

EXECUTIVE SUMMARY

for
**Proposed Expansion of Silica Sand Mining
and Washing with Production
Capacity from 3,00,000 Ton per Annum (TPA)
to 4,50,742 TPA and Extension of Mine Lease Period
Project Category 1 (a) 'B'
F.No. SIA/MH/MIN/64759/2021**



At

**Village: Kasarde, Tehsil: Kankavli,
District: Sindhudurg, Maharashtra**

Document No. : OA/EIA/2022/02/Draft/02

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Maharashtra Minerals Corporation Limited (MMCL)	Environmental Impact Assessment (EIA) & Environmental Management Plan (EMP) for Proposed Expansion of Silica Sand Mining and Washing with Production Capacity from 3,00,000 Tons per Annum (TPA) to 4,50,742 TPA and Extension of Mine Lease Period at Village: Kasarde, Tehsil: Kankavli, District: Sindhudurg, Maharashtra
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EXECUTIVE SUMMARY

1. INTRODUCTION

Maharashtra Minerals Corporation Limited (MMCL) was promoted in 1961 and is engaged in the business of mining, mineral processing, and sales of mineral products. This company was first joint venture enterprise in India where 26% capital was held by Government of Maharashtra & the balance 74% by promoter family, private enterprises, and some esteemed industrialists' houses. Government of Maharashtra still holds shares in the Company (11%).

The Corporation was founded & established by Shri GB (Bhausahab) Newalkar, a renowned Freedom fighter & Visionary, who transformed small scale industry sector in India. Company has leases in four minerals, namely Silica Sand, Kyanite, Fluorspar & Bauxite.

One of these leases, at the village Kasarde, is located at about 25 km North-East of Kankavali town, which is Tehsil Headquarter on Mumbai-Goa highway NH 66 & is known as Kasarde Silica Sand Mine. This mine approachable by road going to village Phonda.

Lease area is divided into two parts. A Major Portion (Part I) has Survey Nos. 16, 115 (New 110), 117 (New 112) and 118 P (New 113) of Uttar Dakshin Gaothan village admeasuring 30.77 Ha, and a Minor Portion (Part II) on Survey No. 737 (New 7) of Awaleshwar village admeasuring area of 5.77 Ha. The distance between Part I and Part II is approx. 277 meters. The total lease is 36.54 ha.

2. PROJECT DESCRIPTION

The nature of the project is Proposed Expansion of Silica Sand Mining and Washing with Production Capacity from 3,00,000 Tons per Annum (TPA) to 4,50,742 TPA and Extension of Mine Lease Period. Employment size for the project is envisaged as around 84 workers.

The cost of this proposed expansion project is estimated to be Rs. 381.60 Lakhs.

As per the Environmental Impact Assessment (EIA) Notification No. S.O.3977(E) Dated 14th August, 2018 the Proposed Expansion of Silica Sand Mining and Washing with

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Production Capacity from 3,00,000 Ton per Annum (TPA) to 4,50,742 TPA falls under “Category 1 (a) B” and requires Environmental Clearance (EC) from SEIAA / SEAC-1, Maharashtra before the commencement of any expansion activity.

Terms of Reference (ToR) issued to Lessee from the State Level Expert Appraisal Committee-1, Maharashtra on Day-3 during 207th Meeting of SEAC-1 from 11th October to 14th October, 2021. The mining lease area is private land, and it is an expansion project. The study area lies in Seismic Zone III.

Lease area is situated in between

Latitude	Longitude
16°26'51.6220"N	73°41'9.1460"E
16°26'8.8972"N	73°41'26.9273"E
16°26'25.1473"N	73°41'44.4327"E
16°26'48.5414"N	73°41'6.4766"E

Highest level of elevation of the project site is 118m MSL and lowest level is 100m MSL. The latest Mining Plan and Progressive Mine Closure Plan has been approved by Directorate of geology and Mining; Govt of Maharashtra vide Letter No. STC / 852 / Part File / 2016 / 722 dated 14th March, 2019. The area falls in Survey of India Toposheet No.47H/11 (E43T11) on 1:50,000 scale.

3. GRADE OF SILICA SAND OF THE OF THE MINE

SiO₂: 98%

Al₂O₃: 3%

FE₂O₃: 0.10%

Threshold value for Silica sand is 90% of SiO₂.

4. TOTAL GEOLOGICAL RESERVES

Total Mineral reserves are	:	38,30,288 tons
Proposed Production	:	4,50,000 tons/year
Life of Mine	:	8.51 yrs. say @ 9 yrs.
*(Source: Approved mining plan as on 1 April 2019, UNFC)		

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5. PROVED MINERAL RESERVES

Proved Mineral Reserve (111, UNFC) is 38,30,288 Ton and Feasible Mineral Resource (221, UNFC) is 9,65,580 Ton. (Source approved mining plan)

6. METHOD OF MINING

Mine is being operated by Semi-mechanized Open cast method. It is found during the course of working that recovery of sand is about 70% and bulk density is 1.5. Mining / processing losses are negligible. Sectional area method is used to calculate the in-situ ore reserves. (Source approved mining plan)

Six section lines (A- A` to F-F`) have been drawn through the potential area. Influence of each section line is 100m. A peripheral line joining the edges of the pits and the bore holes is considered for proved limit.

7. ULTIMATE PIT DEPTH

The Ultimate proposed depth of the pit / excavation depth is 62m RL as per data available. (Source approved mining plan)

8. PRODUCTION AND ASSOCIATED WASTE

The production for the period of 2019 till 2024 is given below;

Year	O/B waste + Ass. Waste tons	Production (in tonnes)	Ratio
2019-2020	156712+ 131508 = 288220	450188	1:0.64
2020-2021	26550 + 131508 = 158058	450742	1:0.35
2021-2022	64650 + 131517 = 196167	450342	1:0.44
2022-2023	36000 + 131526 = 167526	450711	1:0.37
2023-2024	27150 + 131504 = 158654	450311	1:0.35

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9. DESCRIPTION OF THE ENVIRONMENT

➤ Topography

Most of the area is low lying along the South Western boundary of the Western Ghat hill ranges except a few isolated hills. This entire alluvial plain tract contains paddy fields. The three major hills lying in the area strike in Northwest and Southeast direction. 2 small hilltops about 60 m height from the ground level are prominently exposing Kaladgi formations. They are called as Mahar Dongar and Wagh Dongar (local language used) hills. The most prominent and highest of all the hills is the Salwa hill which is also composed of Kaladgi formations. The Salwa hill covers extensive area and it is about 260 mts high from ground level.

Lease area is almost flat in nature. The bench mark of the area is 105m MSL. It is in the South Western portion of the lease area towards Kasarde co-op. society lease. The highest level is 115m MSL in the central part of the lease area, where as lowest level is 100m MSL towards nallah in Northern side and also towards Southern side. The difference between the top MSL and bottom MSL is 15m. The slope of the lease area is towards North East. There is a nallah is located in north eastern boundary of the lease area. It is seasonal in nature It flows from west to east in monsoon season and dries completely in summer season. Total two pits, are existed in the lease area.

➤ Meteorology

Micro-Meteorology at Site

Study Period - Post Monsoon Season (November to December, 2021)

Date	Temperature (°C)		Relative Humidity (%)		Wind at 08:30 hrs		Wind at 17:30 hrs	
	Max	Min	08:30	17:30	Direction	Speed (km/h)	Direction	Speed (km/h)
01.11.2021	34	26	76	68	SE	6	N	7
04.11.2021	34	25	74	57	CALM	0	NE	2
08.11.2021	32	24	81	58	E	2	W	6
11.11.2021	34	21	61	58	SE	7	N	7
15.11.2021	34	25	89	73	NE	2	NW	9

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18.11.2021	32	25	80	75	SE	6	S	2
22.11.2021	31	24	77	75	SE	4	NW	6
25.11.2021	33	25	72	65	SE	4	NW	4
01.12.2021	27	23	87	83	SE	11	CALM	0
04.12.2021	30	24	90	76	SE	6	W	7
08.12.2021	32	22	58	44	SW	11	CALM	0
11.12.2021	32	23	81	65	E	7	N	4
15.12.2021	31	22	88	70	CALM	0	N	11
18.12.2021	32	21	75	60	SE	11	N	6
22.12.2021	31	20	85	59	SE	4	NNW	7
25.12.2021	28	19	91	71	E	4	NNW	9

➤ Ambient Air Environment

Locations of AAQ Monitoring Stations (November, 2021 to December 2021)

Station	Sampling Location	Direction (Distance) from Plant Site	Direction (Distance) from Mine Site
A1	Project Site	-	0.0
A2	Village Devulkarwadi	East	0.42 km.
A3	Village Sidachiwadi	East	6.31 km.
A4	Village Talere	WNW	3.0 km.
A5	Village Ozaram	WSW	5.50 km
A6	Village Asalade	SW	6.0 km.
A7	Village Kokisare	NE	5.0 km.
A8	Village Gadmath	ESE	5.5 km.

The ambient air quality monitoring was done to assess the ambient air quality in one season. Monitoring was carried out at eight stations for the month of November 2021 to December 2021. As far as the gaseous pollutants SO₂ and NO_x are concerned, the CPCB limit of 80 g/m³ for residential and rural areas has never surpassed at any station. The SO₂ concentrations are in the range of 6.5 µg/m³ to 18.2 µg/m³ and the NO_x concentration in the range of 7.3 µg/m³ to 29.4 µg/m³ for all the 8 AAQM stations.

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➤ Noise Environment

Locations of Noise Monitoring Stations (November, 2021 to December 2021)

Station	Sampling Location	Direction from Site	Distance from MineSite
N1	Project Site	-	0.0 km
N2	Village Devulkarwadi	East	0.42 km.
N3	Village Sidachiwadi	East	6.31 km.
N4	Village Talere	WNW	3.0 km.
N5	Village Ozaram	WSW	5.50 km
N6	Village Asalade	SW	6.0 km.
N7	Village Kokisare	NE	5.0 km.
N8	Village Gadmath	ESE	5.5 km.

Ambient noise levels were measured at 8 locations around the proposed project site. Noise levels varied from 46.7 to 54.2 Leq dB(A) during day time and during night time noise levels ranged from 38.7 to 40.2 Leq dB(A). Thus, noise levels at all locations were observed to be within the prescribed limits. From the above study and interpretation, it can be concluded that noise levels in the study area are well within the prescribed limits as prescribed by the CPCB and State Pollution Control Board

➤ Water Environment

Locations of Ground Water Sampling Stations

Station	Sampling Location	Direction from Site	Distance from Mine Site
GW1	Village Kasarde	ESE	1.0 km
GW2	Village Jambhalnagar	NNE	0.5 km
GW3	Near Kasarde road Uttargavthan	WSW	1.54 km

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GW4	Anand Nagar	WSW	3.30 km
GW5	Village Devulkarwadi	E	0.42 km
GW6	Village Nandgaon	S	5.7 km

Ground Water Quality

The quality of ground water was studied by collecting 6 water samples from representative open dug wells and tube wells. Chemical analysis reveals that there is not much variation in chemical composition of water tapped from shallow open wells and from tube wells. The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500. Analysis results of ground water reveal the following:

1. pH varies from 6.48 to 8.02
2. Total hardness varies from 202 mg/l to 378 mg/l
3. Total Dissolved Solids varies from 330 mg/l to 771 mg/l.

All parameter values in ground water sources are well and within the permissible limits laid by Ministry of Health, Govt. of India, for potable water.

Locations of Surface Water Sampling Stations

Station	Sampling Location	Direction from Site	Distance from Mine Site
SW1	Mine Pit	-	-
SW2	Nadhawade dam	NNW	3.8km
SW3	Water body near Khambalwadi	NNE	8.40 km
SW4	Dam near Anand nagar	WSW	4.85 km
SW5	Piyali River	SE	3.0 km

Surface Water Quality

The quality of Surface Water was studied by collecting 5 water samples. pH varies from 6.48 to 8.02 Total hardness varies from 102 mg/l to 196 mg/l. Total Dissolved Solids varies from 162 mg/l to 330mg/l. All parameter values in surface water sources are well

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and within the permissible limits laid by Ministry of Health, Govt. of India, for potable water.

➤ **Soil Environment**

Locations of Soil Sampling Stations

Station	Sampling Location	Direction from Site	Distance from Mine Site
S1	Mine Site	-	--
S2	Mine Site	-	--
S3	Village Kasarde	SSE	0.91 km
S4	Village Uttargavthan	SSW	1.24 km
S5	Village Dhareshwar Near Dense Mix Jungle	NE	2.00 km
S6	Village Talere naka	W	2.65 km
S7	Nagasawantwadi	S	2.66 km
S8	Jambhalnagar Near Dense Mix Jungle	NW	0.50 km

Soil profile and quality was studied at 08 different locations. Augur method was used and samples were collected at 15 cm depth after removing the upper crust. Sample from each spot were well mixed with hand on a clean polythene sheet. About 1 kg of soil was retained after process of quartering.

Core Zone: Texture of soil is Clay Loam. Colour is dark Brown, Porosity 41.02 % to 42.15%, pH is 6.68 to 7.21. Amount of primary nutrients like Organic matter (0.33%-0.93%), the Total nitrogen (133 kg/ha - 378 kg/ha) is lower in range, the Total phosphorus (28.5 kg/ha -85.1 kg/ha) is in medium range and Total potassium (186.4 kg/ha - 355.8 kg/ha) is also lower in range, Primary nutrient profile shows that soil is low in fertility due to the availability of low amount of nitrogen, Potassium, and phosphorus.

Buffer Zone: The result shows that texture of soil is Clay loam. Colour is Brown to Dark Brown, pH ranges from 5.48 to 6.92 Amount of primary nutrients like Organic matter 1.17 % to 3.83 %, the total nitrogen 476 kg/ha to 996 kg/ha, the total phosphorus 50.6 kg/ha to kg/ha mg/kg and total potassium 345.3 kg/ha to 448.2 kg/ha is lower in range, Primary nutrient profile shows that soil is average in fertility due to the availability of low amount of nitrogen and available potassium and medium amount of available phosphorus.

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Land Use Pattern:

Resourcesat-2 satellite imagery has been used for development of Land use pattern map. Survey of India topo maps at 1:50,000 scale and ancillary data has been used as a reference data for preparation of land use and land cover map of 10 km radius study area. The Study area is dominated by Agricultural land (Crop + Fallow+ Plantation) which are covering 44.06% of total area. Wheat, Jowar is grown in rabi season and Rice, Sugarcane in kharif. Some horticulture and fruit orchard plants are presented in study area Piyali River is passing at 3.0 km in S direction from project site. Deciduous forests are presented in study area. Some other mining activities are running nearby project site. The project site has slight slope from North to South and has elevation between 94m to 105m at msl 11.

➤ **Biological Environment**

Core Zone

Floristic composition varies depending upon the site and its environmental features and it is one of the major characteristic features of any plant communities. The flora of the mine lease area dominated by Shrubs and Herbs vegetation consisted of approximately 16 species belonging to Shrubs and 15 species belonging to Herbs. Mainly 4 species of trees were seen in Core zone.

Buffer Zone

In the buffer zone of 10 Km there is no Reserve Forest found in study area. The dominant species are Aegle marmelos (Bel), Zizyphus jujuba (Ber), Acacia catechu (Khair) etc.

Agriculture: Agriculture is mainly raining fed. Rice and Nagali (a type of millet) are the principal foodcrop of the Sindhudurg district.

Fauna of Buffer Zone: The buffer zone comprises diversity of animals. Among mammals Mongoose (*Herpestes edwardsii*), *Macaca radiata* (Monkey), *Sus scrofa* (Wild Boar) are also reported to have been seen by nearby villagers in the Buffer Zone. Among Domesticated animals' cat, dog, cow, buffalo, dog etc are found. Among avifauna common birds like; Blue Rock pigeon (*Columba livia*), etc. are reported.

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Endangered and Threatened Species

Endangered and threatened animals of India have been listed in the Schedule I and Schedule II of the Wildlife (Protection) Act, 1972 (amended in 2002). There was no Schedule I species reported.

Eco-sensitive Zone

There is no Wildlife Sanctuary, National Park, or Biosphere Reserves in the Core as well as bufferzone.

➤ Socio-Economic Environment

The Socioeconomic study was conducted in the study area. It was found that 45 villages fall within the 10 km radius of mining site area. As per secondary data Census 2011, the population of buffer zone is 41858. The number of households found as 10692 inferring that there was an average 4 members per households.

The total number of literates within the study area is 30215 which are 72.18% of total population. Male literacy rate of the study area is 52.65 % and female literacy rate is 47.34%. The number of total workers in the study area is 17057 which is 40.74 % of total population. Total workers are further divided into main workers & marginal workers.

➤ Geology & Hydrogeology of the Area

The mining site and the surrounding area under inspection is located in the Western Coastal region of the Peninsular India. The Eastern side represents the Western slope of the Western Ghat escarpment and the Western region is towards, the coastline of Arabian Sea. This region displays moderate to high hill ranges with low scattered plains. They are highly dissected and are drained by number of rivers like; Gad, Karli and Terekhol, joining the Arabian Sea. The terrain in general shows a high degree of lateralization and about 3-4m thick zone of weathering and soil.

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The area falls under Zone III in seismic hazard zoning categorization of India and relatively seismologically stable. Geologically, the region comprises a North-Western most exposed part of the Dharwar craton.

Dug wells in the area show depth range of 7-14 meters which are mostly in the rock formations comprising of weathered and jointed basalts, laterites, and sandstones. In post-monsoon season static groundwater level observed in the area is ranging from 2.5 to 10 meters. Groundwater movement follows the topographic gradient and flow Westerly. The mine site and surrounding area fall under 'Safe' category.

10. ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

Water Environment	<p>Possible impacts due to contamination of water quality due to runoff of storm water and mine seepage.</p> <ul style="list-style-type: none"> • No effluent discharge from mine. • No toxic chemicals in mineral to contaminate water. • Mining shall not intersect ground water table therefore no negative effect on ground water table is envisaged.
Air Environment	<p>There shall be generation of dust due to point and non-point sources thus following measures shall be adopted:</p> <ul style="list-style-type: none"> • No mining is allowed during monsoon • Regular water sprinkling • Plantation of trees • Vehicles shall have valid PUC certificate
Noise Environment	<p>Ambient noise level in the core zone is likely to increase. To prevent noise pollution:</p> <ul style="list-style-type: none"> • Plantation shall be done along the periphery • Regular maintenance of movable vehicles shall be done to • reduce noise pollution.
Biological Environment	<p>In the core zone no ecologically diverse species were found. There will be no loss of flora and fauna.</p> <ul style="list-style-type: none"> • Trees shall be planted and mined out land reclamation shall be done. • Conservation plan for Sch -I species if found shall be prepared and duly approved from chief Wild life Warden.
Socio-Economic Environment:	<p>It is evident from social survey that population is mostly unemployed.</p> <ul style="list-style-type: none"> • The project will generate direct employment for 84 people and indirect employment for many more. • Regular medical examinations, schooling, better infrastructure etc. shall benefit locals & employees.

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Mine Waste Management	<p>Mining shall not be done during rains and there shall be construction of retaining walls top prevent surface runoff.</p> <ul style="list-style-type: none"> • Hazardous waste such as oil shall be stored properly and sold to registered re-processor. • Domestic wastes due to daily human activities which shall be properly disposed of into septic tanks followed by soak pits. • Wrappers, foils, leftover food material etc shall be collected in separate bins.
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11. ALTERNATIVE SITE AND TECHNOLOGY

The lease has already been executed on the basis of mineral availability and mining plan has been prepared and approved to excavate the mineral therefore any change in site or technology is not envisaged.

12. ENVIRONMENTAL MONITORING PROGRAMME

Post project monitoring shall be done and the recorded data will be submitted half yearly by project proponent to MoEF& CC (Regional Office) and State Pollution Control Board (SPCB). Following parameters shall be monitored.

- Ambient Air Quality
- Noise
- Surface & Ground Water
- Soil
- Plantation and Greenbelt
- Occupational Health and Safety

➤ Environmental Monitoring Schedule

Environmental monitoring at various locations, within the ML area and in the study area of 10km radius will be carried out on periodic basis. A comprehensive network for monitoring has been prepared. Sampling locations have been identified by considering the source of pollution due to mining operations, drainage pattern, topography of the area and biological environment.

The recurring cost of Rs. 1.50 Lakhs has been allocated for environmental monitoring and management program. The details are furnished in the below table.

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Estimated Cost of Environment Monitoring

Sr. No.	Environment Monitoring Parameters	Annual recurring Cost (in Rs.)
1.	Fugitive Monitoring	20,000
2.	Ambient Air Quality Monitoring	30,000
3.	Water Quality monitoring	50,000
4.	Noise Quality Monitoring	24,000
5.	Soil Quality Monitoring	26,000
TOTAL		1,50,000

13. ADDITIONAL STUDIES

Public Hearing for this Proposed Expansion Project will be conducted. Minutes of the Public Hearing, Issues Raised by the Public and Commitment of the Project Proponent along with Budget will be presented within the Final EIA Report.

Risk Assessment & Disaster Management Plan have been prepared and shall be implemented during mining. The suggestions of the stake holders shall be duly complied with and half yearly report shall be furnished to SPCB.

Social Impact Assessment has been carried out regarding various socio-economic aspects in the area, which will result in different facilities e.g., health services, school, drinking water, sanitation, skill training, SHGs monetary support etc. and above all it will also generate greater employment opportunities for local people directly and indirectly.

Detailed Transport Impact Assessment has been carried out and attached as Annexure 3.

14. PROJECT BENEFITS AND COSTS EVALUATION

Mining activity and development go hand in hand. There are numbers of social and infrastructural development activities linked with mining. For example: provision of better infrastructure, schools, green belt development drive and organization of health camps not only for the mine workers but also for the people living in nearby villages

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under CER responsibilities. Many ancillary activities bloom in the nearby areas such as opening of dhabas, tea stalls, and vehicle repair shops, diesel mechanic & heavy vehicle repairing, grocery, chemist & druggist, puncture Wala shops etc.

Cost toward EMP and CER: EMP 9.20 lakh Capital Cost and 9.50 Recurring Cost & CER: Capital cost 15.75 lakh and Recurring Cost 7.75 lakh.

15. IMPORTANT ASPECTS OF THE ENVIRONMENTAL MANAGEMENT PLAN

Environment Management Plan for the proposed project has been presented below –

Land: Systematic excavation has been proposed to prevent seasonal scouring and enhanced erosion. The top soil fertile excavated will be very less and it will be mainly used for plantation. Besides top overburden will be dumped in 0.60 ha area of already excavated land present in the eastern side of the proposed mining area.

Geology & Hydrogeology: Waste generation would be less in relation to the pit size. It is proposed to utilize the waste material to prepare/maintenance of the haul road within the lease area and remaining waste will be backfilled in the exhausted portion of the pit. The reclaimed portion will be levelled/ dressed to suit the overall topography of the area.

It is proposed to let the tailings go to the pit only and not to allow them to join the mainstream. Washing of sand is carried out from the water pumped out of the mine. Water from the pit is pumped out for washing purpose. Tailings of the same are diverted back to the pit and no other area is disturbed. The tailings generated during the course of washing is allowed to go the pit only through specially made drains. No other area is affected due to these tailings.

Air Environment: During the course of mining no toxic substances will be released into the atmosphere except dust and smoke. Dust shall be suppressed by sprinkling of water on stack and mining bench. There shall be regular maintenance of vehicle to control air pollution. Plantation will be carried out on approach roads & nearby area.

Maharashtra Minerals Corporation Limited (MMCL)	Environmental Impact Assessment (EIA) & Environmental Management Plan (EMP) for Proposed Expansion of Silica Sand Mining and Washing with Production Capacity from 3,00,000 Tons per Annum (TPA) to 4,50,742 TPA and Extension of Mine Lease Period at Village: Kasarde, Tehsil: Kankavli, District: Sindhudurg, Maharashtra
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Water Management: Ground water table shall not be intersected during entire span of mining. No mining shall be done during rainy season. Retaining wall shall be constructed to avoid silt runoff.

Noise Environment: Mechanized mining shall be the main source of noise. Proper maintenance of all machines will be carried out, which will help in reducing generation of noise during operations. Personal protective equipment's shall be provided to all the workers.

Solid Waste Management: There shall be mining waste generation therefore backfilling is proposed in the existing pit. The area shall be planted as reclamation work. Hazardous waste such as used oil generated from mining machinery will be sold to authorized dealer.

Biological Environment: The mining lease area is in non-forest land where presence of fauna is very less and no adverse impact is envisaged on the terrestrial flora and fauna.

Green Belt Development: Maharashtra Minerals Corporation Limited has developed very organized green belt at Kondye village. It has been named as Uttam Farm. It is about 12.90 km away from the boundary of the lease area towards South-East. This green belt has been developed on an area of 17 acre i.e 6.88 ha. Total 2000 Nos. (approx.) of trees and medicinal plants are planted. About Four workers from local villages have been employed to maintain Uttam Farm.

Additional Green belt near Uttam Farm on a Devrai land has also been developed by Maharashtra Minerals Corporation Limited. This green belt has been developed on an area of 2.50 acre i.e 1.012 ha. Total 1050 Nos. of trees are there. About two workers from local villages have been employed to maintain this green belt.

Socio – Economic Environment: The socio-economic impact of mining procedure will bring positive impact such as development of roads, plantation near the haul roads, organization of vocational training to the villagers, opening of schools and direct or ancillary employment benefits. EMP 9.20 lakhs Capital Cost and 9.50 Recurring Cost & CER: Capital Cost 15.75 lakhs and Recurring Cost 7.75 lakhs.

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Apart from this there are provisions made for better social management:

- The locals shall be given employment opportunities.
- There shall be better infrastructure facility.
- Health camps, available of clean drinking water & provision of schooling shall be the main focus of the company.

16. BUDGETARY PROVISION FOR ENVIRONMENTAL MANAGEMENT PLAN

The total capital cost for the environmental management budget (proposed) is Rs.9.20 lakhs and recurring cost with amount Rs. 9.50 lakhs.

17. BUDGETARY PROVISION OF CER ACTIVITY

The budgetary provision of CER activity is Rs.15.75 as capital cost and recurring cost per annum would be Rs. 7.75 lakhs.