

**PROPOSED SILICA SAND PROCESSING OUT OF THE TENEMENT AREA, LOT 3F  
MEASURING 2.023 HA (5.0 ACRES) AT MUKIM SG. KARANG, KUANTAN DISTRICT,  
NEGERI PAHANG DM UNDER LMM (MINERAL PROCESSING LICENSE).**

## EXECUTIVE SUMMARY

The proposed project site is located in Mukim Sg Karang, Kuantan District, Pahang Darul Makmur. The project aims to process silica into clean quality grade silica ready for export following the increasing demand from China. The GPS coordinates of the proposed project site are **4° 0'26.24"N ,103°23'28.32"E** The project site can be accessed via Gebeng Bypass. The current site is zoned under "Industrial Zone Land Use", as verified by the PLANMalaysia@Pahang.



### PROJECT PROPONENT

## **Kishobor International Sdn Bhd**

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### EIA CONSULTANT



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## PROJECT DESCRIPTION



**Mineral Type :** Silica



**Method Involved :** Only Processing



**Lifespan :** 15 years



**Location:**

4° 0'26.24"N ,103°23'28.32"E

- The project site is located next to the existing industrial estate, Jinneng Resources Sdn Bhd.

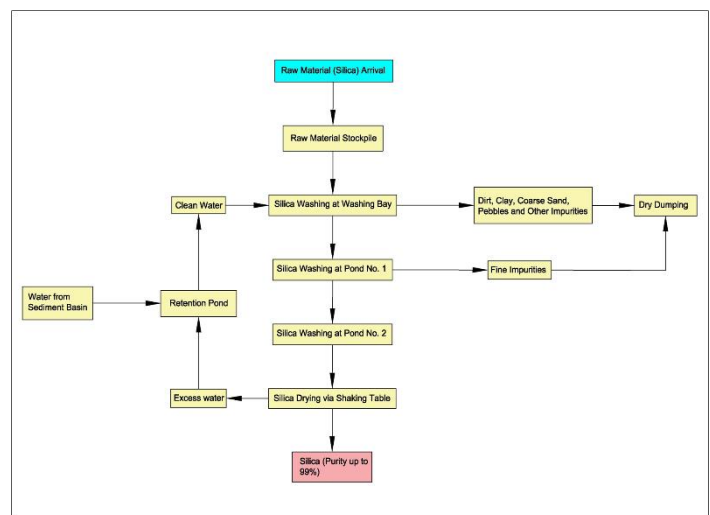


**Project Activities :**  
**Operating Stages**

- Processing operations
- Hoarding
- Dry dumping/tailings management
- Sales
- Road maintenance
- Maintenance of sedimentation ponds
- Waste management

**Abandonment rating**

- Progressive recovery
- Final restoration and reclamation



**Process Flow Chart**

## REQUIREMENTS FOR THE PROJECT



High demand from China

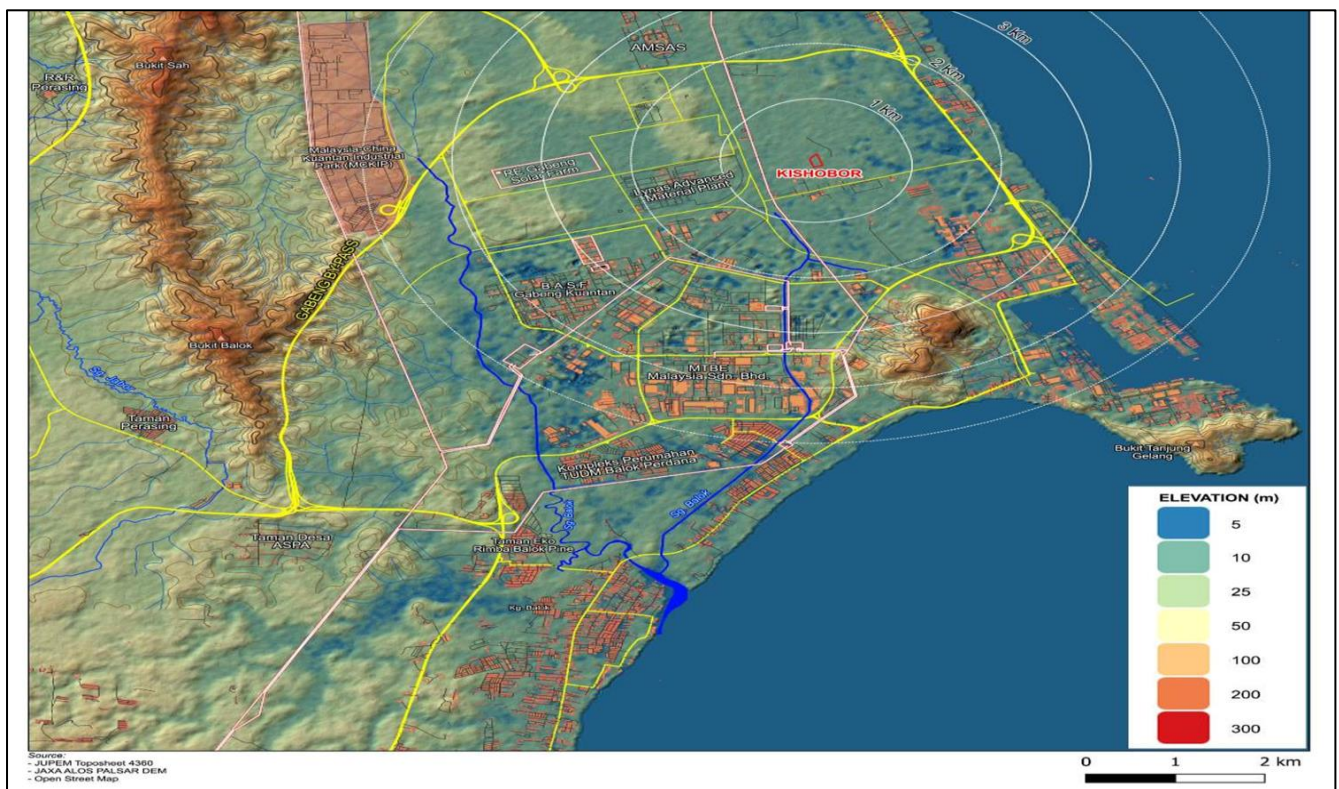
# PROJECT TIMELINE

Phase	Activity	Month 1 April	Month 2 May	Month 3 June	Month 4 July	Month 5 August	Month 6 Sept	Month 7 Oct	Month 8 Nov	Month 9 Dec	Month 10 Jan	Month 11 Feb	Month 12 Mar
Pre-Development	Environmental Impact Assessment (EIA)	X	X										
	Operation Mining Scheme	X	X										
	Land Survey & Geotechnical Investigation	X	X										
	Regulatory Approvals & Permits	X	X										
Site Preparation	Site Clearance		X										
	Earthwork & Land Grading		X										
	Access Road Construction		X	X									
	Drainage & Erosion Control Measures			X									
Mining & Processing Setup	Machinery & Equipment Procurement			X									
	Machinery Installation & Commissioning			X									
	Infrastructure Setup			X									
Processing Preparation	Preparation for Processing Operations				X								
	Silica Washing & Purification System Setup				X								
	Quality Control & Laboratory Setup				X								
Operational Phase	Silica Washing & Processing					X	X	X	X	X	X	X	X
	Stockpiling & Sales					X	X	X	X	X	X	X	X
	Water & Waste Management					X	X	X	X	X	X	X	X
	Dust & Air Pollution Control					X	X	X	X	X	X	X	X
Closure & Rehabilitation	Progressive Rehabilitation		X	X	X	X	X	X	X	X	X	X	X
	Final Rehabilitation & Site Closure												
	Silt Trap Closure												
	Sediment Basin Closure												
	Post-Closure Environmental Monitoring												

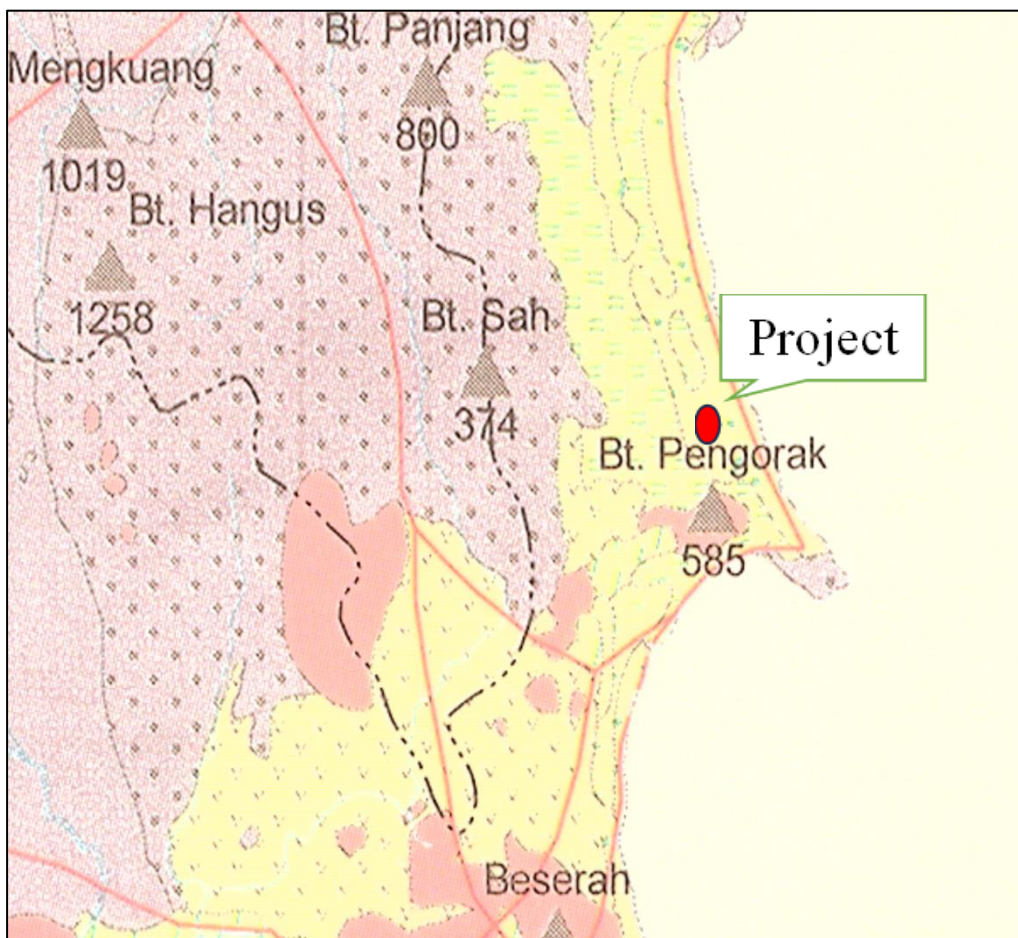
## PHYSICAL ENVIRONMENT

### Topographic

The topography of the proposed project site is relatively flat with a height of 10m to 14 m. The slope class is in the range of 0° - 5°



## Geology



**Quarternary :**  
It is marine and continental deposits: silt, sandy peat with small pebbles (Early Pleistocene basalt in the Kuantan area).

## Land



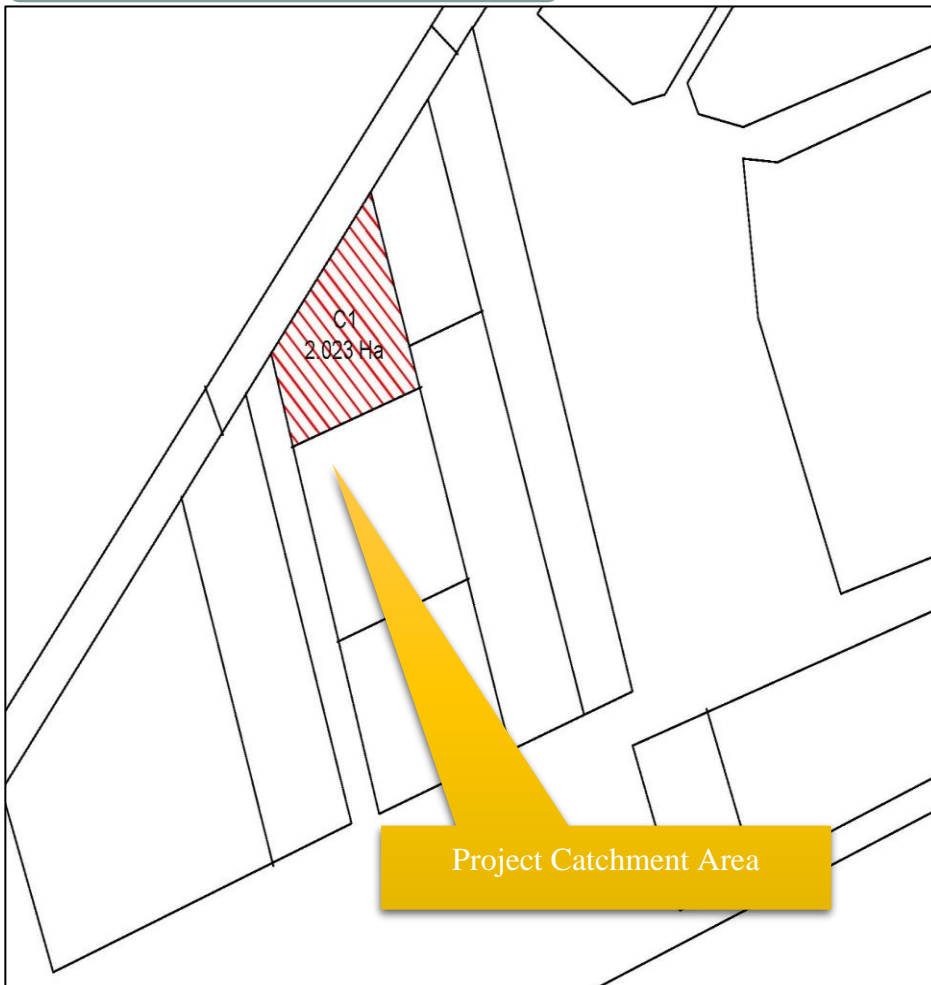
**Soil Series:**  
the land series is Rudua - Rusila

## Hydrological



- There is a river system which is **Sungai Balok**.
- The Balok River flows south and both flow into the South China Sea.
- Another possibility is that the river system runoff may end up in the Balok River through a channel that flows into the South China Sea near Balok Village.

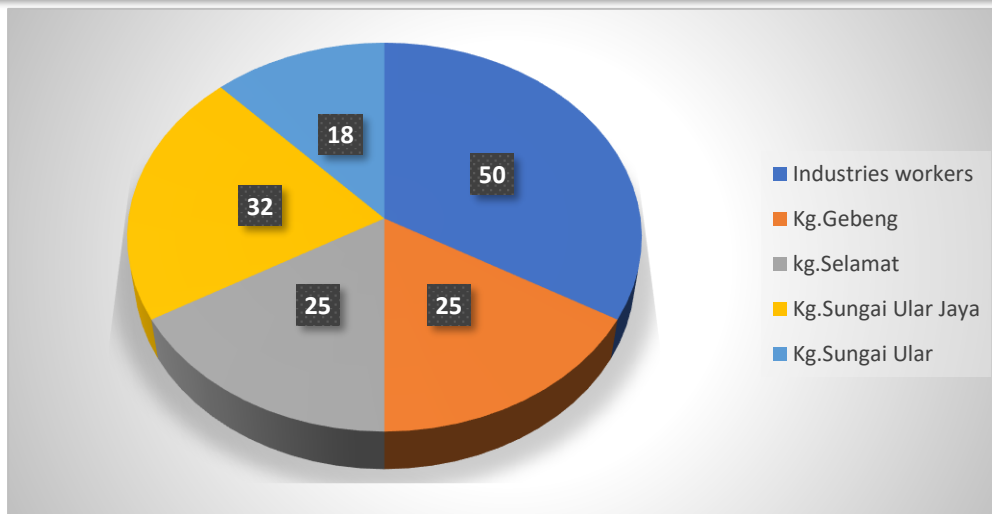
## Catchment Area



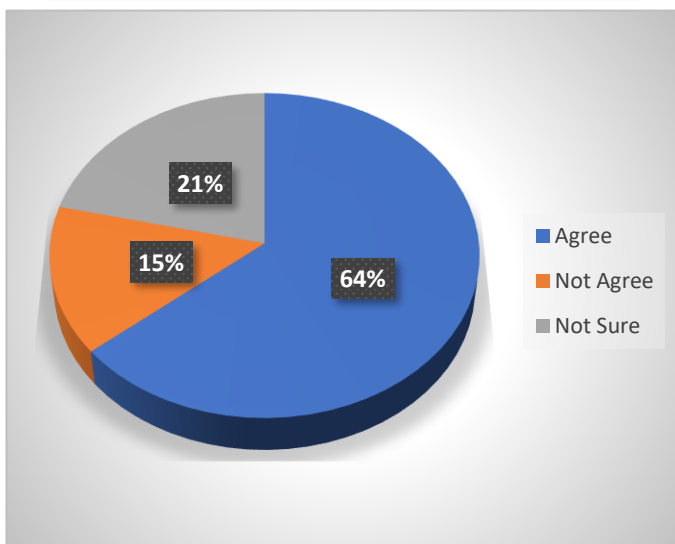
- the shaded area (C1) as shown in the Figure, covers **2.023** hectares, representing the area from which the surface runoff flows.
- The flow continues along the drain of the earth until it flows into the Balok River (Balok River).
- with the delineation highlighting natural flow paths that are affected by soil gradients and drainage infrastructure.

# SOCIO-ECONOMY

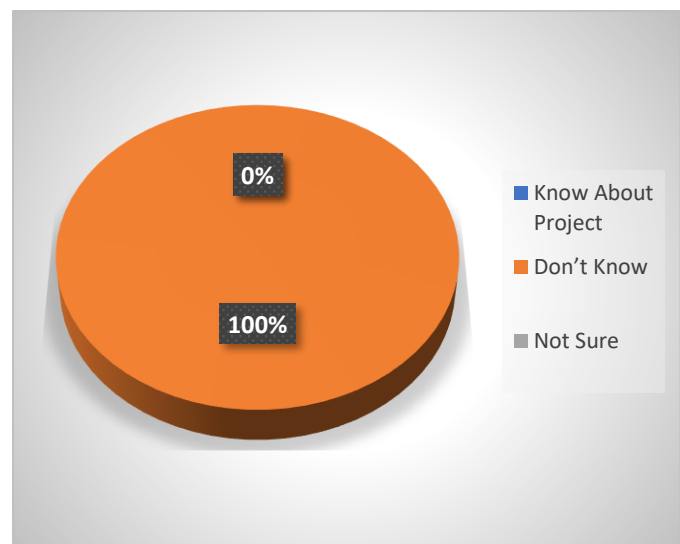
## Respondent Distribution



## Public Acceptance



## Project Awareness



## Reasons for Agreeing and Disagreeing with a Project Proposal

### Agree

- In the industrial zone.
- The proposed project will bring more benefits and advantages in the future Economic resources can be exported abroad.
- the progress and development of the local economy as well as for the state.

### Disagree

- An increase in environmental pollution will occur, especially water pollution that flows into the drainage system and directly into the estuary
- Deterioration of quality of life, disturbance of tranquility, air pollution, entry and exit of lorry vehicles, and noise.

## BASIC QUALITY OF THE ENVIRONMENT

### Water Quality



#### 4 Monitoring Location

- Parameter limits set under Standard B in the Fifth Schedule and Seventh Schedule in the Environmental Quality (Industrial Effluents) Regulations 2009.
- The results are below the permissible limits except W1 (COD, DO and Fe) for W2 (DO, Mn, and Fe), W3 (DO, Mn, Fe and AN) and W4 (DO, Mn, Fe and AN)
- The WQI is in the range of 75.57 to 82.60 and the river's status is "slightly polluted to Clean".

### Sound Quality



#### 3 Monitoring Location

- Daytime: 65 dBA
- Night Time : 55 dBA
- The result is below the permissible limit. Except for N2 which exceeded the near-time limit by 3.8% i.e. (57.2 > 55)

## Air quality



### 3 Monitoring Location

- The results are compared to the Malaysian Ambient Air Quality Standard.
- All comply with the limits allowed.

Parameter	Results
PM10, $\mu\text{g}/\text{m}^3$	24-36
PM2.5, $\mu\text{g}/\text{m}^3$	10-14
SO <sub>2</sub> , $\mu\text{g}/\text{m}^3$	< 5
NO <sub>2</sub> , $\mu\text{g}/\text{m}^3$	<0.5
CO, $\text{mg}/\text{m}^3$	0.8
O <sub>3</sub> , $\mu\text{g}/\text{m}^3$	< 5

## POTENTIAL IMPACT : AIR QUALITY

**ACTIVITIES** : Site Clearance, Loosening of Excess Load Stock, Construction of Driveways, Movement of Vehicles, Site Facility Removal, Leveling, Grading and Addition of Topsoil

### IMPACT

- Dust generation and dispersion.
- Sensitive receptors are more susceptible to negative health effects.

### MITIGATION MEASURES

- Close the shredder and screen housing.
- Order existing plants and trees.
- Cleaned plants and tree parts (biomass) should be stored.
- There is no open combustion. .
- Set truck speed limits.
- A water browsing truck should be provided.
- The drop height of the silica should be as minimal as possible.
- Provision of washing troughs.
- A visual inspection should be carried out.

## POTENTIAL IMPACT : NOISE POLLUTION

**ACTIVITIES** : Vehicle Movement, Processing Plant, Site Demolition Facility and Traffic Noise

**SENSITIVE RECEPTORS** : Maritime Academy

### IMPACT

- Hearing impacts & can cause mental disorders.
- Disturbing the tranquility of the local area and nearby residents.

### MITIGATION MEASURES

- Maintain a vegetation belt as a sound barrier.
- Regular inspection and maintenance of machinery and vehicles.
- Constant monitoring of the noise level.
- Comply with OSHA (90 dBA exposure for 8 hours).
- Set the truck's speed limit to 15 km/h.
- PPE will be provided for workers.

## POTENTIAL IMPACT : WATER QUALITY

**ACTIVITIES** : Site Cleaning, Excess Load Stock, Cover Soil Erosion, AMD Formation, Soil Stability, Washing Plant, Schedule Waste Removal and Site Leveling.

### IMPACT

- Water vision will decrease.
- High level of dissolved oxygen.

- Affects human health & aesthetic appearance.

- Contaminated runs can encroach on the surrounding drainage system.

### MITIGATION MEASURES

- Stop operations during periods of heavy rain
- Handle Scheduled Waste Properly
- Minimize exposed areas
- Continuous monitoring of water quality.

- Minimize exposed areas

- Provide relevant BMPs such as soil drains, sediment basins.
- Periodic maintenance on BMP
- Minimize exposed areas.
- Stabilizes the lost soil structure.
- Buffer zones will be established around the project site.

## POTENTIAL IMPACT: SOIL EROSION & SEDIMENTATION

**ACTIVITIES** : Silica extraction, Side Bank of Earth Drain & Sediment Basin, Dry Dumping, Tailings Waste Storage and Exposed Earth Area.

### IMPACT

- Water quality & deterioration of aesthetic value.

- Soil erosion & sedimentation

### MITIGATION MEASURES

- Periodic maintenance of BMP and tailings ponds every 2 months.
  - Cross drains, sumps and side ditches are recommended.
  - Sediment basin outlet protection is proposed.
  - Installation of bush dams.
- 
- Use cut biomass (branches, leaves and roots) as a protective barrier.
  - Use existing roads. rebuild only to the extent necessary to provide adequate drainage.

## POTENTIAL IMPACT: SOLID & SCHEDULED WASTE MANAGEMENT

**ACTIVITY** : Illegal Management of Solid and Hazardous Waste

### IMPACT

- Water degradation and pollution.

- Soil pollution.

- Fuel oil spill.

### MITIGATION MEASURES

- Project proponents must be fully responsible in the event of a scheduled waste leak into a nearby river.
- Fuel storage in landfills is located 30 meters from any body of water and is located on relatively flat ground.

- General solid waste should be stored in designated bins.
- Recycling and reuse of used materials is recommended.
- Scheduled wastes shall be labelled and stored in accordance with **the ENVIRONMENTAL QUALITY (SCHEDULED WASTES) REGULATIONS 2005**.
- All containers, full or empty, are handled with care.

- The storage area should have a bund to provide a containment capacity of 110% of the largest drum volume.
- Warning signs should be placed.
- The transportation and storage of fuel and lubricants is in a properly constructed container with an approved design.
- Refueling activities are not carried out near water streams or drainage channels on site.

## POTENTIAL IMPACT : TRAFFIC & TRANSPORTATION

**ACTIVITY** : Transportation of Silica, transporter/excavation materials to the Processing Plant

### IMPACT

- Traffic congestion
- Wildlife street killings

### MITIGATION MEASURES

- Avoid transportation during peak hours
- Install clear speed limits and warning signs
- Providing a paved driveway
- Transporting the vehicle should not be overloaded.

- Spread of dirt on public roads

- "Washing through" should be provided
- Road spraying is mainly during the draft season.

## POTENTIAL IMPACT : SOCIO-ECONOMY

**ACTIVITY** : Silica Transport and Plant Cleaning

### IMPACT

- Jobs

### MITIGATION MEASURES

- Employing local workers as part of the workforce
- Local contractors and subcontractors to be appointed

- Public safety & health

- Keeping and keeping records of any transport accidents for further preventive measures planning
- Controllers should be sensitive to nearby stakeholders.
- Install clear speed limits and warning signs on the side of nearby public roads.

- Affects cultural and aesthetic

- Visually beautify with appropriate landscaping and tree replanting.

- Dust and noise interference

- Water surfers and washing troughs should be provided