Water will be guided through lined drains, road-edge grates, and PVC downpipes toward collection sumps and recharge structures. In mine pits, channels will direct stormwater to sedimentation ponds before infiltration.
3. **Filtration Chamber:** Prior to recharge, rainwater will pass through filtration chambers equipped with sediment traps, gravel/sand layers, and silt catchers to remove suspended solids, debris, and hydrocarbons washed from paved surfaces.
4. **Recharge Pits and Check Dams:** Multiple recharge pits (1.5–2 m in diameter, 2.5–3 m deep) will be constructed across the site, filled with boulders, gravel, and sand layers for filtration and gradual percolation. In addition, small check dams will be built in natural depressions and mining benches to retain runoff and enhance infiltration.
5. **Overflow and Drainage:** Excess rainfall will be diverted via stormwater drains to nearby natural channels, preventing waterlogging in operational areas.

Water Quality and Suitability

As the harvested water is intended for dust suppression, washing, and groundwater recharge (not direct human consumption), only basic filtration will be required. Quarterly monitoring for pH, TDS, turbidity, and oil/grease will ensure aquifer health.

Operation and Maintenance

- Pre-monsoon cleaning of catchment surfaces, channels, and filters.
- Regular desilting of sedimentation ponds and recharge pits.

- Gravel/sand filter replacement every 2–3 months during rainy season.
- Routine inspection of check dams for erosion and stability.

Benefits of the System

- **Groundwater Recharge:** Supports aquifer replenishment in a limestone-rich area where water demand is high.
- **Stormwater Management:** Reduces erosion and flooding risks in quarry zones.
- **Resource Conservation:** Reduces dependency on external freshwater sources.
- **Low Cost:** Economical and easy-to-maintain nature-based solution.
- **Sustainability Compliance:** Meets NEQS and environmental management requirements, enhancing the project's eco-friendly profile.

CHAPTER-3: ANALYSIS OF SITE ALTERNATIVES

3.1 Introduction

From the point of view of locating an industry the features, which are considered extremely important, are:

- Availability of suitable land.
- Availability of required utilities and infrastructure
- Road access to the site for easy transportation of materials and finished goods.
- Optimum investment requirement for the development of the infrastructure.

3.2 Site ALTERNATIVES

Alternatives for the proposed mining project have been considered and most suitable site has been selected after consideration of the other four alternatives sites. Four other alternative sites for the proposed mining project are:

- Near mouza Kalar Kahar District Khushab
- Near mouza Jahlar District Khushab

Detail of each alternative site will be described in next section.

3.3 Site selection Criteria

The site selection criteria for the proposed site are as follows;

- Enough reserves of non-metallic mineral deposits i.e. limestone and clay
- Both deposits are in the proximity of Cement Plant
- Plain Area/Barren Land
- No residential settlements or area near the radius of selected site.
- Enough water availability, tube well
- Less/few vegetation/plantation
- Easy access of raw material to cement plant area

3.3.1 Design/Technology alternative

Surface comprises 90% of the world's mineral tonnage output. Also called open pit mining, surface mining is removing minerals in formations that are at or near the surface. Ore retrieval is done by material removal from the land in its natural state.

Surface mining involves quarrying which is excavating minerals by means of machinery such as cutting, cleaving, and breaking. Explosives are usually used to facilitate breakage. Hard

minerals such as limestone and clay, sand, gravel, and slate are generally quarried into a series of benches.

Strip mining is done on softer minerals such as clays and phosphate is removed through use of mechanical shovels, track dozers, and front-end loaders.

The subject proposed mining project will adopt surface mining method for **limestone and clay extraction** by controlled blasting techniques where hard rock would be required to extract into a series of benches from the surface otherwise mechanical extraction will be done to remove the loose or soft mineral overburden. Blasting is a critical part of the mining cycle, used to break rock through controlled drilling and the detonation of explosives. It involves applying a calculated amount of explosive energy to fracture a predetermined volume of material. Since the early use of black powder, blasting technology has evolved significantly with advancements in explosives, detonating and delay systems, and a deeper understanding of rock breakage mechanics.

Effective blast design and execution are essential for the success of mining operations. Poor blasting practices can negatively affect mine economics by damaging rock structures, causing unwanted caving, and increasing ground support costs. Excessive use of explosives, in particular, may lead to safety hazards and higher operational expenses.

Blasting is employed in both open-pit and underground mining. While traditional methods relied on black powder and dynamite, modern mining uses a variety of high explosives, such as ANFO (ammonium nitrate/fuel oil), slurries, and emulsions. These explosives generate intense heat and pressure upon detonation, shattering and fracturing the rock mass.

The mining engineer plays a key role in selecting the appropriate explosive type and designing blast patterns to ensure efficiency, safety, and cost-effectiveness. Factors such as rock type, density, strength, natural fractures, and groundwater conditions must all be carefully considered when planning a blast. Blasting is applied at multiple stages of the mining process, from infrastructure development to ore production, making it one of the most important operations in the industry.

3.4 BLASTING IN SURFACE MINES

Most rocks require blasting prior to excavation in surface mines. Usually, four types of explosives are used in surface mining: slurries, dry mixes, emulsions and the hybrid heavy ANFO. Selection of explosives depends on many factors, which primarily includes critical

diameter, hydrostatic pressure, temperature, minimum primer weight, density weight strength, bulk strength, gap

3.5 Bench Blast Pattern in Quarry / Open Pit

sensitivity, water resistance, loading procedures, coupling or decoupled properties, shelf life, reliability for bulk operations and overall drilling and blasting economics.

Controlled Blasting

Controlled blasting is a technique of blasting for the purpose to reduce the amount of over break and to control the ground vibrations. Following are the different types of controlled blasting techniques:

Pre-Splitting: this is an old but highly recognized technique with the purpose to form a fracture plane beyond which the radial cracks from blasting cannot travel. Other methods include Trim (Cushion) Blasting, Smooth blasting (contour or perimeter blasting) for underground mines and muffle blasting as a solution to prevent fly-rock from damaging human habitants and structures.

Secondary Blasting

"Irrespective of the method of primary blasting employed, it may be necessary to reblast a proportion of the rock on the quarry floor so as to reduce it to a size suitable for handling by the excavators and crushers available. Two methods of secondary blasting of rock are available. The first, called the plaster or mudcap method, is to fire a charge of explosive placed on the rock and covered with clay, the shock of the detonating explosive breaking the block. The second technique, known as pop-shooting, is to drill a hole into the block and fire a small charge in this hole, which is usually stemmed with quarry fines."

Non-Explosives Rock Breaking

Non-explosives are used in areas very closed to sensitive structures. These are mostly used in construction industry for breaking oversize rocks, concrete etc. Rockfrac and Dexpan produce expansion chemicals which are used to break rocks. Most of these are used in limestone and clay and sandstone quarrying. Expansion chemicals require huge amount of drilling. There are also hydraulic rock splitters that can be used where blasting is not permitted, or where it is not suitable.

The subject proposed mining project will adopt controlled blasting technique for safe blasting or breaking of the rocks and to produce less environmental damage.

Characteristics of Explosives

Rational large-scale mining and excavation activities have driven significant advancements in mining equipment as well as in the manufacture, distribution, and handling of explosives. In modern mining operations, safety and working environment considerations have become critical parameters in evaluating overall performance. These factors have strongly influenced product development, leading to the design of less sensitive and safer explosives. At present, the majority of commercial explosives used worldwide are applied in large-diameter drill holes, where they are predominantly managed and delivered in the form of bulk explosives.

ANFO is since more than 25 years the most common bulk explosive as it is cheap, easy and safe to handle. ANFO is unfortunately not water resistant and despite a lot of efforts has been made to add ingredients m order to increase the water resistance; this has only succeeded to a marginal degree. The overall cost for the excavation including loading, hauling, crushing etc. must be minimized. By changing the explosive usually all operations are affected. More powerful explosive in the drill holes gives for example finer fragmentation and a faster flow of rock through the loading, hauling-crushing operation.

EMULITE is an emulsion explosive. It consists of small droplets of ammonium nitrate solution, tightly packed in a mixture of oil and wax. Looked at through a microscope, its structure resembles that of a honeycomb. The thickness of the oil and wax membranes separating the droplets is less than one ten thousandth of a millimeter. This involves an extremely large contact area between the fuel-oil and wax and the oxidizer-ammonium nitrate. As a result, very rapid and complete explosive combustion is obtained. The oil and wax membrane also protect every droplet of ammonium nitrate and makes the explosive highly water resistant.

EMULITE contains no raw materials classified as explosives and becomes itself an explosive only in the final stage of production. EMULITE is extremely insensitive to accidental initiation through friction, fire or other mechanical stimuli. It is therefore extremely safe to manufacture and handle than any other commercial explosive.

The subject proposed mining project will use EMULITE emulsion explosive for limestone and clay extraction for the purpose of controlled blasting in case of extracting hard rock M/S

Himalaya Cement (Private) Limited will also follow the SOPs for careful storage and handling of explosive materials for blasting.

3.6 SITE ALTERNATIVES

Four alternatives' sites were identified initially for the proposed mining project. These sites were also located in District Khushab. The present site has been selected after consideration of the other two alternative sites. These sites and their reasons of rejection are summarized below.

Another site A near Mouza Jahlar District Khushab

Another site near Jahlar in District Khushab was considered for the lease of mining for limestone and clay. The site was rejected due to the following reasons:

Positive aspects of the site:

- The site has accessible limestone and clay deposits suitable for cement production.
- There is sufficient land availability to support quarrying and potential future expansion.
- Its proximity to main roads allows easier transportation of raw materials to processing plants.
- The area could potentially support local economic development and provide employment opportunities.

Negative Aspects of the site

- The site is close to the Uchalli Wetland Complex, which is internationally important for migratory and resident bird species.
- Mining could have adverse impacts on avifauna, including vulnerable species such as Steppe Eagle, Imperial Eagle, Sarus Crane, and Ferruginous Pochard.
- Soil and land degradation could occur due to vegetation stripping, leading to erosion and potential desertification.
- The area hosts xerophytic and medicinal desert plants important for the ecosystem and local ethnomedicine.
- Mining runoff could threaten water quality in nearby wetlands and groundwater.
- Proximity to local settlements increases the risk of social conflicts and disturbance to traditional land use.

- Development in this area faces strict regulatory restrictions due to its environmental sensitivity, making approval and compliance challenging.

Conclusion of Alternative Site A

With the consultation of concerned stakeholders and on the basis of environmental variables and Economic Analysis with reference to transportation, the above Site C was not suitable for the mining activity.

Alternative Site B near Kalar Kahar District Khushab

Another site near Kalar Kahar District Khushab was considered for the lease of mining for limestone and clay.

The site was not selected due to the following reasons:

Positive aspects

- The site contains limestone and clay deposits suitable for cement production.
- There is available land that could accommodate quarrying activities and potential expansion.
- The area is relatively accessible by road, which could facilitate the transportation of raw materials.
- Development of the site could potentially provide local employment and contribute to economic activity in the region.

Negative aspects

- The site is close to Kalar Kahar Lake, a sensitive wetland ecosystem that supports migratory and resident bird species. Mining could disrupt these habitats.
- The surrounding area includes protected or ecologically sensitive zones, including rare desert and wetland flora, which could be damaged by quarrying.
- Soil erosion and land degradation are likely due to stripping of vegetation and excavation.
- Mining operations could contaminate local water sources, including groundwater and nearby lakes.
- Noise, dust, and human activity from mining could negatively affect local wildlife and nearby communities.
- Proximity to local settlements may create conflicts with land use and social concerns.

- The site falls within an environmentally sensitive area, meaning regulatory compliance would be difficult and costly, increasing project risk.

Conclusion for Alternative Site B

On the basis of above negative aspects of the site under consideration, the site was not suitable for the proposed mining activities.

Selected Site: near Kalar Kahar in District Khushab

Advantages of Setting up Proposed Mining Project

- Enough reserves of non-metallic mineral deposits i.e. limestone and clay
- Plain Area/Barren Land
- No residential settlements or area near the study area.
- No environmentally sensitive area within the study radius
- Enough water availability, tube well
- Less/few vegetation/plantation
- No such fauna at the site
- The area was not flood prone
- Easy access to cement plant area
- Convenient plot layout
- Easy access or availability of reserves to plant site
- Due to the location of the project, Economic Activity will be increased in the area that will be a positive impact with respect to social uplifting of the area community.
- With this proposed mining project, commercial activity in the area shall increase. A large market including shops those of auto repairs goods transportation, general provision, food supplies, and restaurants etc. will come up long the approach road and main road, thus there will be some rapid change in the land use and ultimately local will be benefited.

Economic and Environmental Analysis among Sites

When evaluating potential sites for limestone and clay mining for the Himalaya Cement Project in Khushab District, both economic viability and environmental sustainability were key considerations. The analysis focused on sites near Jahlar and Kalar Kahar, comparing their suitability for mining operations while minimizing ecological and social impacts.

Economic Considerations:

- Both sites offer accessible limestone and clay deposits, which is critical for cement production and ensures operational efficiency.
- The proximity to roads and transport infrastructure at both locations would facilitate the movement of raw materials to the processing plant, reducing logistical costs.
- Available land at both sites could support mining operations and potential future expansion.
- Development at either site could contribute to local employment and stimulate economic activity in nearby communities.

Environmental Considerations:

- The Jahlar site is near the Uchalli Wetland Complex, an internationally important habitat for migratory and vulnerable bird species. Mining here could cause significant ecological disruption.
- The Kalar Kahar site is adjacent to Kalar Kahar Lake and surrounding ecologically sensitive zones, including desert and wetland flora, making it vulnerable to habitat loss, soil erosion, and water contamination.
- Both sites are close to local settlements, which increases social and land-use conflicts and raises potential community concerns.
- Strict regulatory restrictions apply to environmentally sensitive areas, increasing the risk of project delays and compliance costs.

While both sites are economically promising due to limestone and clay availability and infrastructure accessibility, they are environmentally sensitive, posing significant risks to wetlands, biodiversity, and local communities. The negative environmental impacts outweigh the economic advantages, leading to the rejection of these sites for the Himalaya Cement Project. This analysis emphasizes the need to select an alternative site that balances economic feasibility with environmental sustainability, ensuring compliance with national regulations and protection of Khushab's unique ecosystems.

CHAPTER-4: DESCRIPTION OF ENVIRONMENT

This chapter presents a comprehensive overview of the existing environmental conditions in and around the project area located in District Khushab, Punjab. The environmental baseline serves as the reference point to assess potential impacts of the proposed project. The description encompasses the physical, biological, and socio-economic components of the environment of Khushab.

4.1 Physical Environment

This section describes the physical characteristics of the environment in and around the project area. Understanding the physical environment is critical for evaluating the potential impacts of the proposed project and identifying effective mitigation measures.

4.1.1 Topography and Geography

The project site is located within District Khushab, Punjab, which encompasses contrasting landforms including the Salt Range hills in the north and the Thal Desert in the south. The terrain around the site is generally stable, consisting of semi-arid plains interspersed with gentle undulations and, in some areas, sandy stretches. Elevation varies between approximately 740–820 meters above sea level in the Salt Range wetland region and gradually declines toward the desert plains of Noopur Thal.

The area does not fall within any major landslide-prone or erosion-sensitive zones, though localized soil erosion can occur on sandy dunes under high wind conditions in the Thal region. Natural drainage is governed by seasonal rainfall and runoff from the surrounding Salt Range hills, which feed the Uchalli, Khabbaki, and Jahlar lakes. In the desert zones, drainage is limited due to aridity and permeable sandy soils. Overall, the topographical stability, coupled with the presence of both wetland ecosystems and desert plains, makes the region suitable for controlled agricultural, industrial, and ecological development, provided that conservation and water management practices are observed.

4.1.2 Geology and Soil

Khushab is not only rich in natural resources (salt & coal) etc. Bauxite ore found at Punjab Quarry, Khushab (Pakistan) has been analyzed and evaluated to determine its constituents and feasibility of extracting aluminum by Bayer Process. Al, Fe, Ti, Ca, Na, K, Mg, Cl, and Si have

been estimated in the samples. The highest alumina (Al_2O_3) content (60 to 73 %) has been found in the deposits of Punjab Quarry.

Problems include:

- Surface erosion
- Tunnel and gully formation
- Sinkholes
- Instability of pavements, foundations, and reservoir linings

This section describes the baseline conditions, which cover the existing Physical, ecological and socio-economic environment of the project as well as study area. Data was collected by reviewing secondary data and field survey.

Table 4.1: Soil Conditions in Khushab

Condition	pH	SAR	PS	CEC	Description
Original Soil	10.7	8.83	58	12.4	Dispersive
Cement 2%	12.0	6.12	18	11.3	Non-Dispersive
Cement 4%	12.3	5.06	15	11.4	Non-Dispersive
Cement 6%	12.4	4.12	13	12.6	Non-Dispersive
Cement 8%	12.5	3.21	11	15.3	Non-Dispersive
Lime 2%	12.4	6.69	20	10.9	Non-Dispersive
Lime 4%	12.7	5.34	17	5.37	Non-Dispersive
Lime 6%	12.8	4.72	13	31.7	Non-Dispersive
Lime 8%	12.7	3.83	11	42	Non-Dispersive

Note: Original Khushab soil is dispersive due to high sodium chloride content. After stabilization with cement or lime (≥2%), soil behavior becomes non-dispersive.

Reference: *Batool, S., Malik, A. A., Akbar, A., & Sultan, T. (2015). Improvement of CBR and compaction characteristics of bauxite rich dispersive soils available in pakistan: A case study of khushab soil. University of Engineering and Technology Taxila. Technical Journal, 20(4), 19.*

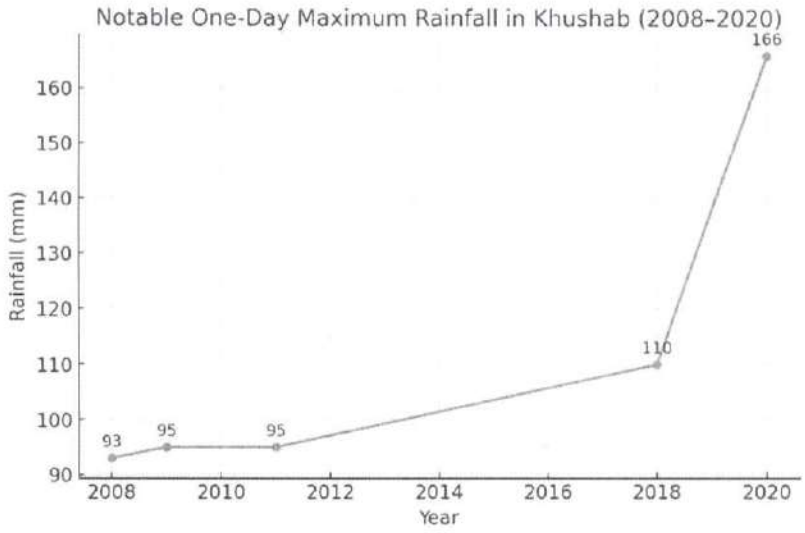
Reference: https://www.pakpedia.pk/khushab

4.1.3 Climate and meteorology

District Khushab lies in a semi-arid zone where monsoon rainfall plays a dominant role in the hydrological cycle. According to the Pakistan Meteorological Department, the average annual rainfall is about 500 mm. From the observed records (2007–2020), the highest one-day rainfall was 166 mm in 2020, which caused severe flooding in Khushab and surrounding areas. Other notable heavy rainfall years include 2008 (93 mm), 2009 (95 mm), 2011 (95 mm), and 2018 (110 mm).

Frequency analysis results indicate that the intensity of rainfall increases significantly with longer return periods. For example, a 10-year return period corresponds to 91–129 mm, while a 100-year return period shows rainfall of 143–201 mm. This analysis highlights that Khushab, is vulnerable to intense rainfall and flash flooding, particularly under changing climate conditions. Therefore, effective water resource management and resilient infrastructure planning are essential to reduce risks and safeguard communities.

Seasonal climatic conditions must be considered for the design and execution of Project. The climate including air, temperature, precipitation, humidity, pressure, average cloud and evaporation is an influencing factor, affecting the construction of project and other engineering structures. However, to determine the overall effect of the climatic stresses, daily and seasonal temperature changes, site altitude, direct solar radiation, and precipitation must be considered. The prevailing climate in Khushab is known as a local steppe climate. There is little rainfall throughout the year. The average temperature in Khushab is 24.3 °C.

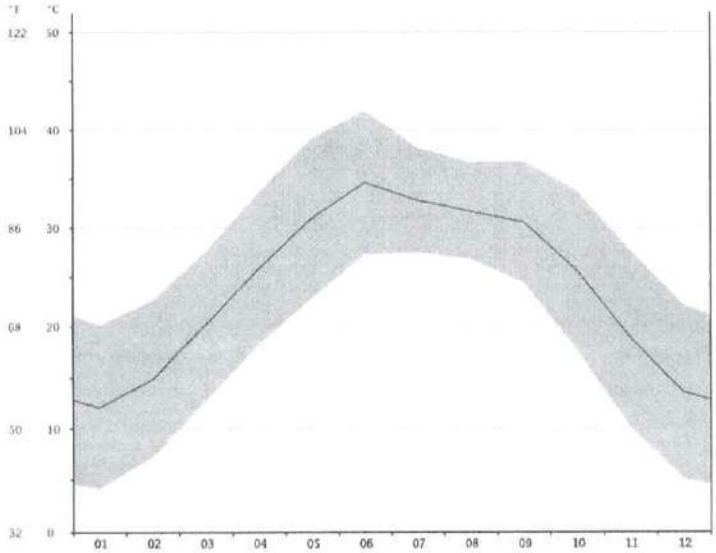


Reference: *Zeeshan, M., Ahmed, A., & Pasha, G. A. (2024). Comprehensive Study on Rainfall Frequency Analysis for Sustainable Water Resource Management in District Khushab, Pakistan. Technical Journal, 3(ICACEE), 770-781.*

Reference: https://en.climate-data.org/asia/pakistan/punjab/khushab-3077/

The driest month is November. There is 5 mm of precipitation in November. The greatest amount of precipitation occurs in July, with an average of 100 mm.

4.1.4 Average Temperature of Khushab



Reference: https://en.climate-data.org/asia/pakistan/punjab/khushab-3077/

With an average of 34.6 °C, June is the warmest month. The lowest average temperatures in the year occur in January, when it is around 12.1 °C.

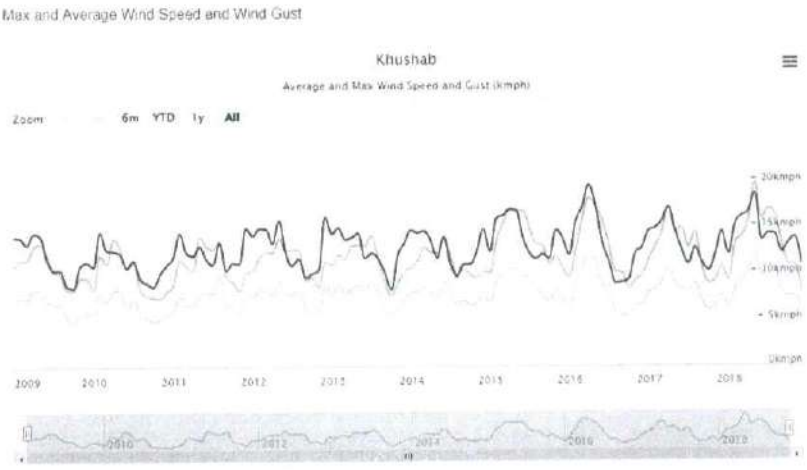
KHUSHAB WEATHER BY MONTH // WEATHER AVERAGES

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	12.1	14.9	20.2	25.9	31	34.6	32.8	31.7	30.6	25.7	18.9	13.6
Min. Temperature (°C)	4.1	7.2	12.7	18.2	22.8	27.3	27.5	26.8	24.4	17.6	10.1	6
Max. Temperature (°C)	20.2	22.7	27.7	33.7	39.2	42	38.2	36.7	36.8	33.8	27.8	22.2
Avg. Temperature (°F)	53.8	58.8	68.4	78.6	87.8	94.3	91.0	89.1	87.1	78.3	66.0	58.5
Min. Temperature (°F)	39.4	45.0	54.9	64.8	73.0	81.1	81.5	80.2	75.9	63.7	50.2	41.0
Max. Temperature (°F)	68.4	72.9	81.9	92.7	102.6	107.6	100.6	98.1	98.2	92.8	82.0	72.0
Precipitation / Rainfall (mm)	19	23	36	24	24	20	100	100	28	9	5	12

Reference: https://en.climate-data.org/asia/pakistan/punjab/khushab-3077/

The precipitation varies 95 mm between the driest month and the wettest month. The variation in temperatures throughout the year is 22.5 °C.

4.1.5 Wind



Reference: https://www.worldweatheronline.com/lang/en-pk/khushab-weather averages/Punjab/pk.aspx

4.1.6 Ambient Air Quality

The primary source of air pollution at the project sites is the vehicular emissions, and the key pollutants likely to be found at project proposed locations are carbon monoxide (CO), oxides of nitrogen (NOX), sulfur dioxide (SO2), and particulate matter (PM). Other source of air pollution is dust arising from construction activities.

To record the baseline ambient air quality of the project area, monitoring was conducted at advised locations to assess the concentration of priority pollutants in the air. Lab reports have been attached as **annexure.**

4.1.7 Noise Level Monitoring

Basic Environmental conditions:

During the measurement following conditions were prevailed on workplace:

Metrological Conditions

During the noise level monitoring weather conditions such as sky, Air pressure is noticed.

Monitoring Instrument

The description of the instrument used for the noise level monitoring is given below:

Name: Digital sound level meter

Model: AR824

Company: Intel Instruments plus

Noise level should be monitored at four points. Lab reports have been attached as **annexure.**

4.1.8 Ground water

District Khushab (Upper Thal Doab) is facing severe shortage of water for irrigation purpose, because canal water is not available and groundwater is saline. Farmers in many parts of this district are utilizing marginal and saline water for cropping.

4.2 Ecological Resources

In agriculture the main crops are sugarcane, gram, wheat, rice and ground nut. Main vegetables are carrot and tomato. Main fruits are citrus guavas and bananas.

4.2.1 Flora

Khushab District encompasses diverse ecological regions, including the Salt Range, fertile plains, and parts of the Thal Desert. Its flora reflects both xerophytic desert vegetation and wetland ecosystems.

Desert Flora

Khushab, supports xerophytic and medicinal plants adapted to arid conditions. A study recorded 54 plant species belonging to 32 families. Notable plants include:

- Acacia nilotica (Kikar) - used for gum, bark, and medicine.
- Capparis decidua (Karir/Karinh) - fruits used as food and medicine.
- Salvadora oleoides (Peelu) - roots used as traditional miswak (tooth-cleaning sticks).
- Citrullus colocynthis (Tumma/Kaur Tummah) - desert melon with medicinal properties.
- Calotropis procera (Aak) - used in folk remedies.
- Moringa oleifera (Suhanjana) - multipurpose tree for food and medicine.
- Ziziphus mauritiana (Beri) - fruit-bearing tree widely consumed and medicinally used.

These plants are vital for local livelihoods, especially in ethnomedicine. Solanaceae, Amaranthaceae, and Mimosaceae are among the most represented families.

Wetland Flora (Salt Range Lakes)

Around the Uchalli Wetland Complex, aquatic and semi-aquatic plants dominate. These wetlands support grasses, reeds, and aquatic vegetation that provide food and nesting habitats for migratory birds.

4.2.2 Fauna of Khushab

Khushab's fauna is equally diverse, ranging from desert-adapted animals to internationally important migratory birds. These wetlands are part of the Siberian migratory flyway, making Khushab globally important for bird conservation.

Desert Fauna

In surrounding desert areas, common animals include:

- Mammals: jackals, foxes, hares, wild boars, desert cats.
- Reptiles: monitor lizards, snakes, and desert-dwelling skinks.
- Birds: partridges, doves, sparrows, larks.
- Livestock: camels, goats, and sheep are widespread, forming a major livelihood base.

Table 4.2: List of Faunas in Khushab

PLANT	FAMILY	COMMON NAME
Acacia nilotica	Fabaceae	Babul, sant tree
Capparis decidua	Capparaceae	Kair, kerda
Delbergia sissoo	Fabaceae	Sheesham
Salviavergata	Lamiaceae	Meadow sage
Solanum nigrum	Solanaceae	Black nightshade
Convolvulus arvensis	Convolvulaceae	Field bindweed (lehli)
Chenopodium album	Chenopodiaceae	Fat hen, bathu
Melilotus indica	Fabaceae	Sweet clover, meena
Nerium oleander	Apocynaceae	Oleander, kaner
Sophora tementosa	Fabaceae	Sophora

Category	Species	Uses
Desert Flora	*Acacia nilotica (Kikar)*	Gum, bark, medicinal use
	Capparis decidua (Karir/Karinh)	Fruits for food and medicine
	Salvadora oleoides (Peelu)	Roots used as miswak
	Citrullus colocynthis (Tumma/Kaur Tummah)	Medicinal desert melon
	Calotropis procera (Aak)	Folk remedies
	Moringa oleifera (Suhanjana)	Food and medicinal uses

	Ziziphus mauritiana (Beri)	Fruit, medicinal uses
Wetland Flora (Salt Range Lakes)	*Aquatic & semi-aquatic plants, grasses, reeds*	Provide food and nesting for migratory birds
	Alexandrine Parakeet	Vulnerable/Near Threatened
	Pallid Harrier	Vulnerable/Near Threatened

Reference: *Shaheen, H., Qureshi, R., Akram, A., & Gulfraz, M. (2012). Some important medicinal flora of Noorpur Thal, Khushab, Pakistan. Archives Des Sciences, 65(2), 57-73.*

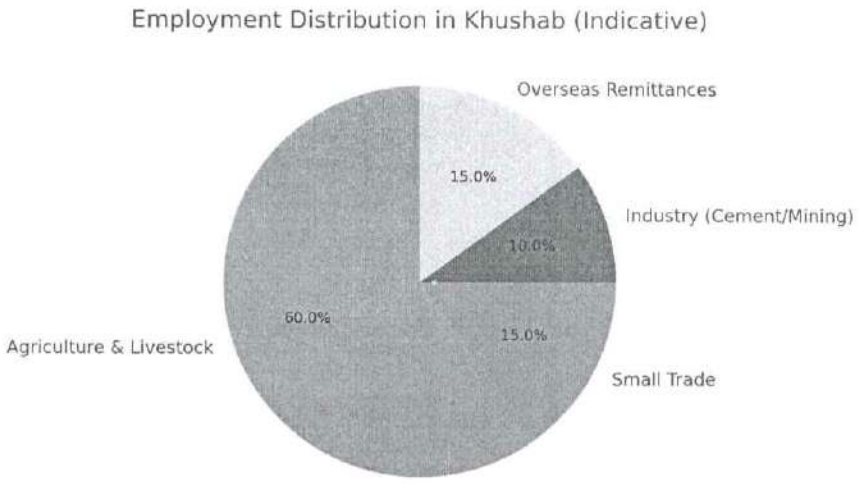
This valley was home to wild animals like tigers, leopards and wolves who preyed on chinkara and urials. The population of urial in Khushab district is at the brink of extinction as reportedly only about 150 animals have survived in the mountains of the district, mainly in the Soon Valley in the north west of the district.

Desert Fauna	Mammals: jackals, foxes, hares, wild boars, desert cats	Adapted to arid regions
	Reptiles: monitor lizards, snakes, skinks	Desert-adapted reptiles
	Birds: partridges, doves, sparrows, larks	Common desert birds
	Livestock: camels, goats, sheep	Major livelihood source

Reference: *Shaheen, H., Qureshi, R., Akram, A., & Gulfraz, M. (2012). Some important medicinal flora of Noorpur Thal, Khushab, Pakistan. Archives Des Sciences, 65(2), 57-73.*

4.3 Demographics

- The population of District Khushab is largely rural, with most people living in villages.
- The majority of the population is engaged in agriculture and related activities.
- The area has a relatively low literacy rate compared to urban centres, with male literacy higher than female literacy.



References: *Urooj, I., Javed, I., & Ahmad, S. (2020). Intentions to Urban Migration among Youth: A Case of District Khushab of Pakistan. Journal of Economic Impact, 2(1), 24-36.*

4.4 Socioeconomic Profile

- Agriculture is the main source of livelihood, with wheat, sugarcane, and fodder crops widely cultivated.
- Livestock rearing (cattle, buffaloes, goats, and sheep) contributes significantly to household income.
- Remittances from abroad also play a role in the local economy.
- Industrial activities are limited but growing, with cement and mining projects playing an increasing role.

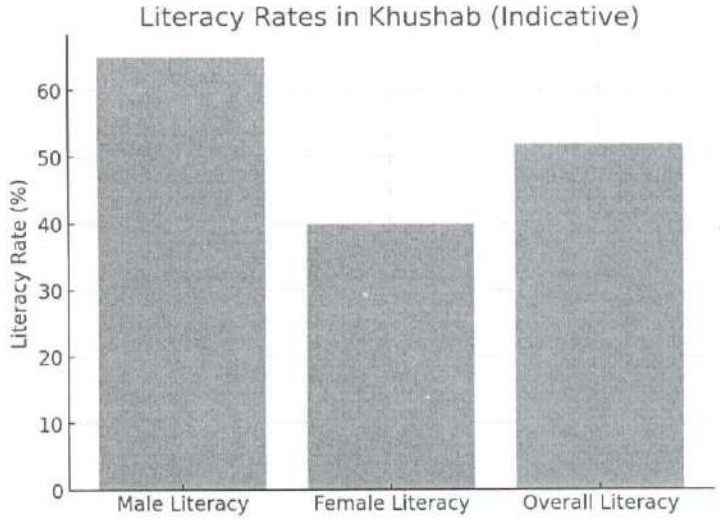
4.4.1 Health Facilities

- Health services are mainly provided through Basic Health Units (BHUs), Rural Health Centers (RHCs), and District Headquarters (DHQ) Hospital Khushab.
- Specialized healthcare is limited; for advanced treatment, residents travel to Sargodha or Lahore.
- Common health issues include waterborne diseases and respiratory problems.

4.4.2 Education Facilities

- The district has a mix of public and private schools, providing education up to the secondary level.

- For intermediate and higher education, students typically travel to Khushab city, Sargodha, or Lahore.
- Literacy rates are improving but remain lower than national averages, especially among women.



References: *Urooj, I., Javed, I., & Ahmad, S. (2020). Intentions to Urban Migration among Youth: A Case of District Khushab of Pakistan. Journal of Economic Impact, 2(1), 24-36.*

4.4.3 Employment and Livelihood

- The majority of the workforce is employed in agriculture, livestock rearing, and small-scale trade.
- Industrial employment opportunities are limited but expanding with cement and mining projects.
- A portion of the population works abroad, with remittances supporting local households.

References: *Urooj, I., Javed, I., & Ahmad, S. (2020). Intentions to Urban Migration among Youth: A Case of District Khushab of Pakistan. Journal of Economic Impact, 2(1), 24-36.*

4.4.4 Tourist Attractions in Khushab

District Khushab, particularly the Soon Valley, is renowned for its natural beauty, cultural heritage, and diverse landscapes, making it a notable tourist destination in Punjab. Key attractions in the vicinity include:

- **Soon Valley (Sakesar, Khushab):** A scenic valley surrounded by hills and rich in natural lakes, springs, and ancient archaeological sites. It is a popular spot for eco-tourism and recreational visits throughout the year.
- **Katha Sagral (Sargodha Road, Khushab):** Known for its fertile lands and serene environment, this area provides a peaceful countryside experience and is easily accessible for visitors traveling along Sargodha Road.
- **Khabbakki Forest (Naushera-Jabba Road, Khushab):** A protected forest offering greenery, fresh air, and natural habitat for various species of flora and fauna, making it attractive for nature enthusiasts and researchers.
- **Khadomi Waterfall (Soon Valley, Khushab):** A picturesque waterfall located within the Soon Valley, drawing visitors for its scenic beauty, especially during the monsoon season when water flow is at its peak.

These sites not only contribute to the natural charm of the area but also hold potential for promoting sustainable tourism, supporting the local economy, and raising awareness about the importance of environmental conservation.

4.4.5 Aesthetic Values

The majority of local residents have limited awareness regarding environmental protection. In some cases, people show a casual attitude toward cleanliness and proper waste disposal, with municipal solid waste (MSW) often being discarded along streets and open spaces. A strong sense of personal responsibility for maintaining a clean and healthy environment, as expected from responsible citizens, is still lacking among certain segments of the community.

CHAPTER-5: SCREENING OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The primary function of an Environmental Impact Assessment (EIA) study is to predict and quantify the potential impacts of a project, assess their magnitude, and evaluate their significance. The findings of the impact assessment provide the foundation for the development of an Environmental Management Plan (EMP). Environmental impacts may be positive or negative, direct or indirect, local or regional, and either reversible or irreversible.

This chapter identifies and defines the potential significant beneficial and adverse environmental and social impacts of the proposed mining project. In general, mining activities and cement plants are widely recognized for their adverse effects on agricultural productivity and their potential to negatively impact human health across broad areas surrounding such facilities. These impacts are primarily linked to the emission of dust particles and harmful gases during mining operations and the cement manufacturing process.

5.1 Methodology for Impact Evaluation:

The methodology adopted for impact evaluation includes the Modified Leopold Matrix.

5.1.1 Leopold Matrix

The analysis is performed with the Leopold Matrix (LM). This matrix has

1. On the horizontal axis, the actions which cause environmental impact, and
2. On the vertical axis, the existing environmental conditions which may be affected by those actions.

This provides a format for comprehensive review of the interactions between proposed actions and environmental factors.

The most important blocks marked are evaluated individually, and a number between 1 and 10 is placed in the upper left-hand corner to indicate the relative magnitude of the impact (1 represents the least magnitude, and 10 the greatest). Likewise, a number between 1 and 10 is placed in the lower right-hand corner to indicate the relative importance of the impact (again, 1 represents the least magnitude and 10 the greatest).

Table 0.1: Type of impacts and their scale of importance and magnitude

Sr. No.	Type of Impact	Scale of Magnitude (0 – 10)	Scale of Importance (0 – 10)
1	No Impact	0	0
2	Low Impact	1 – 4	1 – 4
3	Medium Impact	5 – 6	5 – 6
4	High Impact	7 – 10	7 – 10

For the evaluation of this project, each proposed action was assessed in terms of its magnitude of effect on environmental characteristics and conditions (represented on the vertical axis). In the impact matrix, a diagonal slash (\ ) was placed across each block where a significant interaction between the action and environmental parameter was expected.

The most relevant blocks were then evaluated individually. A numerical value between 0 and 10 was assigned in the upper left-hand corner of each block to represent the magnitude of the impact (where 1 indicates the lowest magnitude and 10 the highest). Similarly, a value between 0 and 10 was assigned in the lower right-hand corner to denote the relative importance of the impact (where 0 is the least important and 10 the most important).

The numbers placed in the slashed boxes were subsequently analysed. Higher values indicate greater significance of the impact, whereas lower values reflect relatively minor effects of the given action on the environmental characteristic. The assignment of these values is based, as far as possible, on factual data and established references rather than personal bias.

This rating system requires the evaluator to quantify professional judgment, thereby ensuring transparency in the evaluation process. It also enables reviewers to follow the evaluator's reasoning, facilitating the identification of points of agreement or disagreement. In essence, the impact matrix serves as a concise abstraction of the detailed narrative provided in the Environmental Impact Assessment report.

5.2 IMPACT ANALYSIS AND PREDICTION

In order to give correct categorization to the present project Rapid Environmental Assessment Procedure was followed. It revealed that there some major impacts of the project have identified which will be controlled by adopting proper mitigation measures. These impacts are mainly attributed to the release of dust and harmful gases to the atmosphere during the mining activity but most of the impacts are projected as moderate/minor impacts although project has many positive impacts on local public and economy. M/S Himalaya Cement (Private) Limited will adopt proper procedures to carry out the operation or mining activity in environmentally friendly way.

Meetings

For the impact analysis and predictions detailed meetings were held with the proponent, management of M/S Himalaya Cement (Private) Limited and with other stakeholders. Issues were discussed that may affect the environment and also the implementation of proposed project. All possible mitigation measures were considered and incorporated in the Environmental Management Plan.

Consultations

Scoping sessions, focused group discussion and way side consultations were held with the relevant stakeholders, inhabitants of the villages, shopkeepers and workers in the area. These included local government departments, educational institutes, NGOs, health departments, public representatives and local residents. The purpose of such consultations is to obtain the feedback from the relevant persons.

The environmental issues have been identified during literature review, consultation with stakeholders, relevant reports and visits to project site. Various types of environmental issues likely to crop up during the life cycle of project are grouped in the following stages:

- Project location
- Project design
- Construction stage
- Operation stage

5.3 Environmental Parameters

Environmental impacts due to Project Location

The subject project is located near Katha Sagral in district Khushab. The surrounding area is hilly and mostly barren land. The selected site is present on the belt which has abundant reserves of deposits of our concerned raw material. Moreover, there is no human settlement within the radius of the selected site and has good road infrastructure. Man power is available in the area. After environmental assessment of the study area the subject project site is most suitable to execute the project regarding the location environmental impacts.

5.4 Environmental Impacts

Project is present in the hilly and barren area. There is no nearby human settlement within the radius of the selected site. The selected site does not fall in the category of sensitive area and no environmentally sensitive localities exist within radius of study area. Also, there could be the issue of traffic congestion due to transportation of the raw material to the plant. If the project proponent maintains HSE conditions and complies with the PEQS limits than, there is no significant impacts on the nearby community.

If the mitigation measures are effectively implemented, the residual impact of the Subject activities on the area's geophysical environment is expected to be insignificant.

Impact significance: Low or may be positive

Nature of impact: Direct

Duration: Long-term

Timing: Operation phase

Reversibility: NA

Likelihood: Low (unlikely),

Consequences: Mild or may be positive

5.5 Mitigation measures

- No human settlement within the radius of the study area
- The district Khushab has already good road infrastructure that is currently used to access the site but M/S Himalaya Cement (Private) Limited will build its own road to access the proposed mining site to the cement plant that will be better the road infrastructure of the area.

- There would be no issue of congestion of traffic after constructing the road
- Location can be considered as the positive impacts due to abundance of raw material.
- The project provides the jobs to the local residents as well as to those from the suburban areas

Environmental impacts due to the project design

Subject project is a proposed mining project over a total area of 1764.99 Acres. Mining activity will be done with proper fencing and specific area would be extracted or mined once in one time. Grazing and harvesting would be allowed on the reaming portion of the mining area other than the specific extracted area. There is no proper structure for this project only surface mining will be done that will exert no such impacts on the environment.

Following are the possible Environmental impacts due to the design:

Impacts

- Soil structure and soil bearing capacity
- Road infrastructure design
- Rain water harvesting capacity of the drainage system

Impact significance: low

Nature of impact: direct

Duration: NA

Timing: NA

Reversibility: NA

Likelihood: Low to Medium

Consequences: Low to Medium

5.6 Mitigation measures and recommendations

Following are the mitigation measures and recommendation to minimize the anticipated impacts

- Proper design of fencing
- Proper Mining activity design

- Mining activity will not be done in scattered manner. One specific portion will be mined in one time.
- Road infrastructure should be according to the laws and regulations

5.4 Environmental Impacts during the construction phase and operational phase

The subject project deals with mining activity so impacts during construction phase are not applicable to this project.

Potential Positive Impacts

Employment Opportunity

Proposed mining project will help the cement and construction industry which will have a ripple effect of increasing local employment. During the proposed mining activity, the requirement of engineers, workers, laborers, technicians, para-professionals etc. will generate employment opportunities. Locals will also have the opportunity to diversify their incomes by being employed during the project. Local people will be preferred for the jobs which in return will increase their livelihood and improve their living standards. It is estimated that more than 50 persons will be employed during the proposed mining project. Hence there will be large employment opportunity arise by this project.

Increase in business

With the influx of the laborers for the proposed project, there will be more opportunities for small scale business such as many auto shops, a petrol pump, a bank and restaurants may be established where mostly local residents work and make their earning.

Better living standard of the area

Due to the job opportunism created, the people of the study area shall receive economic uplift and have better living standards. This is evident of Pacca houses in villages around the vicinity of the plant. The price of the land, rather, has gone up due to economic and commercial activities along the approach.

Land Value

With this proposed mining project and commercial activity in the area shall increase. Many shops including those of auto repairs goods transport, general provision, food supplies, and restaurants have come up long the approach road, thus there is some gradual change in the land use.

The land values in the nearby villages shall increase. There is every likelihood that land values along the access routes will further increase because of the potential of the land to exploit commercial activities.

Road infrastructure

After the approval for the installation and operation of the proposed project, the project management is committed for the widening and construction of link road.

Safe environment for the workers

Management of M/S Himalaya Cement (Private) Limited shall take appropriate measures to provide a pollution free and safe environment during the proposed mining project. Other medical facilities will be provided to workers along with their job security.

Negative Impacts

Acquisition of the land for lease

The project proponent has applied to the Department of Mines and Minerals Punjab for the lease of the area for the proposed mining activity. The proponent has obtained the lease of land for limestone and clay mining. Proponent has already taken the NOC from the Mines and minerals department. Currently the proposed area is not under any mining activity.

Table 5.1: Potential Impacts and Mitigation Measures due to Land Acquisition

Environmental Aspect	Potential Impact	Mitigation and Monitoring Measures
Land acquisition for lease	Possible conflict with stakeholders. Loss of grazing land and seasonal agriculture patches	Acquire land only after consensus with stakeholders. Land will not be acquired or possessed forcefully. Proper compensation will be provided as per policy and negotiations
Land use (grazing and agriculture)	Reduced access to grazing land.	Allow landowners to continue controlled grazing at a safe distance during mining.

	Disruption of small-scale agricultural practices	Maintain patches for agricultural practices. Restore land with maximum plantation after use
Compliance with regulations	Risk of non-compliance with government rules	Proponent will strictly follow rules and guidelines of concerned Government Departments
Social aspects and equity	Gender inequity in access to resources, decision-making, and ownership	Ensure gender considerations in decision-making, access to resources, health, education, and ownership of assets
Landscape and aesthetics	Degradation of natural aesthetics. Potential uneven reclamation	Maintain aesthetics by not using the entire land for quarrying. Avoid reclamation on undulating surfaces; restore land to levelled condition for future agricultural use

Residual Impact:

If the mitigation measures are effectively implemented, the residual impact of the proposed activities on the area's geophysical environment is expected to be insignificant. Land cost will be paid to the stake holders above the actual cost of the land. Currently the use of land in the area is less but in future by the implementation of the project economic status of the land holders will be uplifted.

Impact significance: Low or may be positive

Nature of impact: Direct

Duration: Short-to medium-term

Timing: Construction and Operation phase

Reversibility: Possible

Likelihood: Low (unlikely), as the mitigation measures will ensure that vegetation clearing is minimized

Consequences: Mild or may be positive

Topographic or Soil

Land under consideration is mainly planed area with less undulating patches. Some area falls in the mountainous patches/topography. Estimated 10,000 tons of limestone and clay shall be extracted daily from the quarry area. The activity can result in scarring of the landscape and aesthetic beauty.

Assessment of Impacts

Table 5.2: Potential Impacts and Mitigation Measures for Topography and Soil

Environmental Aspect	Potential Impact	Mitigation and Monitoring Measures
Clearing of native plants	Disturbance to ecosystem complexity. Loss of native vegetation	Develop and implement a restoration and reclamation plan to restore the natural landscape. Establish a plant nursery and garden to rehabilitate native plant species
Quarrying of limestone and clay (dust emissions)	Air quality deterioration. Negative impact on flora and fauna	Use controlled and time-specific blasting techniques to minimize dust and disturbance. Apply dust suppression measures (e.g., water sprinkling)
Habitat disturbance (fauna, reptiles)	Disturbance to reptiles and wildlife. Risk of reptiles moving into human settlements	Fence the mining site to guide reptiles towards natural habitats and away from settlements. Ensure blasting is carefully managed for the safe habitat of animals

Use of generators (flue gases)	Air pollution from exhaust gases (SO_2, NOx, PM)	Maintain generators in good condition and adopt emission control measures.
Overall ecological balance	Potential long-term impacts on flora, fauna, and natural beauty of the hills.	Project proponent will actively minimize ecological impacts- Preserve the natural elevation and aesthetic beauty of the hills. Demonstrate strong environmental stewardship through management commitment

Residual Impact:

If the mitigation measures are effectively implemented and keeping in view the length of time to bring about the change in topography, the overall average impact may not be considered significant.

Impact significance: mild to high

Nature of impact: Direct

Duration: Short-to medium-term (as a whole project the duration is long term otherwise its short-term duration.)

Timing: Construction & Operation phase

Reversibility: Possible

Likelihood: Low (unlikely), as the mitigation measures will ensure that vegetation clearing is minimized

Consequences: Mild or may be positive

Water Resources:

Water requirement for the proposed mining project will be fulfilled by river Jhelum water during mining activity for the purpose of sprinkling on road and for drilling. In the mining area drinking water requirement is fulfilled by underground water by springs and by wells. Local people of the area extract ground water from Rocket motor (in their local language) and by

submersible pumps or motor pumps. Depth of ground water table is 450-500 ft from the project site. There are no proper water channels within the radius of our study area. Rain water in the area flows down the hills or evaporate. There is no storm water or rain water storage facility in the area.

Potential Issues:

Table 5.3: Potential Impacts and Mitigation Measures of Water Resources

Aspect	Potential Impact	Assessment of Impact	Mitigation and Monitoring Measures
Groundwater extraction (long-term)	Reduction in groundwater availability if extraction exceeds sustainable yield	Long-term availability of the area's groundwater resources will not be significantly affected by project activities	Construct check dams to harvest rainwater/stormwater. Store percolated water to stabilize the disturbed water table
Groundwater extraction (short-term)	Temporary decline in yield of wells used for project-Possible decline in water quality in surrounding wells	Short-term extraction may reduce groundwater availability for local communities for a few hours to days. Can indirectly affect water quality	Harvest rainwater/stormwater for agricultural and vegetation use. Use check dams to recharge aquifer and minimize impacts on surrounding wells

Residual Impact:

Post-mitigation residual impact on water resources has been deemed acceptable if it meets the following criteria:

Nature of impact: Direct

Timing: Operation phase

Duration: Long-term; depends on the rainfall pattern and recharge regime of the deep aquifer

Reversibility: Yes

Likelihood: Moderate

Consequences: Low, as monitoring and corrective action will ensure that there is no adverse impact.

Impact significance: Low to moderate

Potential Impact:

Effluents released as a result of project activities, if not contained properly, may contaminate the soil. Water quality may deteriorate if pollutants are mixed with surface runoff during rain and carried to water resources in the vicinity, or if pollutants leach into the ground. Potential sources of pollution in such cases may include:

- Waste water from domestic sources.
- Waste water generated from the mining activity
- Oil and grease from vehicles and machinery
- Stored fuel, oil, and other substances
- Pollutants can also be transferred through the food chain, thereby affecting community health and well-being.

Assessment of Potential Issues:

Table 5.4: Potential Impacts and Mitigation Measures for Effluent

Environmental Aspect	Potential Impact	Mitigation and Monitoring Measures
Wastewater from mining activity	Dust suppression needs Land restoration requirement	Use wastewater for quarry area sprinkling and land restoration
Domestic wastewater (from staff & washrooms)	Pollution of soil and groundwater. Sanitation issues if untreated	Treat domestic wastewater in septic tanks. Chlorinate portion for domestic use with sodium hypochlorite Use chemicals for cooling water makeup to control scaling, bacterial, and algal growth Store treated water in clear water tanks

		Dispose treated wastewater into soakage pits
Septic tank effluents	Potential contamination of surface/groundwater	Install septic tanks at safe distance from water holes, streams, or dry streambeds. Regularly maintain and monitor septic system integrity. Release only treated effluent into drains
Solid waste from domestic and project activities	Soil and water contamination. Nuisance and health risks	Segregate solid waste: a) Recyclables → stored and sold to approved contractors b) Combustible waste → properly disposed c) Non-combustible/non-recyclable waste → properly disposed d) Septic tank sludge → transported to municipal sewage treatment facilities
Fuel, oil, lubricants, and hazardous substances	Risk of contamination of surface and groundwater via runoff or seepage-Pollution during spills and leakages	Store fuels/oils with tarpaulin sheets under generators, compressors, oil tanks. Handle and store hazardous substances per standard safety practice. Vehicle/equipment servicing and washing only in designated concrete-paved areas with runoff catch systems
Vehicles and equipment (servicing/repair)	Oil/fuel spills contaminating soil and water	Prohibit servicing and repair outside designated areas Allow maintenance/washing only in designated, contained areas

Residual Impact:

The residual impact of project activities on the soil and water quality of the area is expected to be insignificant once the suggested mitigation measures are put into effect.

The residual effects are summarized below:

Nature of impact: Indirect

Timing: Operation Phase

Duration: Medium to long term

Reversibility: Yes

Likelihood: Low, as the proposed mitigation measures will ensure that soil and water are not contaminated.

Consequences: Mild to moderate, as the effluents released into the environment will have been adequately treated

Impact significance: Low to medium, based upon low likelihood and mild to moderate consequence.

Air Quality Potential Impact:

Table 5.5: Potential Impacts and Mitigation Measures of Air Quality Potential Impact

Aspect	Potential Impact	Mitigation Measures
Quarrying (blasting, drilling, excavation of limestone and clay)	Dust emissions from blasting and drilling. Release of gases from blasting operations. Increase in particulate matter affecting air quality and health	Controlled blasting using millisecond delay electric detonators to minimize dust clouds. Water sprinkling at quarry site. Maintain quarry area vegetation buffer where possible
Stripping of vegetation and barren mined areas	Fugitive dust emissions from exposed soil and rock surfaces	Water sprinkling on exposed surfaces. Progressive reclamation and re-vegetation of mined areas
Transportation of quarried material on unpaved roads	Dust generation from truck movement- Dust clouds reducing road visibility. Increased particulate matter concentration	Cover all trucks transporting material. Regular water sprinkling on unpaved haul roads. Impose speed limits on project vehicles.

		Reduce vehicle speed near settlements. Encourage efficient journey management
Project-related vehicles and construction machinery	Exhaust emissions (SO_2, NOx, PM, CO) from diesel engines	Ensure all vehicles and machinery are well-maintained and tuned. Regular inspection of engines to prevent smoke emissions. Impose strict vehicle maintenance schedule
Diesel generators (if used)	Gaseous emissions from generator stacks (SO_2, NOx, PM)	Install wet scrubbers at generator stacks. Use low-sulfur fuel wherever possible

Residual Impact:

After implementing the mitigation measures listed above, the residual impact of the proposed activities on ambient air quality is expected to be insignificant, as shown below:

Nature of impact: Direct

Duration: Short term

Timing: operation

Reversibility: Not applicable

Likelihood: Low (unlikely) as mitigation measures will ensure that air pollution remains within acceptable limits.

Consequences: Moderate to High (Moderate in case of mechanical extraction and high in case of blasting)

Impact significance: Low, based upon low likelihood and mild to moderate consequence.

Impact on Biological Environment

Natural Vegetation

Potential Issue:

Project activities that may affect the area's natural vegetation include the proposed mining activity, access roads, and clearing of vegetation for the proposed site. Land in the study area for proposed mining activity is plain and barren and with little amount of flora. After the proposed mining activity, the land in the study area will be restored and native plants will be planted there.

Assessment of Impact:

Table 5.6: Potential Impacts and Mitigation Measures for Natural Vegetation

Aspect	Potential Impact	Mitigation and Monitoring Measures
Removal/burning of plants for fuel wood	Loss of vegetation cover Habitat degradation	Prohibit use of fuel-wood and shrubs as fuel during project activities. Open fires not allowed outside the proposed site
Grazing pressure and habitat degradation	Increased vegetation stress due to livestock and low rainfall	Maintain part of the land for grazing, as not the entire area will undergo mining
Quarry development in vegetated areas	Loss of scattered vegetation. Potential disturbance to shrub species *Phulai*	Plant native species at rehabilitation sites. Preserve *Phulai* populations (extensive in area, not significantly impacted)
General site clearance and project activities	Unnecessary loss of vegetation. Habitat disruption	Strictly avoid unnecessary damage to vegetation. Fence the project area to control access and prevent mishaps inside and outside the mining site

Residual Impact:

Given the current state of the vegetation, and proper implementation of the proposed mitigation measures, no significant residual impact on the natural vegetation of the area is anticipated, as shown below:

Nature of impact: Direct

Duration: Short-to medium-term

Timing: Construction and Operation phase

Reversibility: Possible

Likelihood: Medium (unlikely)

Consequences: Mild, as no rare plant species are present in the area.

Impact significance: Low, based upon low likelihood and mild consequence

Wildlife

Potential Issues:

The project activities that may affect the wildlife of the area include the drilling, blasting, widening/construction of the access road, clearing of vegetation for proposed project. Rare species of Fauna were present in the study area; some of them have migrated to other areas due to population increase and some species have been vanished due to over hunting, so there is no such species or rare species of fauna exist in the area that can be impacted by this proposed mining project.

The following aspects of these activities are expected to disturb the wildlife during these activities:

- Presence of people in the area.
- Drilling and blasting activity
- Noise and movement of project vehicles.
- Physical damage to the habitat
- Displacement of wildlife for a short time period.

Assessment of Impacts

Mammals:

There are no wild species of mammals in the study area so direct damage to the environment is expected to be insignificant.

Birds:

Birds, being highly mobile and therefore capable of avoiding project activity areas, are generally the least susceptible of an area's wildlife to the long-term impacts of such temporary activities. As such there is no rare or endangered species of birds found in the study area.

Reptiles and Amphibians:

The project activities' impacts on the reptiles of the study area will be insignificant. Though avoiding areas of dense vegetation will reduce this impact, a certain degree of residual effects are expected. However, in view of the abundance of these species in the area, the unmitigated residual impacts are considered insignificant.

Mitigation Measures:

The following mitigation measures will reduce the adverse impact of the project activities:

- Discharging firearms will be explicitly prohibited.
- Waste of any kind will not be discharged in open areas.
- Fencing will be done at the mining site to divert the exit route for reptiles to avoid the entrance in to nearby human settlements.
- A 'no-hunting, no-trapping, no-harassing' policy will be strictly enforced.
- The project staff's movement will be strictly restricted to the work area.
- The project staff will be educated and instructed to avoid killing or chasing wild animals.
- Safe driving practices will be observed to minimize the accidental killing of reptiles or small mammals crossing the road.
- Camp waste will be disposed of in such a manner that animals are not attracted to it.
- Off-road driving will not be allowed.
- Unnecessary damage to the natural topography and landscape will be kept to a minimum to the extent possible.

Residual Impact:

Due to the proper implementation of the proposed mitigation measures, no significant residual impact on birds, mammals, reptiles, are anticipated, as shown below:

Nature of impact: Direct

Duration: Short- to medium-term

Timing: Operation & Construction phase

Reversibility: Possible

Likelihood: Low (unlikely)

Consequences: Mild, as the project area does not fall in any more sensitive habitat

Impact significance: Low, based upon low likelihood and mild consequences

Noise and Vibration

The major sources of the noise at proposed mining site are blasting, drilling, and vehicles.

Blasting operation at the quarry site is the main source of vibrations. Their effects on the plant site are minimal due to distant condition and no significance nuisance is experienced.

Assessment of Impact:

Table 5.7: Potential Impacts and Mitigation Measures for Noise and Vibration

Environmental Aspect	Assessment of Impact	Mitigation Measures
Drilling and Blasting	Significant impact expected on workers, nearby communities, and fauna due to vibrations and noise.	Use controlled blasting methods to limit vibration and noise levels.
Vibrations	May cause structural problems in nearby buildings, varying with building age, construction materials, and vibration levels. Disturbance to fauna possible between **1–10 mm/s ppv.** Critical threshold level suggested between **50–100 mm/s ppv** (Grimshaw, 1971).	Controlled blasting to ensure safe vibration levels. Regular monitoring of structural safety of nearby buildings.
Noise on Humans	High noise levels may lead to hearing loss, deafness, high blood pressure,	Provide PPEs (ear muffs, ear plugs, noise abating devices) to

	headache, depression, and mental disturbance. Noise levels expected to remain below **75 dB(A)** at a 2 km radius; site is located at a safe distance from settlements.	workers. Ensure blasting noise remains below **75 dB(A)** during daytime within 2 km radius. All staff engaged in blasting activities to be equipped with safety gear.
Noise on Fauna	Fauna in the study area will be disturbed due to blasting and vehicular movement.	Minimize unnecessary vehicular movement. Restrict blasting to daytime only.

Residual Impact:

Given the current state of the vegetation, and proper implementation of the proposed mitigation measures, no significant residual impact on the natural vegetation of the area is anticipated, as shown below:

Nature of impact: Direct

Duration: Short-to medium-term

Timing: Operation phase

Reversibility: Possible

Likelihood: low (unlikely)

Consequences: Mild

Impact significance: Low, based upon low likelihood and mild consequence

Impact on Social and Cultural Environment

Impact Assessment

Following parameters were adapted to asses' social and cultural impacts.

Community Well-being Parameters:

Parameters for the assessment of the well-being of the poor people near the project site were used to assess the social, economic, and cultural impacts of the project.

Primary Health:

Health indicators, such as infant mortality rates, access to community health services (public and private), and the general life expectancy in a region represent the state of general well-being of a certain community. Health is also closely correlated with labor productivity and efficiency. Improving the overall health of a community enhances its income-earning potential.

Primary Education:

Education is also directly related to income-level; the higher the income level, the more likely the presence of educational facilities. People below the poverty line, on the other hand, are less likely to have access to education. In general, education strengthens human and social capital and enhances gender equality. In the long run, access to education is instrumental in enhancing the level of awareness that provides the intellectual tools to analyze evaluate and adapt to new situation with exit opportunities. It gives empowerment, increased political participation, and reduced birthrates, addressing the long-term needs of an entire community and particularly its women.

Land Use:

Land in project area is used for agricultural and grazing purpose.

Employment:

The management of M/S Himalaya Cement (Private) Limited is committed to provide Employment opportunities to the local people.

Gender Equity:

Gender equity, or the lack of it, reflects women's access to and control of natural resources, public health, and education services, their participation in decision-making and political processes, and their ownership of productive assets in comparison with men will be considered.

Residual Impact:

Project will provide jobs to local community thus there will be improvement in all above mention parameters.

Community Health and Safety

Health:

People from the project area regularly travel to other cities, and thus cannot be considered isolated from the rest of the country. They are regularly exposed to illnesses common to urban populations, and have similar levels of immunity. The management will conduct medical

examinations before being hired, and will be screened for communicable diseases. The project is therefore very unlikely to lead to an epidemic of any sort among local communities. Following measures will be implemented:

1. Personal Protective Equipment will be provided to the workers and other staff.
2. Emergency services will be provided by the management of M/S Himalaya Cement (Private) Limited
3. First aid box and other emergency practices will be provided at the site to cope with the dangerous situation of the proposed project.

Safety:

Project activities could become a hazard if conducted in populated areas where local people, especially children, are likely to gather around to watch the activity. The other safety issue is that of traffic, especially along access roads close to settlements. To reduce the hazards, the following mitigation measures will be implemented:

1. Local people will be informed in advance when work is about to start in an area.

This may result in people keeping young children away from work areas.

2. Machinery will never be left unattended.

3. Safe driving practices will be adopted, particularly while passing through settlements.

Management of M/S Himalaya Cement (Private) Limited will achieve following goals.

- Identification of regulatory requirements that apply to the proposed activities in the context of environmental protection.
- Identification of the environmental features of the project area and the likely impact of the project on the environment,
- Recommendation of appropriate mitigation measures that management will incorporate into the project design to minimize all adverse environmental impacts.
  Baseline environmental and socioeconomic information was collected from a variety of sources, including field surveys.

The impacts of M/S Himalaya Cement (Private) Limited due to mining activity in area will be insignificant, provided the generic mitigation measures proposed in this report are implemented. In areas where proposed site may have a significant impact, additional mitigation measures are given to reduce impacts to as low as reasonably possible.

After assessing the proposed project activities and investigating the project area, the environmental consultants, Pak Green Enviro-Engineering Pvt. Ltd., have concluded that, if the activities are undertaken as proposed and described in this report, and the recommended mitigation and environmental management measures are adopted, the project will not result in any long-term or significant impacts on the local community or the environment.

Project Benefits:

- Economic development
- Contribute to construction industry
- Create job opportunities to the local people
- Poverty reduction
- Contribute in the development of infrastructure
- Improve living standard of the area
- Contribute into national GDP
- Employment opportunity will be provided to the 2000 local people
- The project will provide employment to local community reducing immigration to big cities.
- The local raw material will be consumed locally reducing its transport to other areas and in turn reduce the air pollution which might be produced if transported.

5.5 Environmental Monitoring Program and Institutional Requirements

It will be in the fitness of the things to operate this project under the Environmental Management Plan (EMP). The EMP will ensure that even all type of pollutants from project is within the prescribed limiting values of the PEQS. Thus, the environment and human health around the project will be safeguarded.

Regular monitoring of all the significant environmental issues is essential to check the compliance status of EMP. The main objective of the monitoring will be;

- To verify the results of the environmental study with respects to the proposed project.
- To estimate the trends of concentrated values of the issues, which have been identified as critical and then planning the mitigating measures.
- To assess the efficiency of pollution control mechanism.
- To ensure that any additional parameters, other than those identified in the EIA report, do not turn critical after the commissioning of proposed project.

Potential Environmental Enhancement measures

Following necessary measures will be adopted during mining activity:

- Controlled blasting technique will be used to mined the limestone and clay
- Blasting and any mining activity will not be done in nights
- Proper fencing will be done when mining activity is about to start
- Proper SOPs will be followed with proper schedule along with the HSE conditions
- Sprinkling of water will be done on road, quarry area and tracks
- Area will be restored after completion of mining activity with native plants.
- Any possible measure will be adopted to make the project or mining safe and eco-friendly.

5.7 Mitigation and Impact Assessment Criteria

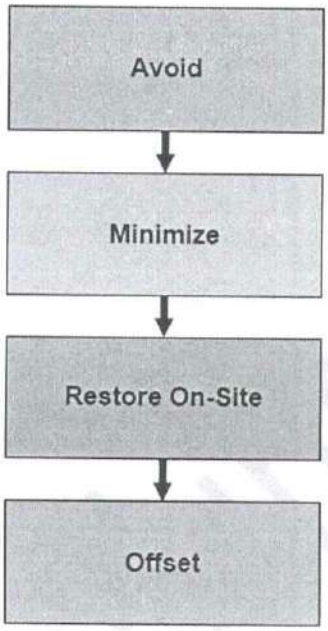
Impact assessment criteria:

The impacts were assessed in the light of criteria given as under:

- Magnitude or degree of impact
- Time and duration of impact
- Likelihood of impact occurrence
- Sensitivity of impact
- Risk related to impact

Mitigation assessment criteria:

The Mitigation Hierarchy establishes a structure to guide development and application of measures to mitigate impacts on environmental values and associated components. The term "mitigation" applies to four steps, or levels, in the mitigation hierarchy



General principles

1. Maintaining the integrity and natural functions and processes of ecosystems, and the resilience of ecosystems, is prerequisite to sustainable use of natural resources, and essential to maintaining ecosystem goods and services over time.
2. The mitigation hierarchy is applied in order of priority as follows:
    a. Avoid
    b. Minimize
    c. Restore On-Site
    d. Offset (Off-Site or On-Site)
3. Generally, the "higher" the priority of the environmental value and associated component, the more protective the mitigation measures.
4. For an action or measure to be considered "mitigation", a party must accept responsibility for implementation of appropriate mitigation measures, and there must be certainty that the mitigation measures will be carried out.
5. Implementing mitigation measures can help resolve issues that may delay or prevent a proposed project or activity.

Purpose of Mitigation measures

Purpose of mitigation measures should include:

- **What is the problem i.e. in terms of "major environmental impacts" which may arise by the subject project activity?**
- **When the problem will occur and when it should be addressed**
- **Where the problem should be addressed**
- **And how the problem should be addressed**

The major impacts may arise by the subject project are landscape disturbance, particulate matter, dust, noise, and disturbance of vegetation feature. Other impacts are of minor importance. These impacts will arise during the mining activity but precautionary measures will be adopted prior to start the activity, during the activity and post activity.

Any impact that would arise due to the subject project activity will be addressed on site. Trainings will be conducted on site prior to start work.

HSE manager/environmental manager along with site manager will be appointed to assess any impact that could be arisen during the mining activity. He would be responsible to address the problem and to mitigate it.

Ways of achieving mitigation measures

By adopting proper mitigation measures, any anticipated major or minor environmental impacts could be controlled or mitigated. The detail of impacts and mitigation measures have been discussed previous chapters.

Management of M/S Himalaya Cement (Private) Limited shall take appropriate measures to provide pollution free and safe environment during the proposed mining project by implementing improved management practices and monitoring techniques suggested in EMP.

The land clearing/mining process will be very slow and time taking. Owners of the land will be allowed for land grazing after the leasing but that will be restricted at safe distance. Proper compensation will be given to stakeholders as per policy and negotiation.

The land will be restored with maximum plantation and patches for agricultural practices will be maintained. Some of the area of land will be maintained for grazing because not whole area will undergo mining activity.

M/S Himalaya Cement (Private) Limited will develop Restoration and reclamation plan to restore the natural landscape of the area. Plant nursery, garden will be developed to rehabilitate the native plants of the area. After the proposed mining/extraction activity the Quarried/extracted area will be restored and reclaimed with maximum plantation.

CHAPTER-6: ENVIRONMENTAL MANAGEMENT AND MONITORING PROGRAM

6.1 Purpose and Objectives of the EMP

The primary objectives of the EMP are to:

- Facilitate the implementation of the mitigation measures identified in the EIA.
- Define the responsibilities of the HSE manager of M/S Himalaya Cement (Private) Limited near Katha Sagral District Khushab.

Define a monitoring mechanism and identify monitoring parameters in order to:

- Ensure the complete implementation of all mitigation measures
- Ensure the effectiveness of the mitigation measures
- Provide a mechanism for taking timely action in the face of unanticipated environmental situations
- Identify training requirements at various levels.

Management Approach:

The overall responsibility for compliance with the environmental management plan rests with the project proponent.

6.2 Proponent's environment management team

Following functionaries will be involved in the implementation of EMP:

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

6.3 Training Schedules

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

- **Training of mining staff**

Training of mining staff & workers will be the part of the ToRs regarding the subject project.

provisions given in EIA Report *Chapter 6 Screening of Potential Environmental Impacts & Their Mitigation Measures* will be followed.

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

1. Handling of Machineries in a safe way
2. Proper fencing design
3. Proper blasting training and schedules
4. Use of PPEs
5. Maintenance of vehicles and submission of Environmental Monitoring Reports
6. Maintenance of Water Consumption records
7. Testing of water and submission of Environmental Monitoring Reports
8. Placement of safety signs/boards during construction
9. Sprinkling of water on the roads and dusty tracks
10. Monitoring of generator emissions

Training regarding all other aspects of HSE will be ensured by the contractor during the mining activity.

6.4 Responsibility of EMP

Overall responsibility for implementation of EMP will be that of Head of HSE department. He will appoint an HSE/Project Manager of relevant qualification and will assist by other departmental in charge like SWM, gardening/nursery another related department. Head of HSE department will be responsible to the Project Proponent in all respects and will manage the all HSE condition at the PEQS. He will make liaison with all stakeholders and EPA Punjab.

6.5 Environmental Technical Assistance and Training Plan

In order to raise the level of professional and managerial staff, there is a need to upgrade their knowledge in the related areas. HSE/Project Manager should play a key role in this respect and arrange the training programs. HSE/Project Manager will provide training to staff and workers about the best environmental management practices at the site and affective implementation of the EMP. The training modules will include air, noise and water pollution monitoring, social awareness, Environmental Laws, Punjab Environmental Quality Standards (PEQS), Usage of personal protection equipment, and health and safety related issues on the construction site.

The HSE/Project Manager will train all workers & staff in basic sanitation and health care issues (e.g., how to avoid malaria and transmission of Sexually Transmitted Infections (STI)

HIV/AIDS and in general health and safety matters, and on the specific hazards of their work. Training should also consist of basic hazard awareness, site specific hazards, safe work practices, and emergency procedures for fire, evacuation. HSE/Project Manager will arrange Training on monthly or quarterly basis regarding health & safety, hygiene, firefighting and first aid.

Table 6.1: Summary of Impacts and their mitigation measures

Impacts	Mitigation Measures
Land / Soil Erosion	Restoration of mined land through plantation and landscaping. Maximum plantation in surrounding areas to reduce erosion. Construction of check dams and terracing where needed.
Noise Pollution (Mining and Generators)	Use of Personal Protective Equipment (PPEs) by workers. Regular maintenance of vehicles. Noise monitoring to ensure levels do not exceed permissible limits within a 2 km radius. Limiting noisy operations to daytime hours.
Solid Waste (Mining & Domestic Sources)	Establish a dedicated Solid Waste Management (SWM) division supervised by HSE and SW Managers. Use quarry waste (rocks, stones, residues) for land restoration, road construction, or check dams. Domestic waste should be collected and disposed of properly through approved methods. Adopt a proper solid waste management system for both project and domestic waste.
Wastewater (Domestic Sources)	- Use domestic wastewater for dust suppression, land restoration, or plantation irrigation. Regular monitoring of water quality to avoid contamination.
Air Pollution (Particulate Matter & Fugitive Dust)	Water spraying on quarry and haul roads to reduce dust. Covering trucks transporting limestone and clay and to minimize dust emissions. Proper blasting practices and controlled drilling to limit dust release.

	Use of PPEs like masks for workers. Regular air quality monitoring around the project site.
Gaseous Emissions (Vehicles & Machinery)	Regular maintenance of generators, trucks, and machinery to reduce emissions. Encourage use of low-emission equipment and fuel-efficient vehicles. Monitoring of emissions to comply with national air quality standards.
Health & Safety Risks	Provision of PPEs, first-aid, and on-site medical facilities. Safe drinking water for workers and local communities. Maintain water consumption records. Display safety signs and boards in operational areas. Proper fencing of mining areas to avoid unauthorized access. Prohibit smoking or drug use during work hours. Store flammable or hazardous materials safely away from explosives. Follow SOPs during extraction (e.g., pre-announcements before blasting, controlled access).

6.6 Equipment Maintenance Detail

The subject project is the mining for limestone and clay for M/S Himalaya Cement (Private) Limited. The company will maintain the records for Health Safety and Environment and will hire HSE manager to check and deal with the HSE issues. The company shall maintain PPEs, medical facilities, firefighting Equipment, SOPs, conduct trainings, develop schedule for blasting, design for proper fencing and records for their periodic fillings or replacement.

6.7 Environmental Budget

The cost required to effectively implement the mitigation measures is important for the sustainability of the Project. M/S Himalaya Cement (Private) Limited has allocated 2% of the project cost as the Environmental budget to recover any damages done by the project activities to environment which will include Environment, Health & Safety, for restoration, rehabilitation & landscaping of the area, for installing any pollution abating technology or equipment, for any

maintenance and repair of safety devices, for the implementation of Environmental Management Plan and other environment related aspects.

6.8 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Environmental Aspect	Potential Impact	Mitigation Measures	Mitigation Activity	Responsibility	Monitoring
Air Quality	Dust emissions from drilling, blasting, crushing, and hauling; particulate matter affecting workers and nearby residents	Water spraying, dust suppression systems, covered trucks, wind barriers, reduce vehicle speed on haul roads	Daily water spraying on roads and stockpiles- Install dust extraction systems at crushers Cover trucks transporting limestone and clay Limit blasting during high wind conditions	Environmental Officer	Monitoring at site boundary (Monthly) Visual inspection of dust suppression weekly

Noise	Noise from machinery, crushers, and blasting affecting workers and nearby communities	Use silencers, acoustic barriers, buffer zones, limit blasting hours	Install silencers on machinery. Restrict blasting to 9 AM -5 PM. Maintain buffer zones around operations	Environmental Officer	Noise level measurement (dB) at site boundary monthly. Weekly inspection of noise mitigation measures
Water Resources	Surface and groundwater contamination from runoff, sedimentation, fuel/oil spills	Sedimentation ponds, bunding for fuel/chemical storage, recycling of water	Construct sedimentation and settling ponds. Provide bunded fuel and chemical storage areas. Use recycled water for dust suppression	Environmental Officer	Water quality monitoring (pH, TSS, turbidity, oil & grease) monthly. Groundwater levels and quality quarterly

Soil and Land	Soil erosion, degradation, loss of topsoil, unstable slopes	Topsoil stripping and storage, progressive reclamation, slope stabilization	Strip and store topsoil for later reclamation. Progressive rehabilitation of mined-out areas. Construct terraces, gabions, and erosion control structures	Environmental Officer	Visual inspection of erosion control measures weekly. Annual soil quality assessment
Biodiversity	Loss of flora and fauna, habitat fragmentation	Avoid high-value vegetation areas, establish greenbelt, fauna rescue and relocation	Identify sensitive areas before clearing- Plant native species along my boundaries. Relocate fauna safely	Environmental Officer	Quarterly biodiversity surveys. Documentation of species rescued and reintroduced

Waste Management	Improper disposal of solid and hazardous waste; potential soil and water contamination	Segregate solid waste, safe disposal of hazardous waste, reuse/recycle materials	Separate hazardous and non-hazardous waste at source. Send hazardous waste to approved disposal facilities. Reuse or recycle packaging and construction materials	Site Supervisor / Environmental Officer	Monthly waste audit-Inspection of storage and disposal facilities weekly
Occupational Health and Safety	Injuries, health hazards from dust, noise	Provide PPE, conduct safety training, maintain first-aid and emergency response facilities	Issue helmets, gloves, masks, ear protection. Conduct regular safety training. Maintain first-aid kits, fire extinguishers, and	HSE Officer	Daily inspection of PPE usage. Quarterly safety drills and training sessions-Record all incidents and accidents

			emergency response plan		
Blasting & Vibration	Structural damage to nearby structures, ground vibration affecting wildlife	Controlled blasting techniques, monitoring of vibration and air overpressure	Limit charge sizes- Use proper blast design and timing Monitor vibration and air overpressure	Site Engineer / Environmental Officer	Vibration monitoring per blast. Monthly report of vibration levels
Hazardous Materials	Spills of fuels, oils, or chemicals affecting soil/water	Proper storage, spill kits, training, secondary containment	Store fuels and chemicals in bunded areas. Provide spill response kits and training. Regular inspection of storage areas	HSE Officer	Weekly inspection of storage. Monthly spill response drills

and ion	Increased vehicle movement causing accidents and emissions	Traffic management plan, vehicle speed limits, driver training	Designate haul roads and speed limits. Schedule vehicle movement to avoid peak times Train drivers on safety	HSE Officer	Weekly traffic inspection Monthly review of accidents/incidents

Need for Disaster Management and Emergency Response System

In order to cope up with the possible hazards it is imperative to prepare the Disaster Management Plan and rehearse it frequently. To evaluate effectiveness of the system preparedness exercises and drills will be undertaken frequently. Small courses will be run to train the relevant persons about their actions during emergency. The administration staff need be familiar with the firefighting procedures and equipment.

Communication System for Declaring Disaster and Emergency Situation

On immediately on occurrence of emergency situation all employees will be informed through disaster Alarm System. The emergency siren means that all employees will assemble at the previously designated assembly areas. At this place the Head of HSE department will instruct the workers regarding their respective duties.

Identification of Risks/Possible Threats

The project and other occupants may come across untoward incidents on account of human interventions and natural catastrophes. Human induced risks may include the placing of an explosive device for causing damage to building and burning of essential office/documentary records. Improper use of electrical, heating and cooking gadgets may lead to outbreak of fires. Similarly, the smokers may create large-scale burnings. The natural hazards consist of the possible damage to of the building due to an earthquake or windstorm. Thus, there is need of carrying out risk assessment for such eventualities.

According to public Consultation natural disaster are very rare in the area. In the operation of the project proper SOPs are developed to cope with emergency situation.

Risk Management

Risk may be minor, serious or fatal. It may be rare, often or frequent.

Risk = Damage X Rate of Occurrence.

Risks are broadly acceptable, tolerable, unacceptable and residual.

Elements of Occupational Health and Safety Management System (OHMS)

For an effective OHMS, the management of the project will implement the f[illegible]

- Identification of risks, hazards and countermeasures
- Adoption of OHS targets based on OHS policy
- Formulation of OHS plans.
- Incorporation of opinions of stakeholders in OHS measures
- Implementation and operation of OHS plans
- Establishing an organization
- Documentation
- Emergency situation
- Routine inspections and improvements
- System audits
- Revision of OSHMS
- OHS education

Post Disaster Rehabilitation

On close of the disaster the management will immediately undertake activities for restoring the normalcy at the site. Efforts will be made to carry on with the operations.

Proposed monitoring program to assess performance or output of EMP

To oversee the environmental performance of the project through its lifecycle enforcing the PEQS an Environmental Monitoring Program has been conducted that ensures effective surveillance of the environmental parameters at various stages of the project development and compliances with PEQS and legal obligations. It shows that all the parameters are within the range of prescribed limits of PEQS.

Particulate Matter/Dust

Monitoring for particulate matter should be conducted as per PEQS and report should be submitted to EPA Punjab.

Flue Gases

Monitoring for vehicular / stack emissions should be conducted as per PEQS and report should be submitted to EPA Punjab.

Noise

Monitoring for noise level should be conducted as per PEQS and report should be submitted to EPA Punjab.

Water quality

Monitoring for waste water & drinking water quality should be conducted as per PEQS and report should be submitted to EPA Punjab and report should be submitted to EPA Punjab. Record should be maintained regarding the underground water pump and consumption.

Proposed EMP reporting and reviewing procedure

HSE manager is responsible for reviewing the performance of the project with respect to the guidelines mentioned in EMP related to following aspects:

- Health and safety
- fire safety arrangements,
- emergency evacuation plan
- emergency preparedness response
- provision of PPEs to workers

Internal audits should be done on biannual basis to check to the project performance with respect to the guideline proposed in EMP

Environmental Monitoring data log book should be maintained by the project proponent.

CHAPTER-7: STAKEHOLDERS PARTICIPATION

Public discussions were held with the inhabitant of the surrounding area. They are quite positive to the project and see the project as growing business. The people observe strong positive impacts regarding employment, business and structural development due to this project. EIA findings depict that people perceive overall positive social and economic impacts by the project. Their attitude towards the project installation is highly optimistic. Majority of the people are convinced for development in the area and they correlate this progress with the pace of their social mobility but they were also concerned with scenic beauty of the area and employment which the proponent shall ensure to maintain the aesthetics of the area, reclaim the land and also to provide jobs/employment during construction and at the time of functioning of the project. Moreover, project proponent admitted to adopt all the mitigation measures to control any impacts resulting from the subject project.

7.1 Methodology of consultation

The EIA team carried out public consultations at various locations around the Project Site and conducting group meetings with different group of stakeholders. The stakeholder's consultation during this phase of the work targeted the project area, administrative and private offices, Govt. offices, shops, etc. near the Project area:

- Selection of the stakeholders for consultation, reconnaissance of the project site and initial discussions with the local community, residents, education institutes, health institutes, hospital and NGOs, shopkeepers, drivers etc.
- Environmental consultants and social specialists and documenting the opinions of the stakeholders expressed during the meetings etc.

7.2 Stakeholder identification

Stakeholders must be considered at all levels according to the importance of the project. They may be at provincial, district and village level. The process of consultation is an ongoing process which continues during the project life cycle and even after the submission of this environmental assessment report and so on. Therefore, three-tier approach was adopted. Stakeholders were identified, categorized and consulted at provincial (EPD Punjab, Irrigation department, Agriculture department, Wildlife department, mines and mineral department,

metrological department etc.), district level (EPD, Irrigation department, Agriculture department, Wildlife department etc.) & village level (Direct & indirect affected and Locals)

Consultations with government, provincial and district level departments were carried out through meetings and visits while consultations with locals, villagers, neighbors and directly affected peoples were under taken during baseline study of the area.

Proponent

Possible impacts and mitigation measures related to the subject mining project were discussed with the project proponent and management. They assured to take all suggested mitigation measures to control any discrepancy arose by the project and to make the project eco-friendly.

Responsible Authority

Management of M/S Himalaya Cement (Private) Limited is the responsible authority to take all measures prior to the mining activity.

Other departments and agencies

For the impact analysis detailed meetings were held with the management of M/S Himalaya Cement (Private) Limited, local community, education institutes, health institutes, hospital and NGOs. Issues were discussed that may affect the environment and also the implementation of proposed project. All possible mitigation measures were considered and incorporated in the Environmental Management Plan.

Scoping sessions, focused group discussion and way side consultations were held with the relevant stakeholders in the area. The purpose of such consultations is to obtain the feedback from the relevant persons.

Environmental Practitioners and Experts

Team of Pak Green Enviro-Engineering (Pvt.) Ltd. visited the project site, had discussions with stakeholders and consulted with the local people of nearby and other villages to evaluate the project socio-economic impacts. People of the area belong to different professions like mostly belong to employment, own businesses, doctors, some in abroad, in Army, teaching, in agriculture, etc. Women were also consulted for their point of view regarding the betterment of the area by this project, some of them communicated but according to social value of the area they mostly hesitate to communicate comfortably and get pictured. People provide the massive

information about the project and have positive remarks regarding the project development.

Affected & Wider Community

There is no affected community present in the radius of our study area. PGEE team has consulted with the inhabitants of the different villages. They provided positive remarks regarding the subject project and in the favor of the subject mining activity for cement plant. Stakeholders' participation Performa's and socioeconomic questionnaire were get filled by the inhabitants to evaluate the project socio-economic impacts. Stakeholders' participation Performa & socioeconomic questionnaire annexed in **Annexure.**

7.3 Stakeholder Analysis

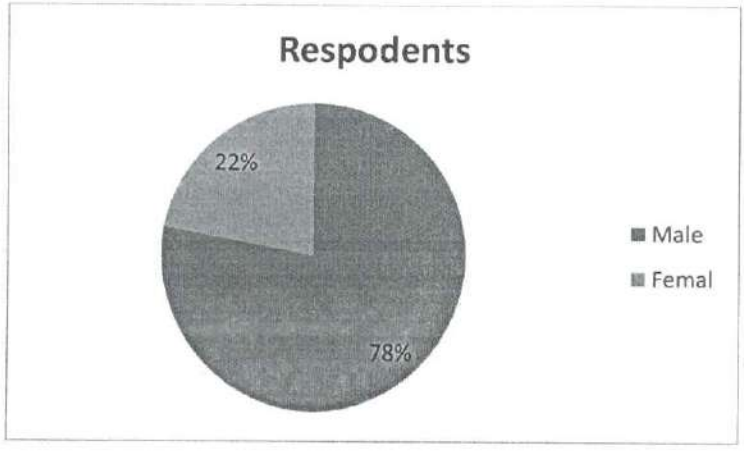
Sample size

48-50 sample size was selected by the Team of consultants for conducting the socioeconomic survey. Women were also consulted for the said survey; some of their names are mentioned in the above list of respondents while most of them were not willing to give personal information.

Statistical Analysis

SPSS 19.0 has been used for the statistical analysis of the data collected during the visit of study site villages through questionnaires.

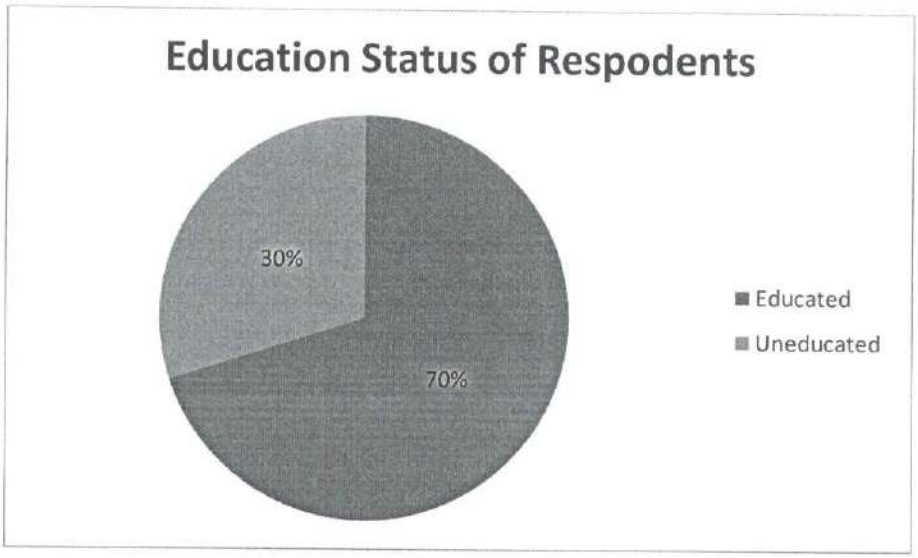
7.4 Results & Discussion



Discussion:

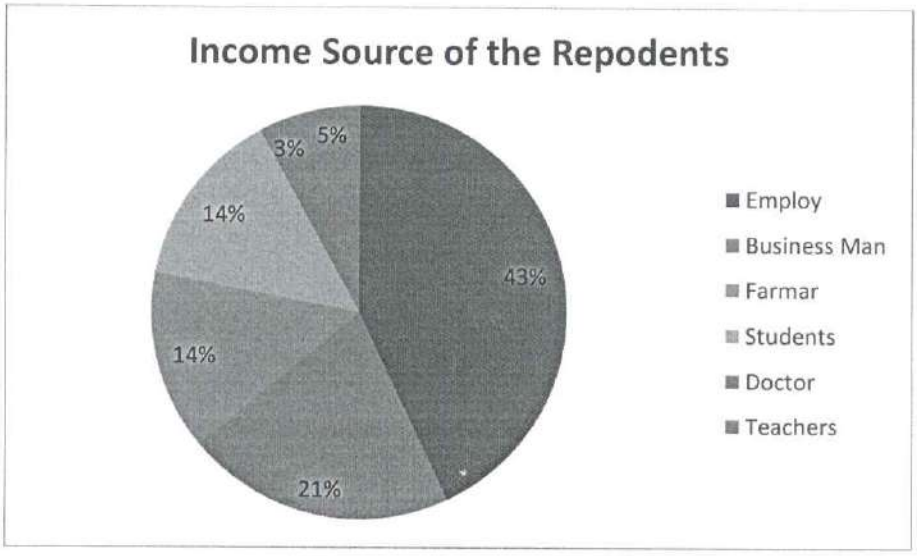
According to graphical representation, 78% respondents were male while 22 % respondents were female. The number of female respondents is less as compared to male respondents

because according to the social binding female hesitates to respond or communicate comfortably.



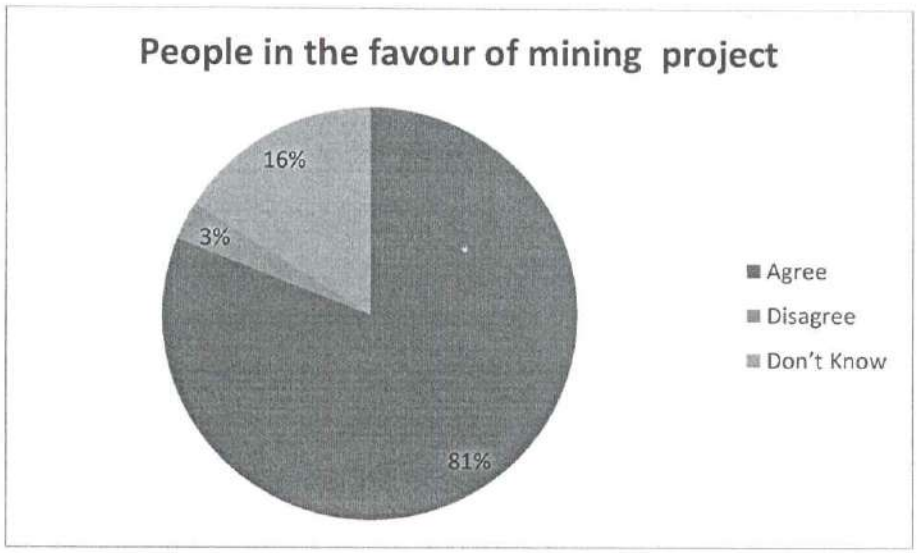
Discussion:

According to above graphical representation, 70 % respondents were educated while 30 % were uneducated. So, according to the survey overall education status of the area is good.



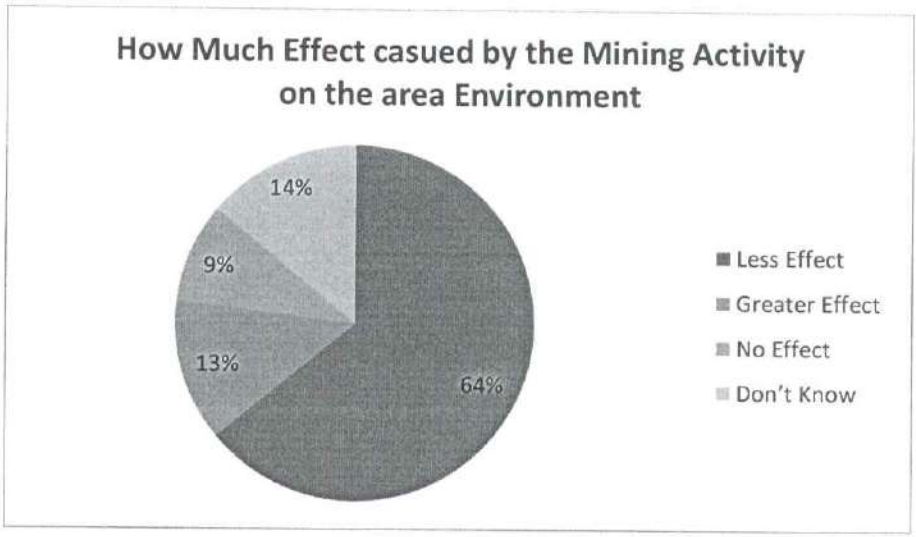
Discussion:

According to above graphical representation, source of income of majority of the respondents in the area was mainly employee in the private and government sectors while all other respondents' source of income was business man, farmers, students, doctors and teachers.



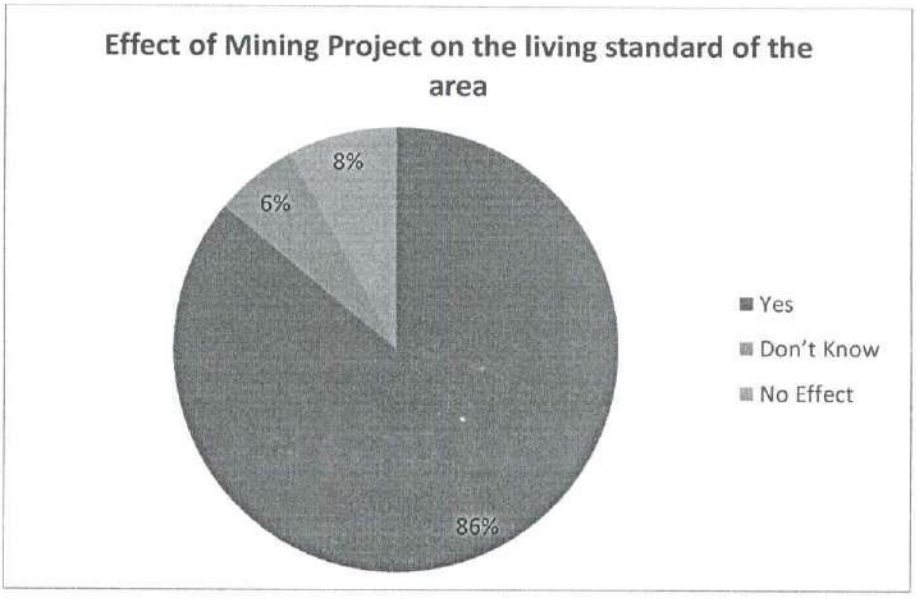
Discussion:

As per survey, 81% people were in the favor of the mining project and they gave positive remarks regarding the subject project while 16% respondents were have no opinion regarding the project and only 3% respondents were not in the favor of the subject project due to their concern regarding the aesthetic degradation of the srae and no preference to local people for jobs.



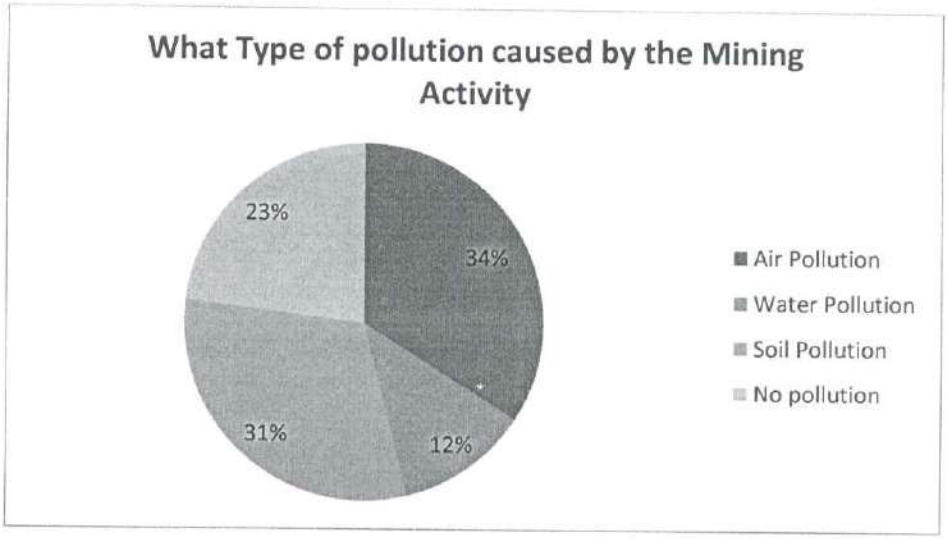
Discussion:

As per survey, 64 % respondents remarked that there will be less effect caused by the mining activity on the area environment while 14% respondents had no point of view regarding the mining activity, 13% respondents remarked that subject activity will cause greater effect on the environment of area and only 9% remarked that mining activity will have no effect on the environment of the area.



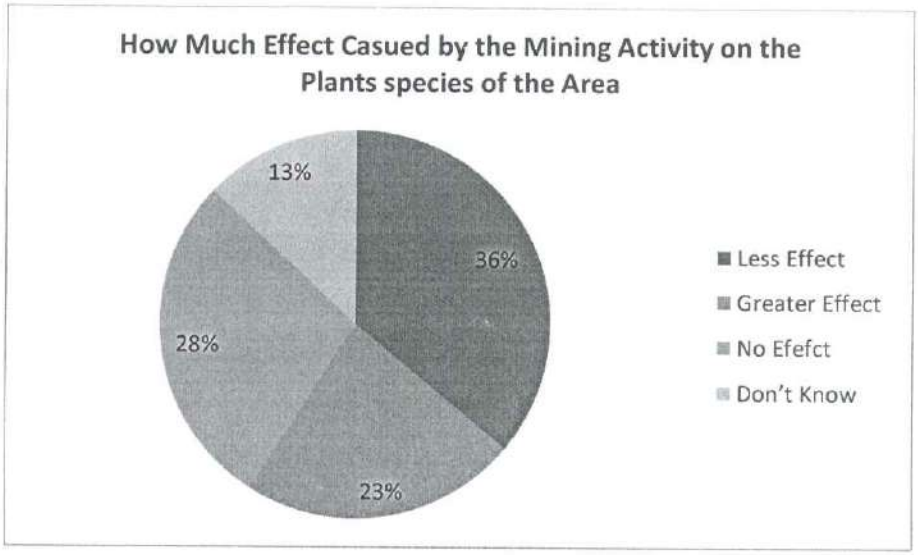
Discussion:

As per survey, 86% respondents said that mining activity will enhance the living standard and income level of the area, 8% said that there will be no effect on the living standard and income level while only 6% respondents had no remarks regarding the subject project.



Discussion:

As per survey of the area and graph indicates, some people gave remarks that there will be higher air pollution (i.e. 34%) by the subject mining activity, some people said that there will be soil pollution (i.e. 31%) by the subject activity, some people said that there will be no pollution caused by the subject project while some people said that there will be water pollution (i.e. 23%) caused by the subject activity.



Discussion:

As above graph indicates, 36% of the respondents remarked that there will be less effect caused on the plants species by the mining activity, 28% said that there will be no effect caused on the plants species by the subject activity and 23% said that greater impact will be caused by the subject

project on the plants species while 13% respondents had no remarks regarding the subject project effect on the plants species.

CHAPTER- 8: CONCLUSION AND RECOMMENDATIONS

8.1 Conclusions

The Environmental Impact Assessment (EIA) of the proposed project by M/S Himalaya Cement (Private) Limited concludes that the project is economically feasible, socially beneficial, and environmentally manageable. The establishment of the cement plant will contribute significantly to meeting the growing demand for cement across Pakistan while simultaneously generating employment opportunities for local communities during both the construction and operational phases. The project will particularly benefit the residents of District Khushab and nearby villages, including Katha Sagral, by enhancing socio-economic development in the region.

The proponent has demonstrated a strong commitment to implementing the project in an environmentally responsible manner, with strict adherence to national regulatory requirements and best environmental management practices. Additionally, the company intends to register the project with the local government and will develop a comprehensive Emergency Preparedness and Response Plan to address any unforeseen incidents, ensuring the safety of workers, the community, and the surrounding environment.

In light of the findings, the EIA study supports the implementation of the project, provided that all proposed mitigation measures, monitoring programs, and environmental management plans are effectively adopted. With these safeguards in place, the project is expected to deliver long-term economic and social benefits while minimizing potential adverse environmental impacts.

8.2 Recommendations

Need for Further Investigations

In view of the comprehensive screening and assessment process carried out under this study, no further investigations will be required. The project will proceed on the basis of the current EIA findings, provided that all mitigation and management measures will be implemented effectively.

Dust Control Measures

During mining and excavation activities, water will be sprinkled regularly on dusty roads and excavation sites. This practice will reduce the spread of dust particles into the atmosphere and will help in maintaining acceptable air quality standards for workers and nearby residents.

Provision of Personal Protective Equipment (PPEs)

All workers engaged in mining and plant operations will be provided with PPEs such as masks, helmets, ear plugs, and other protective gear. The use of PPEs will be made mandatory, and compliance will be strictly monitored to safeguard worker health and safety.

Solid Waste Management

Solid waste generated during mining and cement plant operations will be managed systematically through proper collection, segregation, recycling, and safe disposal. Non-recyclable waste will be disposed of in environmentally sound facilities to avoid contamination of soil and water resources.

Employment Opportunities for Locals

The project proponent will give preference to local people for employment during both the construction and operation phases. This measure will contribute to improving the socio-economic condition of the nearby communities and will strengthen the relationship between the project and local stakeholders.

Tree Plantation and Greenbelt Development

As part of environmental conservation measures, tree plantation and the development of a greenbelt will be carried out around the project site. This initiative will improve the aesthetic value of the area, provide dust control, enhance biodiversity, and contribute to carbon sequestration.

Land Restoration and Reclamation

After the completion of mining activities, the project proponent will undertake land restoration and reclamation measures. These will include backfilling, leveling, and plantation to return the land to a stable and productive state, thereby minimizing long-term adverse impacts.

Implementation of Safety Rules and SOPs

All mining operations will be conducted in accordance with safety rules and Standard Operating Procedures (SOPs). The management will ensure compliance with occupational health and safety regulations, particularly in blasting activities, to protect both workers and nearby residents.

Fencing of Mining Site

The project area will be properly fenced to prevent unauthorized entry, reduce safety risks, and avoid accidental access by local people, livestock, or wildlife. This measure will improve site security and minimize the chances of mishaps.

Restriction on Nighttime Operations

Mining activities will not be carried out at night. All operations will be confined to daytime working hours to minimize noise and dust-related disturbances to local communities and to ensure safer working conditions.

Community Engagement and Awareness

Prior to the commencement of mining activities, the local communities will be informed about the project schedule, nature of activities, and possible impacts. This step will promote transparency, cooperation, and trust between the project proponent and community members.

Noise Control Measures

To mitigate noise impacts, a soundproof generator room will be constructed. This will ensure that noise from generators remains within permissible limits and will reduce disturbance to both workers and local residents.

Bio-Security and Worker Safety

During the operation phase, high standards of bio-security and worker safety will be enforced. Regular medical check-ups, training sessions, and safety drills will be conducted. The safety and health of the workers will remain the top priority of the project management.

Corporate Social Responsibility (CSR)

The project management will continue to assist local communities as part of its Corporate Social Responsibility (CSR) commitments. Initiatives will include healthcare support, education facilities, infrastructure improvements, and other welfare programs to ensure long-term benefits for the people living in the surrounding areas.

The present EIA report is enough to meet the administrative and legal framework. Therefore, the environmental approval may be accorded for the present project.

Annexure – A

TORs

CLIENT RESPONSIBILITY

HIMALAYA CEMENT (PVT) LIMITED

- Proponent will be responsible to nominate a senior officer as Coordinator who will be responsible for all coordination activities as required by the Consultants and to whom the Consultants will refer for information and assistance. All correspondence between the Consultants and the CLIENT will be routed through the coordinator
- Consultants will require free access to all relevant information available with the Client
- The report developed for the CLIENT shall be the property of the CLIENT and the Consultants shall adhere to confidentiality morally as well as legally.
- Client will provide relevant documents as:
    - Signed application on company letter head
    - Pay Order in favor of DG EPA as review fee 30,000/-
    - Undertaking on Stamp Paper as per EPA Format
    - Affidavit on Stamp Paper as per EPA Format
    - Copy of NIC of proponent
    - Duly filled and Sign Schedule IV
    - Details of firefighting Equipment's
    - Layout Maps of the project
    - Other NOCS/Certificates from other concerned departments (if any)
    - Any other relevant documents/details required by the consultant.

Signatures: _____

Environmental Consultant
Pak Green Enviro-Engineering
Pvt. LTD.

HIMALAYA CEMENT (PRIVATE) LIMITED
Director

Signatures: _____

Client: Mr. Yousaf Khan
CNIC# 35201-2109195-7
M/s Himalaya Cement (Private)
Limited

TERM OF REFERENCES (TORS)

TO CONDUCT THE ENVIRONMENTAL IMPACT ASSESSMENT STUDY FOR

Establishment of Limestone and Clay Mining site for new Cement Plant

M/S Himalaya Cement (Private) Limited

LOCATED AT

Near Katha Sagral District Khushab.

TERM OF REFERNCES

These terms of references are being submitted for the subject EIA study falls under Schedule II, Category C (Mining and Mineral Processing), Clause 1: "Mining and processing of major non-ferrous metals" of policy and procedure for the filing, review and approval of environmental assessment. These TORs of EIA have been prepared by the environmental consultants, in consultation with the project proponent.

INTRODUCTION OF PROJECT:

The Subject project **Establishment of Limestone and Clay Mining site for new Cement Plant.** The project involves the construction of a five-story commercial building, including a basement and ground floor. The building has been designed to accommodate retail outlets, offices and businesses facilities, to provide a modern and efficient space. The project site is located at **Near Katha Sagral District Khushab.**

The total area of the project site is **5796.91 Acres (For Limestone and Clay Mining) and 120 Acres (Required for the setup of new Cement Plant)**, with a total estimated cost of **Cement Plant Project** is **Rs 30 billion and Mining Project** is **Rs 01 billion.** This EIA is being submitted in compliance with **Section 12 of the Pakistan Environmental Protection Act (PEPA), 1997 (Amended 2022)**, to ensure that the expansion is carried out in an environmentally responsible and sustainable manner.

Name & Address of proponent

- **Name:** Mr. Yousaf Khan
- **Address:** House No. 05, Muhalla Burj Colony, Lahore Cantt, District Lahore.
- **CNIC:** 35201-2109195-7

M/S Himalaya Cement (Private) Limited has appointed the Pak Green Enviro-Engineering (Pvt) Ltd as the Consultant for the subject project to conduct the EIA. M/S Pak Green Enviro-Engineering (Pvt) Ltd will be called as "Consultant" **M/S Himalaya Cement (Private) Limited"** as the "Client".

Objective of the EIA study

The Objective of study includes Compliance of section 12 of PEPA 1997 (Amended 2012) & NEQS/ PEQS.

Purpose of the EIA

The key objectives of the EIA are to:

- Document the ecological and socioeconomic baseline conditions of the study area and the affected communities
- Inform and obtain input from stakeholders, (e.g., governmental authorities, the public, and indigenous communities) and capture their relevant issues and concerns
- Assess in detail the environmental, social, and health impacts that would result from the Project
- Identify environmental and social mitigation measures to address the impacts identified
- Develop the EMPs as discussed above, based on the mitigation measures developed in the EIA
- Meet the requirements or recommendations of the applicable national Environmental Laws and Guidelines

Scope of Services

1. Review of existing regulatory framework

    1.1 Laws and Regulations

    1.2 National and International Guidelines and Policy

    1.3 Guidelines of Labor & Human Resource Department

    1.4 Punjab Local Government Ordinance

2. Methodology for carrying out this study

    2.1 Project Description

    2.2 Site Selection

    2.3 Project Alternatives

3. Process Description

    3.1. Detailed review of the processes

    3.2 Design Parameters

    3.3 Details related to Plant and Equipment's

4. Environmental profile of the environmental study area

    4.1 Climatology

    4.2 Geographical features

4.3 Geological and Hydrological features

4.4.4 Historical review

4.4.5 Land Use

4.4.6 Ecology, i.e. Flora and Fauna etc.

4.5. Analysis of EPA required environmental parameters

4.5.1 Sampling for Air, Water, and Noise Level

4.5.2 Investigate Socio-Economic and Socio-Environmental aspects and cultural values within and around the operating facility

4.5.3 Cultural and Social Values

4.5.4 Interviews from different groups

4.6 Development activities and Waste Management

4.7 Identify and evaluate major environmental impacts

4.8 Identify mitigation measures and develop Environmental Management and Monitoring plan

4.9 Conclusions based on the study conducted for this EIA

4.10 1-2 Site Visits for data acquisition

4.11 Environmental Monitoring plan

4.12 Preparation of Lab Analysis Report

4.13 Preparation of Environmental Management Plan EMP

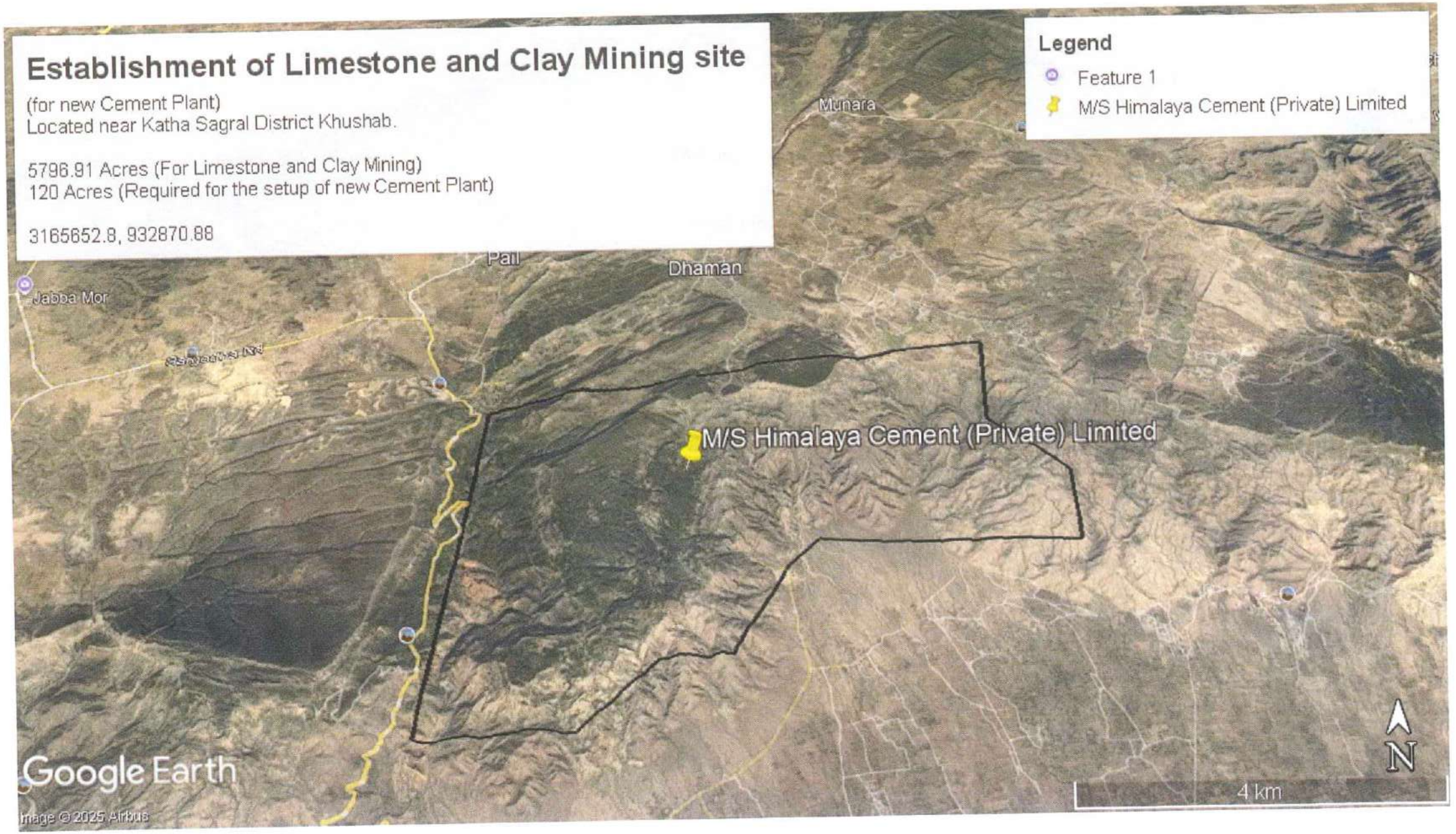
4.14 Briefing & Presentation to the Expert Committee in the EPA Punjab.

4.15 Reply to technical Environmental Objections/Review

4.16 Presentation in the office of DG EPA, Punjab (if required)

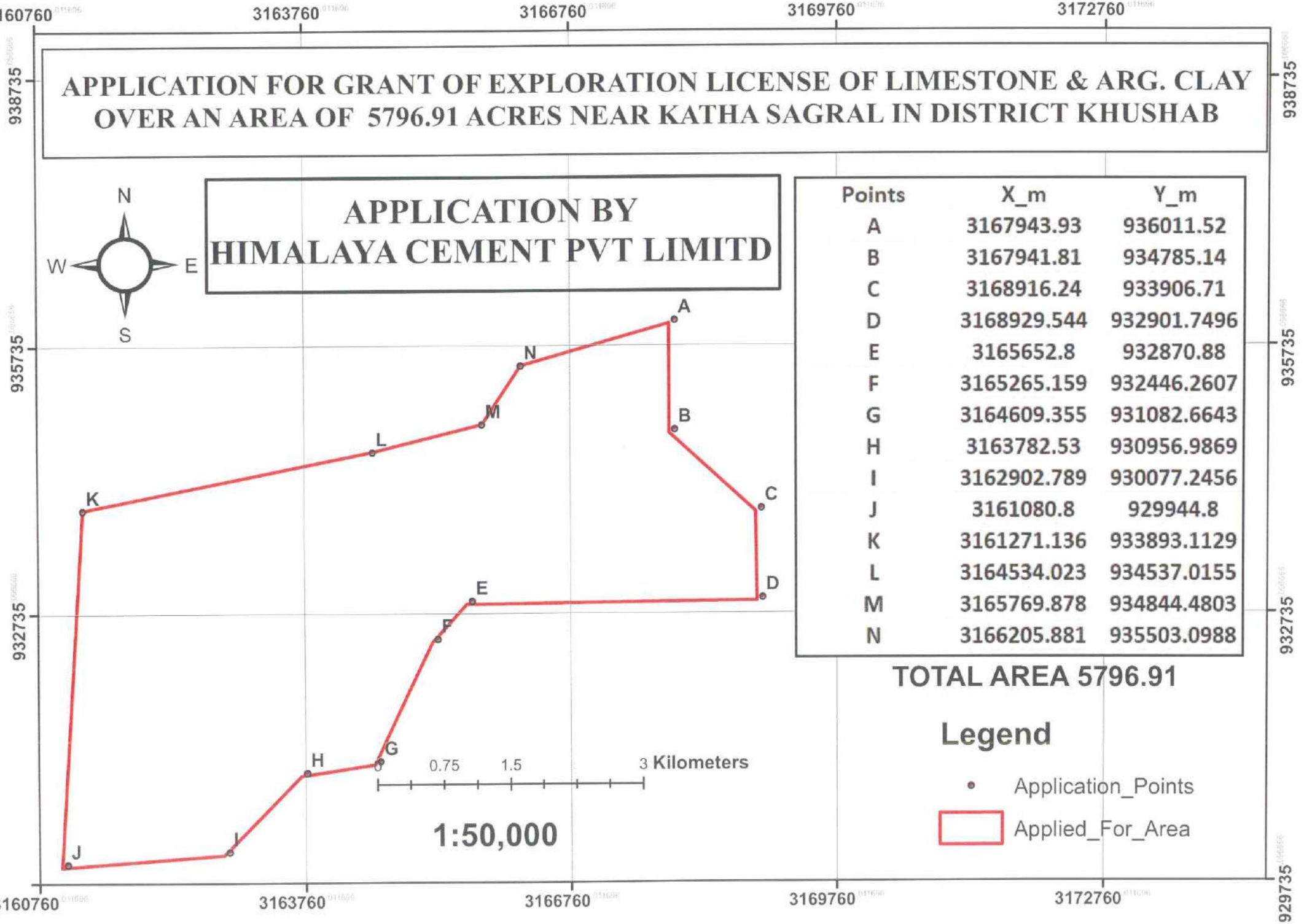
Annexure – B

Layout Plan & Google Earth Map


Establishment of Limestone and Clay Mining site
(for new Cement Plant)
Located near Katha Sagral District Khushab.
5796.91 Acres (For Limestone and Clay Mining)
120 Acres (Required for the setup of new Cement Plant)
3165652.8, 932870.88
Legend
Feature 1
M/S Himalaya Cement (Private) Limited
Munara
Pail
Dhaman
Jabba Mor
M/S Himalaya Cement (Private) Limited
Google Earth
Image © 2025 Airbus
4 km
N

APPLICATION FOR GRANT OF EXPLORATION LICENSE OF LIMESTONE & ARG. CLAY OVER AN AREA OF 5796.91 ACRES NEAR KATHA SAGRAL IN DISTRICT KHUSHAB

APPLICATION BY HIMALAYA CEMENT PVT LIMITD



Points	X_m	Y_m
A	3167943.93	936011.52
B	3167941.81	934785.14
C	3168916.24	933906.71
D	3168929.544	932901.7496
E	3165652.8	932870.88
F	3165265.159	932446.2607
G	3164609.355	931082.6643
H	3163782.53	930956.9869
I	3162902.789	930077.2456
J	3161080.8	929944.8
K	3161271.136	933893.1129
L	3164534.023	934537.0155
M	3165769.878	934844.4803
N	3166205.881	935503.0988

TOTAL AREA 5796.91

Legend

- Application_Points
- Applied_For_Area

Annexure - C

Lab Reports & Validations

PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.
(Environmental Laboratories Division)

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +92-42-35441444 Cell: 0303-4442334

EPA Certified

PGG/IMS/FF/159	Rev.#01	Rev date: 16-06-25

Report Limitation: "This report is not valid for any Court Cases, Environmental Protection Orders, Compliance Reports for Operational Phase Approvals, or any regulatory action under Punjab Environmental Protection (Smog Prevention and Control) Rules, 2023. etc.

TEST REPORT

Ref #: PGL/LAB/2025-6922/GW **Issue date:** 17-Sep-25

Name of Industry/Client:	Himalaya Cement (Private) Limited
Site Location:	Near Katha Sagral District Khushab.
Nature of Sample:	Ground Water
Sampling By:	Pak Green Laboratories
Sample Source:	Pressure Pump
Sample Code:	GW-2107
Monitoring Coordinates:	32.569348° N 72.512605° E
Date of sampling:	10-Sep-25
Sample Receiving Date:	10-Sep-25
Testing Facility:	Pak Green Laboratories
Testing Date:	10-Sep-25 to 17-Sep-25
Env. Conditions During Analysis:	Temperature=22.0-23.8°C RH=52.9-56.9%
Validated by EPA Representative:	Muhammad Nadeem, RO EPA(Lab), Lahore

Results:

Sr. No.	Parameters	Unit	WHO	PEQS	Method / Technique	Results
1.	Taste	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2160 C	Non-Objectionable
2.	Odor	-	Non-Objectionable / Acceptable	Non-Objectionable / Acceptable	APHA-2150 B	Non-Objectionable
3.	Color	TCU	≤ 15	≤ 15	APHA-2160 C	0.000
4.	Turbidity	NTU	< 5	< 5	APHA-2130 B	0.42
5.	Total Hardness^	mg/L	-	<500	APHA-2340 C	172
6.	Total Dissolved Solids^	mg/L	< 1000	< 1000	APHA-2540 C	662
7.	pH^	-	6.5-8.5	6.5-8.5	APHA-4500-H^+ B	7.023 at 23.9°C
8.	Chloride (Cl^{-1}) ^	mg/L	250	< 250	APHA-4500-Cl^{-1}B	92
9.	Electrical Conductivity (EC)^	µS/cm	-	-	APHA-2510 B	879
10.	Sodium (Na)^	mg/L	-	-	APHA-3111 B	72.9982

.....End of Report.....

PEQS: Punjab Environmental Quality Standards **WHO: World Health Organization** **^ PNAC Accredited**

Remarks: All Parameters are in compliance with the PEQS Limit.

Terms & Conditions:

- Analysis was conducted on the request of project proponent for IEE/EIA Baseline study.
- This report should be reproduced as a whole and not in parts.
- The Sampling was done as per the sampling and preservation protocol method APHA 1060-B&C
- The leftover sample (if so available) shall be retained for fifteen days after the issuance of the report unless otherwise negotiated between the client and the laboratory.
- The report is not valid for any negotiations.
- Dually calibrated instruments were used during monitoring and testing activities.

Lab. Analyst	Chief Analyst	Laboratory Incharge
	Muhammad Raza Ullah	Muhammad Iftikhar Ahmed

Pak Green Enviro-Engineering (Pvt.) Ltd. 46-M, Gulberg III, Lahore, Pakistan.

Report Limitation: "This report is not valid for any Court Cases, Environmental Protection Orders, Compliance Reports for Operational Phase Approvals, or any regulatory action under Punjab Environmental Protection (Smog Prevention and Control) Rules, 2023. etc.

TEST REPORT

Ref #: PGG/LAB/2025-6921/NL **Issue date:** 17-Sep-25

Name of Industry/Client: Himalaya Cement (Private) Limited
Site Location: Near Katha Sagral District Khushab
Nature of Monitoring: Noise Level
Coordinates: 32.570965°N 72.512007°E
Monitoring Time: Real Time
Monitoring Instrument: Land TEK SL 5868-P
Monitoring Date: 10-Sep-25
Validated by EPA Representative: Muhammad Nadeem, RO EPA(Lab), Lahore

Results:

Sr. No.	Locations	Equivalent Noise Level dB (A)
1.	Point-01: East Side	64.3
2.	Point-02: West Side	61.7
3.	Point-03: North Side	66.5
4.	Point-04: South Side	62.8
PEQS (Day Time Industrial Area)		75 dB(A)

..... End of Report.....

PEQS: Punjab Environmental Quality Standards
dB (A) Leq: Time weighted average of the level of sound in decibel on scale A, which is relatable to human hearing.
Remarks: The noise level at all points along the boundary wall is in compliance with PEQS limits.
Terms & Conditions:

- Analysis was conducted on the request of project proponent for IEE/EIA Baseline study.
- This report should be reproduced as a whole and not in parts.
- The responsibility of the ethical use of the results reported in this report lies with the client.
- The report is not valid for any negotiations.
- Dually calibrated instrument was used during monitoring.

Field Analyst	Chief Analyst	Laboratory Incharge
	Muhammad Raza Ullah	Mian Ittikhar Ahmed

Pak Green Enviro-Engineering (Pvt) Ltd. 46-M, Gulberg III, Lahore Pakistan

PAK GREEN ENVIRO-ENGINEERING (Pvt.) Ltd.
(Environmental Laboratories Division)

ISO/IEC 17025:2017 Accredited Testing Lab, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018

Head Office: 46-M, Gulberg III, Lahore-Pakistan. Ph: +92-42-35441444 Cell: 0303-4442334

EPA Certified

PGG/IMS/FF/063	Rev.#03	Rev date: 16-06-25

Report Limitation: "This report is not valid for any Court Cases, Environmental Protection Orders, Compliance Reports for Operational Phase Approvals, or any regulatory action under Punjab Environmental Protection (Smog Prevention and Control) Rules, 2023. etc.

TEST REPORT

Ref. #: PGG/LAB/2025-6920/AA

Issue date: 17-Sep-25

Name of Industry/Client:	Himalaya Cement (Private) Limited
Site Location:	Near Katha Sagral District Khushab.
Nature of Monitoring:	Ambient Air
Monitoring Location:	Near Site Area
Coordinates:	32.571037° N 72.51193° E
Monitoring Instrument:	AQMS
Monitoring Date:	10-Sep-25 to 11-Sep-25
Validated by EPA Representative:	Muhammad Nadeem, RO EPA(Lab), Lahore

Results:

Parameters	CO	NO	NO_2	SO_2	PM_{10}	$PM_{2.5}$
	mg/m^3	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$	ug/m^3	ug/m^3
Methodology	Non-Dispersive Infrared Absorption (NDIR)	Reduced Pressure Chemiluminescence (CLD)	Reduced Pressure Chemiluminescence (CLD)	UV fluorescence (UVF)	β Ray Absorption method	β Ray Absorption method
Results	1.109	5.98	21.72	41.77	149.3	46.2*
PEQS for Ambient Air	05 8-Hrs	40 24-Hrs	80 24-Hrs	120 24-Hrs	150 24-Hrs	35 24-Hrs

.....End of Report.....

PEQS: Punjab Environmental Quality Standards

Remarks: Parameters with * are not in compliance with the PEQS Limit.

Terms & Conditions:

- This report should be reproduced as a whole and not in parts.
- The responsibility for the ethical use of the results reported in this report lies with the client.
- The report is not valid for any negotiations.
- Dually calibrated instrument was used during analysis.

Field. Analyst	Chief Analyst	Laboratory Incharge
	Muhammad Raza Ullah	Mian Tikkay Ahmed

Pak Green Enviro Engineering (Pvt) Ltd. 46-M, Gulberg III, Lahore Pakistan

ENVIRONMENTAL PROTECTION AGENCY
GOVERNMENT OF THE PUNJAB
National Hockey Stadium, Gate No. 08
Gaddafi Stadium Complex, Lahore

EPA
ادارہ تحفظ ماحول حکومت پنجاب

Validation for Monitoring / Sampling of Stack Emission, Noise, Ambient air, Vehicular emissions

(Read conditions of certificate along with Regulation 9(1)(d) of CELR, 2000)

Cautions Related to scope, use & legal foundation of Validation

1. The Validation is quality control check under Regulation 91(d) for sampling & monitoring.
2. The Sampling / monitoring performed under Regulation 3(a) by Technical & Scientific Staff of private Laboratory as allowed through Conditions of Certificate.
3. The Scope of quality check of validation does not cover quality check of results declared with Report.
4. "The validated sampling / monitoring of the tests report is for non- punitive actions such as baseline study EIA/IEE, Self-monitoring, reporting under conditions of EIA/IEE, etc. while the report is not valid for Court cases, EPO, compliance reporting for operational Phase approvals, punitive actions such as Smog prevention & control Rules, 2023, complaint cases, etc". The same shall be exhibit at top of Report during its issuance under Regulation 12.
5. The tests Report cannot be used as evidence against any non-compliance SMR /report issued by EPA official Laboratory.
6. The EPA officer as well as certified Laboratory should also comply directions issued by authority vide letter No. 01-DD(Labs)/EPA dated 25.07.2022 while considering test report.

Nature Of Sample	Stack Emissions	Ambient Air✓	Vehicular Emission	Ambient Noise✓		
Description of monitored source / Site	Ambient Air, Noise Level					
Name and category of Unit	Hunza Steel Mills (PVT.) Limited, 8-km Layyah Road, 18 Hazari, District Jhang, Pakistan					
Standard Method	NDIR+UV					
Equipment, Model,	AQMS, Noise Meter					
Field Tested Parameters ,	CO, NO, NO_2		Lab Tested Parameters **(Not Validated)**			
Industrial Gaseous Emissions						
Values of tested Field Parameters: CO .....mg/nM3, NOx ...mg/nM3 , excess air (%age):						
~~(i) 5-min Ramp-Up phase (ii) flow rate & EC Temp. measured during calibration & testing (iii) Data recorded with 15-min interval (iv) complied all QA/QC checks~~					~~Yes~~	~~NO~~ ~~NA✓~~
Stack Particulate Matter (PM) Monitoring / Sampling under USEPA Method 5 / 17						
~~(i) Sample train is complete (ii) Leak Test Performed (iii) data sheet filled (iv) "K" & "Y" calculated (v) QA/QC complied (vi) suitability of filter ensured~~					~~Yes~~	~~No~~ ~~NA✓~~
Stack SOx sampling as per Method 8 (Thorin Indicator Method)						
~~(i)Absorbent solution available (ii) Flow rate as per method (iii) sampling as per Method~~					~~Yes~~	~~No~~ ~~NA✓~~
Ambient Air Quality Monitoring by Automatic Monitors for CO, O3, SO2, NOx, PM2.5 & PM10						
Zero/span check is performed (ii) CE of NOx 96% - 104.1% , Compliance of Critical Criteria (iii) Compliance of operational Criteria (iv) Comply PEQS measuring technique					Yes✓	No NA
Ambient Air Sampling of SPM, PM10, Pb by High Volume Sampler						
~~(i) The flow rate of sampler 1.1m3/min, (ii) Calibration performed~~					~~Yes~~	~~No~~ ~~NA✓~~
Vehicular Emissions & Noise Measurement						
Vehicle emissions and noise measurement performed as per method					Yes✓	No NA

Remarks:-

Research Officer
Environment Protection Agency
Punjab, Lahore

Imshad: Pak-Green Lab
Dated: 10-09-2025

Pak Green Enviro-Engineering (Pvt.) Ltd.

ENVIRONMENTAL PROTECTION AGENCY
GOVERNMENT OF THE PUNJAB
National Hockey Stadium, Gate No. 08
Gaddafi Stadium Complex, Lahore

EPA
ادارہ تحفظ ماحول حکومت پنجاب

Validation for Sampling of Wastewater & Drinking Water / Ground water

(Read conditions of certificate along with Regulation 9(1)(d) of CELR, 2000)

Nature Of Sample	**Waste Water**	**Drinking Water / Ground Water✓**		
Description of Sample source /Site		Ground Water		
Name and category of Project /Unit	Himalya Cement (Private) Limited, Located Near Katha Sagral District Khuhsab			
Standard Method used for Sampling	EPHA-1060			
Field Tested Parameters ,	Field Tested parameter	Temp, PH, etc.	**Lab Tested Parameters (Not validated)**	

Waste Water Treatment facility	Primary	Secondary	Tertiary
Total WW collected Sample .....NA	Total Collected Drinking water samples.....01		

Sample Tag for testing parameter is assigned on sample container	Yes✓	NO	NA
Sample is preserved properly for each testing parameter	Yes✓	NO	NA
Sample size is adequate for testing the target parameters	Yes✓	NO	NA
Wastewater Flow Measurement performed to ensure sample representativeness	Yes	NO✓	NA

No. of Waste Water outlets	Waste Water Flow m^3/hr from each outlet **(Optional)**	Water intake m^3/hr**(Optional)**	Water Mass balance **(Optional)**	Sample Type
			Yes No	Grab✓ Composite

Parameter	Matrix W	Matrix WW	Container	Sample Size	Preservation	Yes	NO	NA
Coliform,TotalorFecal	✓		SterileContainer	100mL	Refrigerate6C	✓		
Coliform,TotalorFecal,ChlorinatedWater	✓		Sterile Container	100mL	0.008% Thiosulphate& cooled6C	✓		
Color, Turbidity	✓		P,G	500mL	Cool6C	✓		
Hardness,Total	✓		P,G	500ml	HNO3 to pH<2	✓		
Nitrogen,Nitrate+Nitrite , Phenolic Compounds, Oil & Grease, COD, NH3			P,G	2000 mL	H2SO4 topH <2,Cool6C			
Metals,General	✓		P,G Rinsed1.1 HNO3	500mL	HNO3 topH < 2	✓		
Cyanide,Total			P,G	500mL	NaOHtopH> 12,Cool 6C			
Pesticides,General			Glass	1Liter	Cool6C			

Field Parameters

Field parameter		PH Meter, Model Make	Measurement Method	Calibrated in Field	Measured value
pH		AS 218	APHA 4500 B	Yes✓ NO	
Temp					
Cl					

Remarks / Caution: (1) The Validation is quality control check under Regulation 91(d) for sampling & monitoring. (2)The Sampling / monitoring performed under Regulation 3(a) by Technical & Scientific Staff of private Laboratory as allowed through Conditions of Certificate (3)The Scope of quality check of validation does not cover quality check of results declared with Report (4) The validated sampling / monitoring of the tests report is for non- punitive actions such as baseline study EIA/IEE, Self-monitoring, reporting under conditions of EIA/IEE, etc. (5) The tests Report cannot be used as evidence against any non-compliance SMR /report issued by EPA official Laboratory (6) The EPA officer as well as certified Laboratory should also comply directions issued vide letter No. 01-DD(Labs)/EPA dated 25.07.2022 while considering test report.

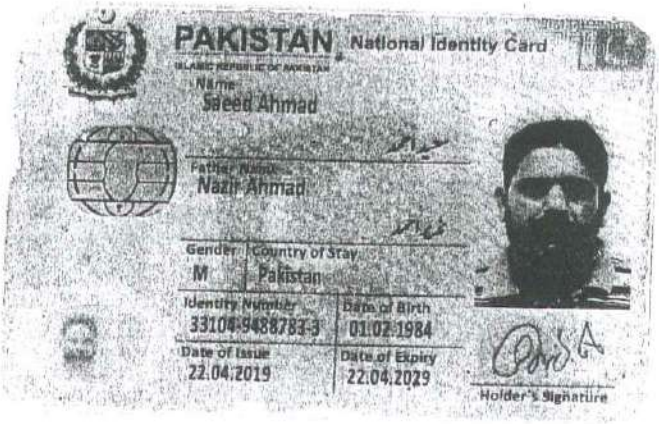
Imshad: Pak-Green Lab
Dated: 10-09-2025

Research Officer
Environment Protection Agency
Punjab Lahore

Pak Green Enviro-Engineering (Pvt) Ltd. Lahore Pakistan

Annexure – D

CNIC of Witnesses & other relevant documents


PAKISTAN
ISLAMIC REPUBLIC OF PAKISTAN
National Identity Card
Name
Saeed Ahmad
Father Name
Nazir Ahmad
Gender
M
Country of Stay
Pakistan
Identity Number
33104-9488783-3
Date of Birth
01.02.1984
Date of Issue
22.04.2019
Date of Expiry
22.04.2029
Holder's Signature

Witness -1


حکومت پاکستان
قومی شناختی کارڈ
13302-9281283-7
نام: مظہر حسین شاہ
جنس: مرد
والد کا نام: مطاش شاہ
شناختی علامت: کوئی نہیں
تاریخ پیدائش: 15/03/1985
عثمان یوسف مبین
دستخط رجسٹرار جنرل
دستخط حامل کارڈ

Witness -2

Proponent

PAKISTAN National Identity Card

ISLAMIC REPUBLIC OF PAKISTAN

Name
Yousaf Kamran Khan

یوسف کامران خان

Father Name
Kamran Khan

کامران خان

Gender	Country of Stay
M	Pakistan

Identity Number	Date of Birth
35201-2109195-7	01.06.1985

Date of Issue	Date of Expiry
24.05.2021	24.05.2031

75152

Holder's Signature

35201-2109195-7 موجودہ پتہ: مکان نمبر 5، محلہ برج کالونی، لاہور کینٹ، ضلع لاہور

مستقل پتہ: مکان نمبر 5، محلہ برج کالونی، لاہور کینٹ، ضلع لاہور

108461496237
270-85-396029

Registrar General of Pakistan

گمشدہ کارڈ ملنے پر قریبی لیٹر بکس میں ڈال دیں

SECURITIES AND EXCHANGE COMMISSION OF PAKISTAN

Business Centre at Head Office Islamabad

CERTIFICATE OF INCORPORATION

[Under section 16 of the Companies Act, 2017 (XIX of 2017)]

Corporate Unique Identification No. 0302721

I hereby certify that **HIMALAYA CEMENT (PRIVATE) LIMITED** is this day incorporated under the Companies Act, 2017 (XIX of 2017) and that the company is **Limited by shares.**

Given at **Islamabad** this **Twenty Ninth** day of **July**, Two **Thousand** and **Twenty Five**

SEAL OF REGISTRAR OF COMPANIES
SECP

https://leap.secp.gov.pk/#/verify-company-info/0302721

This is an electronically generated document and does not require a physical signature

Disclaimer: This certificate of incorporation is not a permission to accept deposits from the general public by offering fake jobs/investment packages and return thereon, indulge in leasing/ financing of vehicles and household products etc., MLM, Pyramid and Ponzi Schemes, Lottery Business, trading in forex and virtual currencies or any other unlawful business activities

Annexure – E

Lease Document

Government of the Punjab
DIRECTORATE GENERAL MINES & MINERALS, PUNJAB
Poonch House Multan Road, Lahore

APPLICATION FORM
Large Scale Mining

APPLICATION BY: Himalaya Cement (Private) Limited

A. PARTICULARS OF THE APPLICANT:

1) Application for Limestone & Arg Clay (Group of Minerals) of Exploration License under Rule 24 of the Punjab Mining Concession Rules, 2002

a) If the application is by individual:

- Name: _____
- Nationality: _____
- Date of Birth: _____
- Residential Address: _____

_____

- Postal Address: _____

_____

- Phone: _____
- Email: _____

Not Applicable

b) If the application is by firm:

- Name of the Company: _____
- Address: _____

_____

- Postal Address: _____

_____

Not Applicable

- Detail of Shareholding:

Sr. #	Name of Partners	CNIC	Nationality	Share Holding (%)

c) If the application is by Private / Public Limited Company or if the application is by a company incorporated outside Pakistan, state full particulars of the Company to be incorporated in Pakistan.

- Name of the Company: Himalaya Cement (Private) Limited
- Postal Address: House No. 170, Wireless Compound, Tufail Road, Cantt. Lahore.
- Nature of Business: Manufacturing of cement
- Paid up Capital: 1,000,000/-
- Authorized Capital: 10,000,000/-
- Net Equity: _____
- Detail of Share Holding (having share more than 5%)

Sr. #	Name of Director	CNIC	Nationality	Share Holding	Shared Capital
1	Kamran Khan	3520155643917	Pakistani	500000	
2	Yousaf Kamran Khan	3520121091957	Pakistani	250000	
	Qasim Khan	3520118487965	Pakistani	250000	

d) Particulars of the representative of the company for correspondence with the department

- Name: Yousaf Khan

- Designation: Director
- Email Address: _____
- Phone No: 0300-4004036
- Specimen Signature: (a) _____, (b) _____

c) Payment Detail

Purpose of Fee: Application fee for exploration license

Amount (Rs.): 100,000/-

Treasury Challan No: _____

Date: 02.09.2025

Treasury/Bank: National Bank, Pakistan

B. PARTICULARS OF THE APPLIED FOR AREA:

a) Mineral for which Mining Lease / Exploration License is required: Limestone & Arg. Clay

b) Type of Mineral Concession: Exploration License

c) Proposed Industrial Unit: Cement Plant

- Proposed Production Capacity: 10000TPD
- Estimated Cost: 30 billion
- End Products: Clinker / Cement

d) Survey Coordinates of the area:

Points	Easting (Meter)	Northing (Meter)
A.	3167944	936011.5
B.	3167942	934785.1
C.	3168916	933906.7
D.	3168930	932901.8
E.	3165653	932870.9
F.	3165265	932446.3
G.	3164609	931082.7
H.	3163783	930957
I.	3162903	930077.3
J.	3161081	929944.8
K.	3161236	934584.8
L.	3164534.02	934537.02

M.	3165769.88	934844.48
N.	3166205.88	935503.1
O.		

f) Total Applied for Area: 5796.91 Acres, 27.45 Square Kilometers

g) Location: Katha Sagral

h) District: Khushab

i) Topographic Sheet No. 43/D-6

j) Detail (s) of Already held Mining Concession under Large Scale Mining:

Sr. No.	Lease / License ID	Date of Grant	Date of Expiry

k) Documents to be annexed by the applicant

Type of Documents	Yes	No	Page #
▪ Sketch Plan of Applied for area (15 copied duly signed by applicant)	✓		
▪ Copy of CNIC(s) in case of individual, firm (all partners) and company (all directors)	✓		
▪ Original receipted copy of treasury challan	✓		
▪ Certificate of ownership of immoveable property issued by the competent authority showing the particulars and value of the property		NA	
▪ Copy of partnership deed registered with the Registrar of Firms and Registration Certificate (In case of Firm)		NA	
▪ Bank Statements (03 years)		NA	

▪ Copy of Memorandum and Article of Association (In case of Company)	✓		
▪ Registration Certificate with Security Exchange Commission of Pakistan and list of shareholders (In case of Company)	✓		
▪ Certificate of listing of company in Stock Exchange of Pakistan (In case of Public Limited Company)		NA	
▪ Income Tax Return (Latest)		NA	
▪ Audited Financial Statements (for last 03 years)		NA	
▪ Certificate showing that applicant is not blacklisted by any Govt. Department	✓		
▪ Affidavit from assignee on the Stamp paper (In case of assignment)		NA	
▪ Feasibility Report	✓		
▪ Geological Map o 1: 50,000 in case of exploration license o 1:20,000 along with three (03) cross section in case of mining lease	✓		
▪ Topographic Map at scale of 1:50,000	✓		
▪ Proposed Environmental Management Plan [Draft Initial Environmental Examination (IEE)/ Environmental Impact Assessment (EIA)]	✓		
▪ Detail of Technical Experts engaged along with their profiles		NA	
▪ Projects in hands and Past Experience of the Company along with proof (If any)		NA	
▪ Base Business Case of the Project		NA	

**All documents shall be annexed and attested by quarters concerned*

To be used in case of assignment of mining concession

Signature (s) of Assignor
Stamp and Thumb impression

Signature (s) of Assignee
Stamp and thumb impression

Both parties have signed & give the thumb

Impression(s) in presence of : _____

Signature of the Officer: _____

I/We hereby declare that all the foregoing particulars are correct. I/We hereby solemnly declare in the event of the Licensing Authority granting me/us the required license/lease. That I/We will abstain activity whatsoever affecting the

sovereignty of security of Pakistan or such as may be tantamount to interference in its internal affairs and that I/We will eschew espionage. I/We further undertake that in case any information given in the application found in-correct, the Licensing Authority shall have right to reject the Application forthwith. In the event of any violation of above undertaking by me/us the Licensing Authority shall have the right to cancel the license/lease. Provided that any dispute as to whether any of my/our activities can considered as a violation of this undertaking shall be subject to appeal in accordance with Rule 185 of the Punjab Mining Concession Rules, 2002 and the appropriate in the allotment letter.

HIMALAYA MANAGEMENT (PRIVATE) LIMITED Director

Signature(s) of Applicant(s): _____

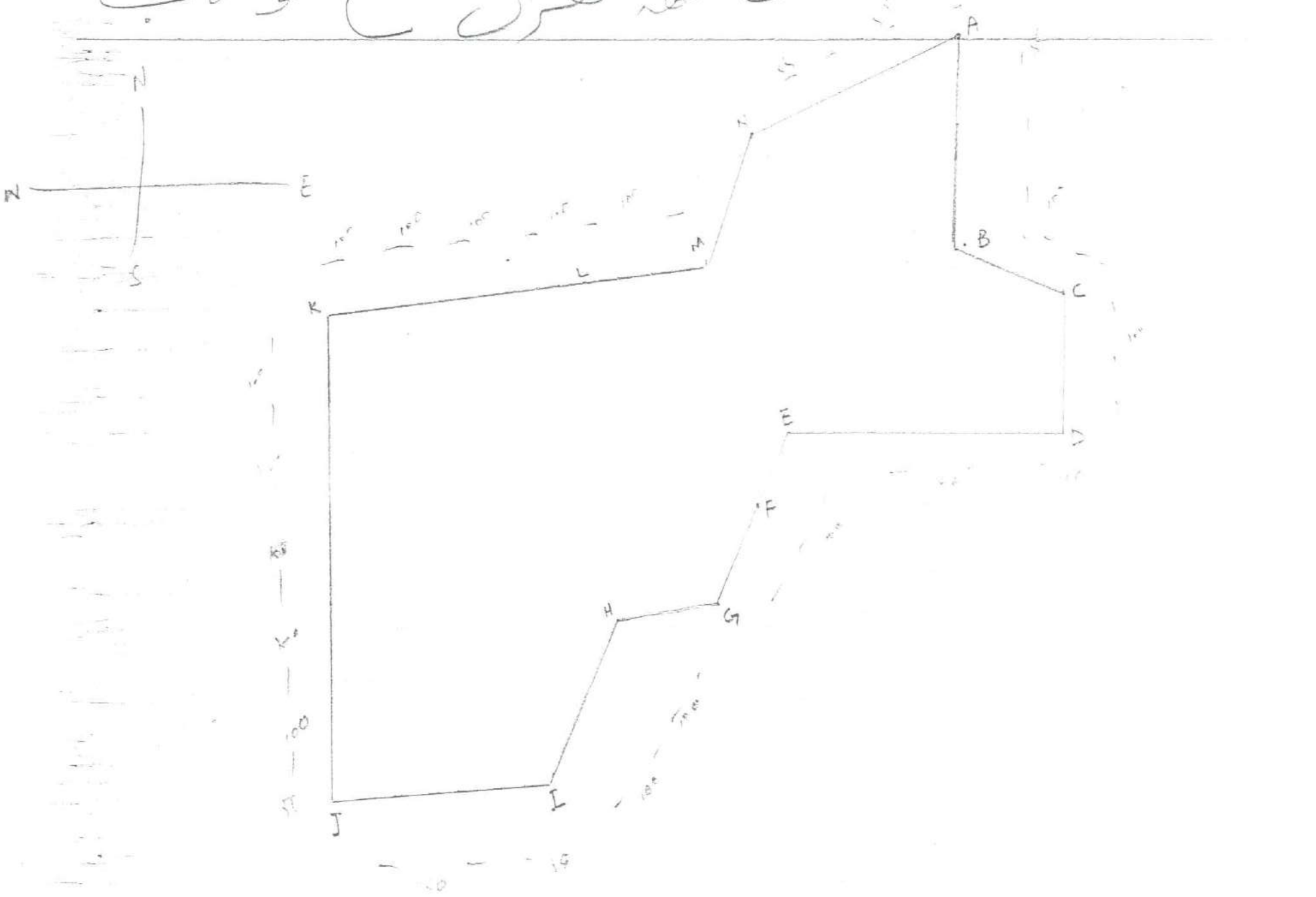
Stamp & thumb impression(s): _____

Date: _____

Annexure – G

Aks Shajra

عکس شجرۂ کشوار کہ وضع کنندہ سنگھرال ضلع حوشاب



Annexure – H

Wastewater Document

HIMALAYA CEMENT (PVT) LIMITED

DECLARATION

I, **Mr. Yousaf Khan** R/o **House no.05, Muhallah Burj Colony, Lahore Cantt, District Lahore**, proponent of the **Establishment of limestone and clay mining site for Cement Plant by M/S Himalaya Cement Private Limited** located at **Katha Sagral District Khushab**, do hereby solemnly affirm and declare that;

The volume of wastewater generated from our operations is negligible and does not contain any hazardous or industrial effluents. The generated wastewater is appropriately diverted to our own nearby farmland, where it is utilized for irrigation purposes in a controlled and beneficial manner. This practice is undertaken with due regard to environmental protection requirements and ensures that no untreated discharge is released into natural drains, watercourses, or surrounding ecosystems.

It is further stated that this undertaking is submitted to fulfill the requirement of the competent authority for environmental approval purposes.

Regards:
Yousaf Khan
CNIC: 35201-2109195-7
Proponent

Factory: Mangowal, District Khushab
Head Office: 170 Wireless Compound, Tufail Road, Lahore Cantt, 0300-8453111
yousafkkhan@gmail.com, qasim.khan111111@gmail.com

Annexure – H

Stakeholders' participation Performa

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Saqlain

Residence: Mohalla Khokharan, Khushab

Gender: [✓] M [ ] F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	✓	☐	☐	☐
Will the project increase the importance of the area?	☐	✓	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	✓	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☐	✓
Level of satisfaction?	☐	☐	✓	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Dilawar

Residence: Mohalla Chohan Sagral, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☐	☑
Level of satisfaction?	☑	☐	☐	☐	☐

Signature of Interviewer Dilawar

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Maisam

Residence: Mohalla near canal bank, khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Basit

Residence: Mohalla behind Primary School, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer Basit

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Naveed

Residence: mohalla beside graveyard, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Javaid

Residence: Mohall towards Botala side, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Mehdi

Residence: Mohalla near the old mosque, Ichushab

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer 

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Muhammad Raza

Residence: Mohalla Near Bus Stop, Ichushab

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☐	☑	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Maham

Residence: Near the Village of Botala, Khushab

Gender: M ☐ F ☑

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☑	☐	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Sara Akmal

Residence: Adhi kot area, Khushab

Gender: ☐ M ☑ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Hassan Askari

Residence: Mohalla by the canal Bridge, Khushab

Gender: ☑ M ☐ F

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Haris

Residence: mohalla besides old well, Khushab

Gender: ☑ M ☐ F

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Hamza

Residence: mohalla Chohan, khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Niamat

Residence: Mohalla Malikaan

Gender: ☑ M ☐ F

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☐	☑	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Huzaifa mehboob

Residence: Near Canal Banks, Khushab

Gender: ☑ M ☐ F

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☐	☑
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Rameez Iqbal

Residence: Mohalla Nageen, Khushab

Gender: ☑ M ☐ F

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☑	☐	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Ahmad Waseem

Residence: Near mohalla Syedan, khushab

Gender: ☑ M ☐ F

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer A.A.

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Mateen Kamran

Residence: Mohalla at the entry point of Sagral, Khushab

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?.	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Junaid

Residence: mohalla behind market area, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Afzal

Residence: Mohalla Gujjaran, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Zeshan

Residence: Mohalla Sheikhaan, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Areeba Arshad

Residence: Near Joharabad road, Khushab

Gender: M ☐ F ☑

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☐	☑	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☐	☐	☑

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Asif Ali

Residence: close to kacha track, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer Ali

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Jawad

Residence: Mohalla close to Katha Sagral, Khushab

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: mohsin

Residence: Canal passing near Sagral side

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☑	☐	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Sohail

Residence: Katha Sagral towards Johrabad, Khushab

Gender: ☑ M ☐ F

Qualification:

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☑	☐	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Asma Khatoon

Residence: Mohalla Rizvia, Khushab

Gender: ☐ M ☑ F

Qualification:

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Noman

Residence: Botala and Sagral, Khushab

Gender: ☑ M ☐ F

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Sadia Feroze

Residence: Mohalla Hashmi, Khushab

Gender: M ☐ F ☑

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☐	☑	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Sheraz

Residence: Sagral and Adhi Kot, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Farwah Shahid

Residence: Mohalla Noorani, Khushab

Gender: M ☐ F ☑

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☐	☑	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☑	☐	☐	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer Farwah

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Kashif

Residence: Khushab-Sagral link road

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☑	☐	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Mateen Kamran

Residence: Sheikhu Village, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Kamran Anwar

Residence: mohalla Qadriya, khushab

Gender: ☑ M ☐ F

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☐	☑	☐

Signature of Interviewer Kamran

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Zahid Mehmood

Residence: Mohalla Farooqia, Ichushab

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Danish Irfan

Residence: mohalla Muhammadi, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Sohail Anwar

Residence: House No. 112, mohalla Haider, Dhok mehrwal

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☑	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Adeel Riaz

Residence: Mohalla Gulzar, Khushab

Gender: ☑ M ☐ F

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer A. J.

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Mehwish Altaf

Residence: Mohalla Hanfiaj Khushab

Gender: M ☐ F ☑

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Adnan Khalil

Residence: Mohalla Rehmania, Khushab

Gender: ☑ M ☐ F

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☐	☐	☑	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Imran Tariq

Residence: Mohalla Naqshbandi, Khushab

Gender: ☑ M ☐ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☐	☐	☑	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☑	☐	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Arslan Javed

Residence: Mohalla Husainabad, Khushab

Gender: ☑ M ☐ F

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Waqar Ahmad

Residence: Mohalla Shamsia, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Faisal Abbas

Residence: Mohalla Ghausia, Khushab

Gender: ☑ M ☐ F

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☑	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Noman Ashraf

Residence: mohalla Rehmat, Khushab

Gender: [✓] M [ ] F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☐	☐	☑	☐
Will the project help to improve the living standards of the area?	☐	☐	☐	☑	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☐	☑	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Saba mehmood

Residence: mohalla Rehmania, Khushab

Gender: M ☐ F ☑

Qualification: matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☐	☑	☐
Will the project affect the environment of the area?	☐	☐	☐	☐	☑
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Rubina Yousaf

Residence: Mohalla Siddique, Khushab

Gender: M ☐ F ☑

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☐	☑	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Amna Saleem

Residence: mohalla Shamsia, Khushab

Gender: ☐ M ☑ F

Qualification: Intermediate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Salma Khan

Residence: Mohalla Noorani, Khushab

Gender: M ☐ F ☑

Qualification: Graduate

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☑	☐	☐	☐	☐
Will the project increase the importance of the area?	☑	☐	☐	☐	☐
Will the project help to improve the living standards of the area?	☑	☐	☐	☐	☐
Will the project affect the environment of the area?	☐	☐	☐	☑	☐
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer

Public Consultation/ Stakeholder Participation Regarding EIA

"Establishment of Limestone and Clay Mining site for new Cement Plant"

M/S Himalaya Cement (Private) Limited

Located near Katha Sagral, District Khushab

Name: Hina Rauf

Residence: Mohalla Chisti, Khushab

Gender: M ☐ F ☑

Qualification: Matric

REMARKS

	Strongly agree	Agree	No comments	Disagree	Strongly disagree
Are you in favor of the proposed construction?	☐	☑	☐	☐	☐
Will the project increase the importance of the area?	☐	☑	☐	☐	☐
Will the project help to improve the living standards of the area?	☐	☐	☐	☑	☐
Will the project affect the environment of the area?	☐	☐	☐	☐	☑
Level of satisfaction?	☐	☑	☐	☐	☐

Signature of Interviewer Hina