DRAFT ENVIRONMENT IMPACT ASSESSMENT REPORT

of

MINING OF MINOR MINERALS

Project	**Extraction/ Collection of Sand, Stone & Bajri by Smt. Rama Sharma, Prop: M/s Sidhi Vinayak Stone Crusher**
Location	**Khasra Nos. 79/1 (5-72-02 Ha) and 447/1 (4-24-62) falling in Mohal Ranoh, Tehsil Jaswan, District Kangra, Himachal Pradesh**
Land Status/ Type	**Government Land/ River Bed of Soan River (a tributary of Beas River)**
Mining Area	**09-96-64 Ha**
Category (as per EIA Notification, 2006)	**Category B1**
Production	**2,04,750 MTPA**
TOR Letter No.	**HPSEIAA/ 2023/1103 dated 03.10.2023**
Baseline study period	**15th October 2023 – 15th January 2024**

APPLICANT

Smt. Rama Sharma, Proprietor, M/s Sidhi Vinayak Stone Crusher

Village Ranoh & P.O. Kanpur, Tehsil Jaswan,

District Kangra, Himachal Pradesh

PREPARED BY

Chandigarh Pollution Testing Laboratory- EIA Division

(QCI/ NABET Certificate No: NABET/EIA/2225/RA0250)

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Date: 29-01-2024

DECLARATION BY CONSULTANT

TO WHOMSOEVER IT MAY CONCERN

I hereby declare that the EIA/EMP report for the proposed mining project for extraction of sand, stone and bajri from river bed of Soan River by Smt. Rama Sharma, M/s Sidhi Vinayak Stone Crusher from the mine lease area of 09-96-64 Hectare in Khasra No. 79/1(5-72-02 Ha) and 447/1 (04-24-62), Mohal Ranoh, Tehsil- Jaswan, District- Kangra, Himachal Pradesh has been prepared as per "Terms of reference" and information supplied by the project proponent.

Sital Singh
CEO
Chandigarh Pollution Testing Lab

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PROJECT AT A GLANCE

<table>
<tr><td>1.</td><td>Name of the project</td><td>Extraction of Sand Stone & Bajri by Smt. Rama Sharma Prop. M/s Sidhi Vinayak Stone Crusher</td></tr>
<tr><td>2.</td><td>Type of project</td><td>Mining of Minor Minerals-Sand Stone and Bajri.</td></tr>
<tr><td>3.</td><td>Location</td><td>Khasra No. 79/1(5-72-02 Ha) and 447/1 (04-24-62), Mohal Ranoh, Tehsil- Jaswan, District- Kangra, Himachal Pradesh.</td></tr>
<tr><td rowspan="2">4.</td><td>Lease Area Co-ordinates</td><td>
<table>
<tr><th>Pillar No.</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>P1</td><td>31°51'31.51"N</td><td>75°57'42.91"E</td></tr>
<tr><td>P2</td><td>31°51'21.93"N</td><td>75°57'43.92"E</td></tr>
<tr><td>P3</td><td>31°51'12.74"N</td><td>75°57'44.75"E</td></tr>
<tr><td>P4</td><td>31°51'14.51"N</td><td>75°57'39.08"E</td></tr>
<tr><td>P5</td><td>31°51'21.75"N</td><td>75°57'39.08"E</td></tr>
<tr><td>P6</td><td>31°51'30.42"N</td><td>75°57'36.81"E</td></tr>
</table>
</td></tr>
<tr><td>Elevation (Altitude at origin)</td><td>Highest 458 meters above MSL
Lowest 451 meters below MSL</td></tr>
<tr><td>5.</td><td>Land Status/ Type</td><td>Government Land/ River Bed</td></tr>
<tr><td>6.</td><td>Mining Area</td><td>09-96-64 Hectare</td></tr>
<tr><td rowspan="2">7.</td><td>Width of Khad</td><td>580 - 720 meters</td></tr>
<tr><td>Length of Khad</td><td>22 Kms upto confluence with Beas River</td></tr>
<tr><td rowspan="2">8.</td><td>Products</td><td>Sand, Stone and Bajri</td></tr>
<tr><td>Production Capacity</td><td>Approx. 204750 MT for one year or 10,23,750 MT over a period of five years (including silt/clay)</td></tr>
<tr><td>9.</td><td>Cost Details</td><td>Total Project cost = Rs. 30 Lakhs
EMP = Rs. 13.0 (Capital cost) and Rs. 4.35 (Recurring Cost)</td></tr>
<tr><td>10.</td><td>Source of Electricity</td><td>Not required</td></tr>
<tr><td>11.</td><td>Alternative source</td><td>Nil</td></tr>
<tr><td>12.</td><td>Power Requirement at mining area</td><td>Not required</td></tr>
<tr><td>13.</td><td>Water consumption</td><td>3.5 KLD</td></tr>
<tr><td>14.</td><td>Source of water supply</td><td>From Tubewell</td></tr>
</table>

15.	**Air pollution control at mining site**	Water sprinklers & tree plantations
16.	**Hazardous chemical**	Nil.
17.	**Hazardous waste**	Nil.
18.	**Manpower requirement**	170 persons
19.	**Validity of Lease**	As per grant order
20.	**Method of mining**	Manual
21.	**Working Days**	300 (as per approved Mining Plan)
22.	**Waste (silt/clay)**	4027 MT for one year or 20138 over a period of five years.

TOR LETTER

File No.HPSEIAA/2023/1103
Goverment of India
State Level Environment Impact Assessment Authority
Himachal Pradesh
***

To,

M/s HARISH SHARMA
Mohal - Ranoh, Tehsil-Jaswan, District - Kangra, Himachal Pradesh,
Kangra-176501
Himachal Pradesh

Tel.No.-; Email:sidhivin23@gmail.com

Sub. Terms of Reference to the Extraction/Collection of Sand, Stone & Bajri by Smt. Rama Sharma, Prop:- M/s Sidhi Vinayak stone Crusher, Mohal - Ranoh, Tehsil-Jaswan, District - Kangra, Himachal Pradesh

Dear Sir/Madam,

This has reference to the proposal submitted in the Ministry of Environment, Forest and Climate Change to prescribe the Terms of Reference (TOR) for undertaking detailed EIA study for the purpose of obtaining Environmental Clearance in accordance with the provisions of the EIA Notification, 2006. For this purpose, the proponent had submitted online information in the prescribed format (Form-1) along with a Pre-feasibility Report. The details of the proposal are given below:

1. Proposal No.:	SIA/HP/MIN/440010/2023
2. Name of the Proposal:	Extraction/Collection of Sand, Stone & Bajri by Smt. Rama Sharma, Prop:- M/s Sidhi Vinayak stone Crusher
3. Category of the Proposal:	Non-Coal Mining
4. Project/Activity applied for:	1(a) Mining of minerals
5. Date of submission for TOR:	10 Aug 2023

Date : 03-10-2023

Sh. D.C. Rana
(Director (Environment, Science & Technology))

Office : **Director, Department of Env., S&T, US Club, Shimla-171001**
Phone No : Mobile : **9814849941**
Email id : **ms.hpseiaa@gmail.com**

Note : This is auto tor granted letter.

In this regard, under the provisions of the EIA Notification 2006 as amended, the Standard TOR for the purpose of preparing environment impact assessment report and environment management plan for obtaining prior environment clearance is prescribed with public consultation as follows:

STANDARD TERMS OF REFERENCE (TOR) FOR EIA/EMP REPORT FOR PROJECTS/ACTIVITIES REQUIRING ENVIRONMENT CLEARANCE

Terms of Reference (TOR) for preparation of Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP) for "Mining of Minerals" as per the EIA Notification, 2006 has been devised to improve the quality of the reports and facilitate decision-making transparent and easy. TOR will help the project proponents to prepare report with relevant project specific data and easily interpretable information. TOR for mining of minerals is expected to cover all environmental related features.

Mining of minerals plays a positive role in the process of country's economic development. In addition to the contribution towards economic growth, mining can also be a major source of degradation of physical as well as social environment, unless it is properly managed. Environmental impacts can arise during all activities of the mining process. Minimizing the damage due to mining operations depends on sound environmental practices in a framework of balanced environmental legislation. The potential adverse effects of mining activities include air pollution, surface and groundwater pollution, noise and vibration, damage to local ecology, natural topography and drainage, depletion of water resources etc. All these environmental components are required to be considered while selecting a proper methodology of mining, mitigation measures to reduce pollution load, conservation of natural resources etc.

The projects of mining of minerals as stated in the schedule require prior environment clearance under the EIA notification, 2006. Category 'A' Projects are handled in the MoEF&CC and Category 'B' projects are being handled by the respective State Environment Impact Assessment Authorities (SEIAAs) notified by MoEF&CC and following the procedure prescribed under the EIA Notification, 2006. As per this Notification, as amended, the projects of mining of minor minerals with mining lease area equal to or greater than 50 hectare are to be handled at the level of the MoEF&CC for grant of EC. Such projects with mining lease area less than 50 hectare are to be handled by the respective State Environment Impact Assessment Authority (SEIAA).

1(a):STANDARD TERMS OF REFERENCE FOR CONDUCTING ENVIRONMENT IMPACT ASSESSMENT STUDY FOR NON-COAL MINING PROJECTS AND INFORMATION TO BE INCLUDED IN EIA/EMP REPORT

1) Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.

2) A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.

3) All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.

4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the areashould be provided. Such an Imagery of

STANDARD TERMS OF REFERENCE (TOR) FOR EIA/EMP REPORT FOR PROJECTS/ ACTIVITIES REQUIRING ENVIRONMENT CLEARANCE

the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).

5) Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.

6) Details about the land proposed for mining activities should be givenwith information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.

7) It should be clearly stated whether the proponent Company has a well laid down Environment Policy approved by its Board of Directors? If so, it may be spelt out in the EIA Report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/ violation of the environmental or forest norms/ conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large,may also be detailed in the EIA Report.

8) Issues relating to Mine Safety, including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study etc. should be detailed. The proposed safeguard measures in each case should also be provided.

9) The study rea will comprise of 10 km zone around the mine lease from lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine / lease period.

10) Land use of the study rea delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlements and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted. Impact, if any, of change of land use should be given.

11) Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.

12) A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.

13) Status of forestry clearance for the broken up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.

STANDARD TERMS OF REFERENCE (TOR) FOR EIA/EMP REPORT FOR PROJECTS/ACTIVITIES REQUIRING ENVIRONMENT CLEARANCE

14) Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.

15) The vegetation in the RF / PF areas in the study area, with necessary details, should be given.

16) A study shall be got done to ascertain the impact of the Mining Project on wildlife of the study area and details furnished. Impact of the project on the wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be worked out with cost implications and submitted.

17) Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors, Ramsar site Tiger/ Elephant Reserves/(existing as well as proposed), if any, within 10 km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlifeand copy furnished.

18) A detailed biological study of the study area [core zone and buffer zone (10 km radius of the periphery of the mine lease)] shall be carried out. Details of flora and fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicating the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan alongwith budgetary provisions for their conservation should be prepared in consultation with State Forest and Wildlife Department and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.

19) Proximity to Areas declared as 'Critically Polluted' or the Project areas likely to come under the 'Aravali Range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Dept. Should be secured and furnished to the effect that the proposed mining activities could be considered.

20) Similarly, for coastal Projects, A CRZ map duly authenticated by one of the authorized agencies demarcating LTL. HTL, CRZ area, location of the mine lease w.r.t CRZ, coastal features such as mangroves, if any, should be furnished. (Note: The Mining Projects falling under CRZ would also need to obtain approval of the concerned Coastal Zone Management Authority).

21) R&R Plan/compensation details for the Project Affected People (PAP) should be furnished. While preparing the R&R Plan, the relevant State/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs /STs and other weaker sections of the society in the study area, a need based sample survey, family-wise, should be undertaken to assess their requirements, and action programmes prepared and submitted accordingly, integrating the sectoral programmes of line departments of the State Government. It may be clearly brought out whether the village(s) located in the mine lease area will be shifted or not. The issues relating to shifting of village(s) including their R&R and socio-economic aspects should be discussed in the Report.

STANDARD TERMS OF REFERENCE (TOR) FOR EIA/EMP REPORT FOR PROJECTS/ ACTIVITIES REQUIRING ENVIRONMENT CLEARANCE

22) One season (non-monsoon) [i.e. March-May (Summer Season); October-December (post monsoon season) ; December-February (winter season)]primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and flora and fauna shall be collected and the AAQ and other data so compiled presented date-wise in the EIA and EMP Report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500 m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.

23) Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.

24) The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.

25) Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.

26) Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.

27) Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.

28) Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground Water Authority for working below ground water and for pumping of ground water should also be obtained and copy furnished.

29) Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the impact of the same on the hydrology should be brought out.

30) Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.

31) A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up front on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered

under plantation and the species to be planted. The details of plantation already done should be given.The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.

32) Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road network (including those outside the Project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.

33) Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report.

34) Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.

35) Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination and periodical medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measures with required facilities proposed in the mining area may be detailed.

36) Public health implications of the Project and related activities for the population in the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocations.

37) Measures of socio economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.

38) Detailed environmental management plan (EMP) to mitigate the environmental impacts which, should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.

39) Public Hearing points raised and commitment of the Project Proponent on the same along with time bound Action Plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.

40) Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given.

41) The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.

42) A Disaster management Plan shall be prepared and included in the EIA/EMP Report.

STANDARD TERMS OF REFERENCE (TOR) FOR EIA/EMP REPORT FOR PROJECTS/ ACTIVITIES REQUIRING ENVIRONMENT CLEARANCE

43) Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.

44) Besides the above, the below mentioned general points are also to be followed:-

a) All documents to be properly referenced with index and continuous page numbering.

b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.

c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.

d) Where the documents provided are in a language other than English, an English translation should be provided.

e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.

f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA.II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.

g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.

h) As per the circular no. J-11011/618/2010-IA.II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable.

i) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining area.

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TOR COMPLIANCE

S.NO.	TOR's POINT	TOR COMPLIANCE	Reference in EIA
1.	Year-wise production details since 1994 should be given, clearly stating the highest production achieved in any one year prior to 1994. It may also be categorically informed whether there had been any increase in production after the EIA Notification 1994 came into force, w.r.t. the highest production achieved prior to 1994.	The proposed mining unit will be operational only after the grant of EC.	
2.	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	Agreed and complied.	Provided as Annexures 1
3.	All documents including approved mine plan, EIA and Public Hearing should be compatible with one another in terms of the mine lease area, production levels, waste generation and its management, mining technology etc. and should be in the name of the lessee.	Approved Mine Plan will be submitted along with the final EIA Report which shall be compatible with the EIA report.	
4.	All corner coordinates of the mine lease area, superimposed on a High-Resolution Imagery/ Toposheet, topographic sheet, geomorphology and geology of the area should be provided. Such an imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).	Location map is provided at Fig. 3.1, Pillar Co-ordinates map is provided at Fig. 3.2 and 500m radius map is provided at Fig. 3.3. of Chapter-3.	Provided in Chapter-3
5.	Information should be provided in Survey of India Toposheet in 1:50,000 scale indicating geological map of the area, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.	Provided at Fig.3.1, geological Map provided as figure 2.1, and land useand land cover Map provided in figure 3.6 of Chapter-3.	Provided in Chapter-3
6.	Details about the land proposed for mining activities should be given with information as to whether mining conforms to the land use policy of the State; land diversion for mining should have approval from State land use board or the concerned authority.	The proposed project satisfies all the requirements of state mining policy as detailed in approved mining plan and obtained Letter of Intent.	
7.	It should be clearly stated whether the proponent Company has a well laid down Environmental Policy approved by its Board of Directors? If so, it may be spelt out in the EIA report with description of the prescribed operating process/procedures to bring into focus any infringement/deviation/violation of the environmental or forest norms/conditions? The hierarchical system or administrative order of the Company to deal with the environmental issues and for ensuring compliance with the EC conditions may also be given. The system of reporting of non-compliances/violations of environmental norms to the Board of Directors of the Company and/or shareholders or stakeholders at large may also be detailed in the EIA report.	The project will formulate a comprehensive Environmental Policy and the same will be executed by duly constituted EMC.	

8.	Issues relating to Mine safety; including subsidence study in case of underground mining and slope study in case of open cast mining, blasting study, etc. should be detailed. The proposed safeguard measures in each case should also be provided.	The proposed project is a river bed mining project and mining will be manual and no blasting is required. All safeguards applicable to open cast mining of minor minerals through pits shall be taken care of.	Chapter 7
9.	The study area will comprise of 10km zone around the mine lease from the lease periphery and the data contained in the EIA such as waste generation etc. should be for the life of the mine/lease period.	The 10 km zone from periphery of the lease has been considered as the study area is provided as Fig. 3.1 and details regarding the sensitive areas is provided in Fig. 3.12 and Table no 3.1. Silt/ Clay will be generated as a waste during the process which is detailed in the Chapter 2 of the report.	Refer Chapter 3 and Chapter 2
10.	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human settlement and other ecological features should be indicated. Land use plan of the mine lease area should be prepared to encompass preoperational, operational and post operational phases and submitted Impact, if any, of change of land use should be given.	Provided at para 3.15 and 3.16. Detailed LU/LC map delineating the land use classification has been provided as Fig. 3.6; Page no.84	Refer Chapter 3,
11.	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its land use, R&R issues, if any, should be given.	No overburden is involved because this is a river-bed mining project. R & R is not applicable with this project.	Detailed in the Chapter-3
12.	A Certificate from the Competent Authority in the State Forest Department should be provided, confirming the involvement of forest land, if any, in the project area. In the event of any contrary claim by the Project Proponent regarding the status of forests, the site may be inspected by the State Forest Department along with the Regional Office of the Ministry to ascertain the status of forests, based on which, the Certificate in this regard as mentioned above be issued. In all such cases, it would be desirable for representative of the State Forest Department to assist the Expert Appraisal Committees.	No involvement of forest land in the project area and hence not applicable.	Provided in Chapter-3
13.	Status of Forestry clearance for the broken-up area and virgin forestland involved in the Project including deposition of net present value (NPV) and compensatory afforestation (CA) should be indicated. A copy of the forestry clearance should also be furnished.	Not Applicable in view of 12 above.	
14.	Implementation status of recognition of forest rights under the Scheduled Tribes and other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006 should be indicated.	Not Applicable in view of 12 above.	
15.	The vegetation in the RF/PF areas in the study area, with necessary details, should be given.	All type of vegetation conducive to the environment of Kangra district is prevalent in RF/PF forests.	

16.	A study shall be got done to ascertain the impact of the mining Project on wildlife in the surrounding and any other protected area and accordingly, detailed mitigative measures required, should be given worked out with cost implications and submitted.	The common wild life of the area is not likely to be impacted by the operation of proposed project and no endangered/threatened species is found.	
17.	Location of National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors. Ramsar site Tiger/Elephant Reserves (existing as well as proposed), if any, within 10km of the mine lease should be clearly indicated, supported by a location map duly authenticated by Chief Wildlife Warden. Necessary clearance, as may be applicable to such projects due to proximity of the ecologically sensitive areas as mentioned above, should be obtained from the Standing Committee of National Board of Wildlife and copy furnished.	No National Parks, Sanctuaries, Biosphere Reserves, Wildlife Corridors,Tiger & Elephant Reserves fall within 10km radius of the mine lease.	
18.	A detailed biological study of the study area (core zone and buffer zone (10kms radius of the periphery of the mine lease) shall be carried out. Details of Flora and Fauna, endangered, endemic and RET Species duly authenticated, separately for core and buffer zone should be furnished based on such primary field survey, clearly indicated the Schedule of the fauna present. In case of any scheduled-I fauna found in the study area, the necessary plan along with budgetary provisions for their conservation should be prepared in consultation with State Forestland WildlifeDepartment and details furnished. Necessary allocation of funds for implementing the same should be made as part of the project cost.	No endangered, endemic, RET species are present in the core and buffer zone.	Provided at table 3.18 and 3.19 of Chapter 3.
19.	Proximity to areas declared as "Critically Polluted" or the Project areas likely to come under the 'Aravalli range', (attracting court restrictions for mining operations), should also be indicated and where so required, clearance certifications from the prescribed, Authorities such as the SPCB or State Mining Department should be secured and furnished to the effect of the proposed activities could be considered.	Not Applicable as the lease area is not in the Proximity of those Areas which are declared as 'Critically Polluted' & also the project areas not coming under the Aravali Range.	
20.	Similarly, for coastal projects, A CRZ map duly authenticated by one of the authorized by one of the authorized species demarcating LTL, HTL, CRZ area, location of the mine lease w.r.t. CRZ, coastal features such as mangroves, if any should be furnished. (Note: Mining project falling under CRZ would also need to obtain approval of the conserved Coastal Zone Management Authority).	Not Applicable as the mine lease area is not falling under CRZ.	
21.	R & R Plan/ compensation details of the Project, affected people (PAP) should be furnished. While preparing the R & R plan, the relevant site/National Rehabilitation & Resettlement Policy should be kept in view. In respect of SCs/STs and other weaker sections of the society in the study area, a need-based sample survey, family-wise, should be undertaken to assess their requirements, and action programmers prepared and submitted accordingly, integrating the sectoral programmers of line departments of the State Government. It may be clearly brought out	Not applicable, as no displacement and subsequent rehabilitation is involved.	

	whetherthe village (s) located in the mine lease area will be shifted or not. The issued related to shifting of village(s) including their R & R and socio-economic aspects should be discussed in the Report.		
22.	One season (non-monsoon) (i.e., March-May (Summer Season)' October-December (post-monsoon season): December-February (winter season) primary baseline data on ambient air quality as per CPCB Notification of 2009, water quality, noise level, soil and Flora and Fauna shall be collected and the AAQ and other data so compiled presented data-wise in the EIA and EMP report. Site-specific meteorological data should also be collected. The location of the monitoring stations should be such as to represent whole of the study area and justified keeping in view the pre-dominant downwind direction and location of sensitive receptors. There should be at least one monitoring station within 500m of the mine lease in the pre-dominant downwind direction. The mineralogical composition of PM10, particularly for free silica, should be given.	Primary Baseline data on Ambient Air Quality, water quality, noise level, soil, Flora and Fauna was collected during 15 October 2023 to 15 January 2024 & the details are provided in para 3.13 to 3.21	Refer Chapter 3
23.	Air quality modeling should be carried out for prediction of impact of the project on the air quality of the area. It should also take into account the impact of movement of vehicles for transportation of mineral. The details of the model used and input parameters used for modeling should be provided. The air quality contours may be shown on a location map clearly indicating the location of the site, location of sensitive receptors, if any, and the habitation. The wind roses showing pre-dominant wind direction may also be indicated on the map.	As this a non-coal mining project, there is no particular point of emission, so modelling will be done on the basis of fugitive emission and vehicular moments in the mining area.	Refer to chapter 4
24.	The water requirement for the Project, its availability and source should be furnished. A detailed water balance should also be provided. Fresh water requirement for the Project should be indicated.	Only 3.5 KLD water is required. The water will be sourced through own tubewell. Affidavit for the same has been provided as Annexures.	Chapter-2
25.	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	Will be provided in Final EIA.	
26.	Description of water conservation measures proposed to be adopted in the Project should be given. Details of rainwater harvesting proposed in the Project, if any, should be provided.	Since no water will be used in the mining operations, therefore, no waste water will be generated, small amount of domestic waste water shall be treated in septic tanks at crusher site before it is put to use for plantation.	
27.	Impact of the Project on the water quality, both surface and groundwater, should be assessed and necessary safeguard measures, if any required, should be provided.	Provided at para 3.16, 3.16.1 and 3.16.2. Since no water will be used in the mining operations, therefore, no waste water will be generated, thereby no impact on groundwater and surface water quality.	Refer chapter 3
28.	Based on actual monitored data, it may clearly be shown whether working will intersect groundwater. Necessary data and documentation in this regard may be provided. In case the working will intersect groundwater table, a detailed Hydro Geological Study should be	It is ensured that mining will be carried out upto 1m bgl, above ground water table, whichever comes first to prevent the intersection with ground water table. Therefore, the mining operation will not intersect	

	undertaken and Report furnished. The Report inter-alia, shall include details of the aquifers present and impact of mining activities on these aquifers. Necessary permission from Central Ground water Authority for Working below ground water and for pumping of ground water should also be obtained and copy furnished.	groundwater. All the rules and precautionary measures shall be followed accordingly as mentioned in statutory notifications and the Approved Mining Plan.	
29.	Details of any stream, seasonal or otherwise, passing through the lease area and modification/diversion proposed, if any, and the impact of the same on the hydrology should be brought out.	Mining will be done in river bed. No modification or diversion will be done. The mining will be done manually.	
30.	Information on site elevation, working depth, groundwater table etc. Should be provided both in AMSL and bgl. A schematic diagram may also be provided for the same.	Site elevation, working depth, groundwater table, etc. is mentioned in Chapter- 2.	
31.	A time bound Progressive Greenbelt Development Plan shall be prepared in a tabular form (indicating the linear and quantitative coverage, plant species and time frame) and submitted, keeping in mind, the same will have to be executed up from on commencement of the Project. Phase-wise plan of plantation and compensatory afforestation should be charted clearly indicating the area to be covered under plantation and the species to be planted. The details of plantation already done should be given. The plant species selected for green belt should have greater ecological value and should be of good utility value to the local population with emphasis on local and native species and the species which are tolerant to pollution.	The plantation will be done as per the availabity/ requirement on the adjoining land. The affidavit for the same is attached is as Annexure IX (Page no. 211).	Refer Chapter- 2
32.	Impact on local transport infrastructure due to the Project should be indicated. Projected increase in truck traffic as a result of the Project in the present road networks (including those outside the project area) should be worked out, indicating whether it is capable of handling the incremental load. Arrangement for improving the infrastructure, if contemplated (including action to be taken by other agencies such as State Government) should be covered. Project Proponent shall conduct Impact of Transportation study as per Indian Road Congress Guidelines.	Only trucks/tippers will be used for transportation mostly through approach road.	
33.	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA report.	Local labor will be employed. Hence, no onsite shelter and facilities are required. However, toilets with septic tank will be provided.	
34.	Conceptual post mining land use and Reclamation and Restoration of mined out areas (with plans and with adequate number of sections) should be given in the EIA report.	Proposed project is a riverbed mining project excavated mineral will be replenished in every monsoon season.	

35.	Occupational Health impacts of the Project should be anticipated and the proposed preventive measures spelt out in detail. Details of pre-placement medical examination schedules should be incorporated in the EMP. The project specific occupational health mitigation measure with required facilities proposed in the mining area may be detailed.	Occupational health impact is mainly expected from air pollution due to fugitive dust emission because of movement of vehicles. However, appropriate mitigation measures for air pollution control have been proposed and detailed in the Chapter 10.	Refer chapter-10.
36.	Public health implications of the Project and related activities for the population of the impact zone should be systematically evaluated and the proposed remedial measures should be detailed along with budgetary allocation.	Though, mining would be done manually, and far away from pollution, therefore there may not be major impact envisaged related to project activity. Budgetary allocation for project related activities detailed in Chapter 10.	Refer chapter-10
37.	Measures of socio-economic significance and influence to the local community proposed to be provided by the Project Proponent should be indicated. As far as possible, quantitative dimensions may be given with time frames for implementation.	Agreed and complied in Para 3.19.	Refer chapter- 3
38.	Detailed Environment Management Plan (EMP) to mitigate the environmental impacts which should inter-alia include the impacts of change of land use, loss of agricultural and grazing land, if any, occupational health impacts besides other impacts specific to the proposed Project.	Detailed Environmental Management Plan to mitigate the environmental impacts are discussed in the report in Chapter 10.	Refer chapter-10.
39.	Public Hearing points raised and commitment of the Project Proponent on the same along with time bound action plan with budgetary provisions to implement the same should be provided and also incorporated in the final EIA/EMP Report of the Project.	Will be included in Final EIA report after the conduction of Public Hearing.	
40.	Details of litigation pending against the project, if any, with direction/order passed by any Court of Law against the Project should be given.	No litigation pending.	
41.	The cost of the project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out.	The cost of the project is 30 lakhs. The cost towards the implementation of EMP is mentioned in Chapter 10.	Refer table 10.1 of Chapter 10.
42.	A Disaster Management Plan shall be prepared and included in the EIA/EMP Report.	Agreed & complied in chapter 7; Page no. 173	Refer chapter-7.
43.	Benefits of the Project if the Project is implemented should be spelt out. The benefits of the Project shall clearly indicate environmental, social, economic, employment potential, etc.	Agreed & complied in Chapter 8; Page no.148	Refer chapter-8.

44.	Besides the above, the below mentioned general points are also to be followed: -		
	a) All documents to be properly referenced with index and continuous page numbering.	Noted & complied.	
	b) Where data are presented in the Report especially in Tables, the period in which the data were collected and the sources should be indicated.	Noted & complied.	
	c) Project Proponent shall enclose all the analysis/testing reports of water, air, soil, noise etc. using the MoEF&CC/NABL accredited laboratories. All the original analysis/testing reports should be available during appraisal of the Project.	Agreed & complied.	
	d) Where the documents provided are in a language other than English, an English translation should be provided.	Agreed.	
	e) The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	Agreed.	
	f) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF vide O.M. No. J-11013/41/2006-IA. II(I) dated 4th August, 2009, which are available on the website of this Ministry, should be followed.	Agreed & complied.	
	g) Changes, if any made in the basic scope and project parameters (as submitted in Form-I and the PFR for securing the TOR) should be brought to the attention of MoEF&CC with reasons for such changes and permission should be sought, as the TOR may also have to be altered. Post Public Hearing changes in structure and content of the draft EIA/EMP (other than modifications arising out of the P.H. process) will entail conducting the PH again with the revised documentation.	The details of scope in Form I, PFR and EIA/EMP report is compatible with one another.	
	h) As per the circular no. J-11011/618/2010-IA. II(I) dated 30.5.2012, certified report of the status of compliance of the conditions stipulated in the environment clearance for the	Not applicable as it a greenfield proposal.	

	existing operations of the project, should be obtained from the Regional Office of Ministry of Environment, Forest and Climate Change, as may be applicable. i) The EIA report should also include surface plan of the area indicating contours of main topographic features, drainage and mining area, (ii) geological maps and sections and (iii) sections of the mine pit and external dumps, if any, clearly showing the land features of the adjoining areas.	Complied.	

EXECUTIVE SUMMARY

1.0 PROJECT NAME AND LOCATION:

Smt. Rama Sharma, proprietor, M/s Sidhi Vinayak Stone Crusher, has proposed mining of approx. 2,04,750 TPA of minor minerals viz. sand, stone & bajri from the auctioned land of 09-96-64 Hectare on the river bed of Soan Khad falling in Mohal Ranoh, Tehsil- Jaswan, District- Kangra, Himachal Pradesh.

2.0 PROJECT PROPOSAL:

The Letter of Intent (LOI) has been issued by the Industries Department, GoHP. vide letter No. Udyog- Bhu (khani-4) Laghu-407/09 dated 13/10/2022 for a period of one year. The LOI for extension of validity period was issued vide letter no. Udyog Bhu (Khani-4) Laghu-407/09-13773 dated 01.03.2024 for a term of one-year w.e.f 13.10.2023 to 12.10.2024 for the purpose of obtaining Environment Clearance.

The applicant is seeking prior Environmental Clearance for the above-said proposed project as per EIA notification- 2006 and the subsequent amendments under Schedule 1(a) category B1 for mining of minor minerals.

The project proponent has engaged QCI NABET Accredited Environmental Consultant, ***Chandigarh Pollution Testing Laboratory-EIA Division*** for conducting EIA study and preparation of EIA/EMP report.

DETAILS OF THE PROJECT:

<table>
<tr><td>Name of the project</td><td colspan="3">Extraction of Sand, Stone & Bajri by Smt. Rama Sharma Prop. M/s Sidhi Vinayak Stone Crusher</td></tr>
<tr><td>Type of project</td><td colspan="3">Mining of Minor Minerals Sand, Stone and Bajri.</td></tr>
<tr><td>Location</td><td colspan="3">Khasra No. 79/1(5-72-02 Ha) and 447/1 (04-24-62), Mohal Ranoh, Tehsil- Jaswan, District- Kangra, Himachal Pradesh.</td></tr>
<tr><td>Lease Area Co-ordinates</td><td>Pillar No.</td><td>Latitude</td><td>Longitude</td></tr>
<tr><td></td><td>P1</td><td>31°51'31.51"N</td><td>75°57'42.91"E</td></tr>
<tr><td></td><td>P2</td><td>31°51'21.93"N</td><td>75°57'43.92"E</td></tr>
<tr><td></td><td>P3</td><td>31°51'12.74"N</td><td>75°57'44.75"E</td></tr>
</table>

	P4	31°51'14.51"N	75°57'39.08"E
	P5	31°51'21.75"N	75°57'39.08"E
	P6	31°51'30.42"N	75°57'36.81"E
Elevation (Altitude at origin)	Highest 458 meters above MSL Lowest 451 meters below MSL		
River/Khad	Soan River		
Width of river at the mining site	580-720 m.		
Total Area	09-94-64 Hectares		
Products	Sand, Stone and Bajri		
Capacity	Approx. 204750 MT for one year or 10,23,750 MT over a period of five years (including silt/clay)		
Manpower	170 persons		
Water Requirement	3.5 KLD		
Source of Water	Tubewell		
Cost Details			
Cost of project	Rs. 30 lacs.		
Cost of EMP	Rs. 13.0 lacs. (Capital) Rs. 4.35 lacs (Recurring)/Annum		
Environmental setting of the area			
Ecological sensitive area (national parks, Wildlife sanctuaries, Biosphere reserves etc.)	None within 10 km radius.		
International boundary within 5 km radius	None		
Nearest highway	State Highway -25 Talwara Rd (0.80 Km in W direction)		
Nearest railhead/Railway station	Dasuya 44.6 km in W direction		
Nearest airport	Kangra Airport (101 km towards NE direction)		

Nearest Major City	Daulatpur 11.0 Km
Nearest Major Settlement	Daulatpur 11.0 Km

3. PROJECT DESCRIPTION:

The proposed project involves the mining of sand, stone & bajri by open cast mining method in the river bed over an area measuring 09-96-64 Hectare with proposed production capacity of approx. 204750 TPA (including silt/clay).

Details of the production during the five-year period are given below:

Showing year-wise production programme of mining in mineable area

Period	Proposed area in sqm	Quantity of Boulders in MT	Quantity of Bajri in MT	Quantity of Sand in MT	Quantity of Silt and clay in MT	Quantity of mineral deposit
1st year	91000	81900	51188	40950	30712	204750
2nd year	91000	81900	51188	40950	30712	204750
3rd year	91000	81900	51188	40950	30712	204750
4th year	91000	81900	51188	40950	30712	204750
5th year	91000	81900	51188	40950	30712	204750
Total						**10,23,750**

The total geological reserves are 448488 TPA, mineable reserves are 204750 TPA and the mining will be restricted to 1.0 m depth. River block will be fully replenished during the rainy seasons. The extracted minerals which are widely used in buildings, bridges and other infrastructure will be transported by trucks/dumpers for processing at the stone crusher owned by the proponent. Total water requirement of project will be 3.5 KLD and the manpower requirement is 170 persons. Site facilities like shelter, water, electricity and sanitation will be provided as per requirement. No litigation is pending against the project.

4. DESCRIPTION OF ENVIRONMENT:

The baseline data in respect of environmental components: Air, Soil, Noise, Water, Ecology & Biodiversity has been collected for non-monsoon season from ***15th October, 2023 – 15th January, 2024*****.** The EIA study is being carried out for mine lease (core zone)

& area within 10 km radius of lease area (buffer zone).

Baseline Status

Attribute	Baseline Study
Ambient Air quality	• AAQ monitoring was carried out at 8 locations, the maximum value of 71.2 ug/$m^{3\ for}$ PM 10 was observed at Bhated and the minimum value of 60.2 ug/m^3 at Mandwara. • The maximum value of 40.0 ug/m^3 for PM 2.5 was observed at Ranoh & minimum of 30.8 ug/m^3 at Palahar. • In respect of SO_2, the maximum concentration of 6.6 ug/m^3 was observed at Bhated & minimum of 4.4 ug/m^3 at Palahar. • In case of NO_2, the maximum value of 11.7 ug/m^3 was observed at Bhatehar & minimum of 8.0 ug/m^3 at Ranoh and Mandwara station. • CO was not detected at any of the stations.
Noise Levels	• Of the eight-noise monitoring locations (within 2-3 Km), maximum day time noise of 47.5 dB (A) was observed at project site and minimum 40.3 dB (A) at Ramgarh. • For night time noise levels, the maximum of 39.4 dB (A) was observed at project site & the minimum of 31.5 dB (A) at Ramgarh.
Water Quality	***Ground water*** The monitoring was done at 8 locations. • The pH varied from 7.32 to 7.84. • Total hardness ranged from 232 (village Bhatehar) to 250 mg/L (Amroh). • TDS ranged from 246 (village Bhated) to 262 mg/L (Village

	Amroh). • Fluoride was not detected. • Nitrate was not detected. ***Surface water*** Surface water was analyzed at one location for upstream & downstream quality**.** • pH varies from 7.28 to 7.33. • Total hardness ranged from 110 to 114 mg/L. • TDS varied from 174 to 178 mg/L. • Fecal Coliform was observed in the range 110 to 130 MPN/100 ml. • Total Coliform ranged from 80.0 to 90.0 MPN/100 ml. • COD varied from 6.4 to 6.6 mg/L. • BOD was in the range of 2.0 to 2.4mg/L.
Soil Quality	Soil was analyzed for 8 locations. • pH varied from 7.15 to 7.87. • EC was observed maximum at 365 µmhos/cm at Project site and minimum 328 µmhos/cm at Mandwara. • Organic matter ranged from 0.26 to 0.58 %. • Measured conc. in respect of N, P was moderate while K was low at all the locations.

4.1 BIOLOGICAL ENVIRONMENT:

The biological environment has been studied based on the site observation and secondary data. There are no rare or critically endangered and threatened plant species in the study area as per the IUCN category. The species found in the study area are common and widely distributed.

4.2 SOCIO ECONOMIC ENVIRONMENT:

Study of socio-economic environment refers to the systematic analysis of various social, economic characteristics of human beings living in the given geographical area which in

the present case includes the study area and the impact zone. The underlying idea of study is to evaluate the cultural, social & environmental impacts of the proposed development on the social set up of the people of the area.

The demographic profile of the study area is tabulated below:

DEMOGRAPHY & SOCIO-ECONOMY

Name of villages	No. of Households	Total Population	Male	Female	Child (0-6)	Literacy (%)		Scheduled Caste	Scheduled Tribe	Total workers	Main workers	Marginal workers
						Male	Female					
Amroh	35	166	70	96	22	96.61	82.35	12	0	132	19	113
Bhatehar	22	86	45	41	5	97.62	92.31	4	0	22	12	10
Ranoh	42	190	86	104	35	83.82	81.61	68	0	142	31	111
Nagoh Karant	45	208	101	107	21	93.55	79.79	45	0	166	7	159
Nangal Khanora	82	350	164	186	38	88.57	84.30	84	0	74	40	34
Koi	73	301	140	161	35	93.70	84.89	0	0	243	39	204

(Source: Census of India, 2011

5. ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES:

Air environment: In river bed open-cast mining, the air quality depends on the nature of pollutant & its concentration and the meteorological conditions of the area.

Anticipated impacts: Loading & unloading operation during manual & semi-mechanized mining results in the generation of dust which depends upon the emission rate of pollutant & its dispersal and the meteorological conditions. The only significant pollutant generated in open cast river bed mining is PM of different sizes.

Mitigation measures:

- Greenbelt will be developed outside the mining area but within the lease area.
- Masks as PPE will be provided to workers.
- Water sprinkling on mining site and on the haul roads will be done as when required.
- PUC certified and properly maintained vehicles will be engaged in transportation.
- Speed limit will be fixed for transport vehicles.
- Overloading will be strictly prohibited and covered transportation will be enforced.

Water environment: The mining operations in the river bed may impact groundwater hydrogeology and surface water regime and the impacts depend on the nature of material, hydrogeology and groundwater requirements.

Anticipated impacts:

- Groundwater contamination due to water table intersection.
- Surface water contamination due to waste water disposal.
- Excessive mining results in the thickness of natural layer which may reduce the recharge of groundwater.

Mitigation measures:

- Water table will not be intersected and mining will be limited to 1.0 m or the water table whichever comes first.
- Periodic analysis of groundwater quality and the trend.

Land environment: Land environment is generally affected by change in Land use, topography, drainage pattern and the geological features of mine lease area.

Anticipated impacts:

- River bed topography may change by formation of excavated pits.
- Solid waste dumps may be carried to the river.
- Nearby area may experience some topographic changes.

Mitigation measures:

- No pits will be created and the whole block mined each year.
- Mining will be done after leaving the stipulated safety zone.
- No solid waste will be generated in the river bed mining.
- Mining will be done as per mining plan and restricted to lease boundary.
- Due to replenishment, topography pre & post mining will not change.

Noise environment: The lease area is away from habitation and surrounded by thick vegetation and represent calm surroundings. There exists no industry and heavy traffic in the area. No blasting is involved in mining**.**

Anticipated impacts: The main source of noise will be vehicular movement & negligible noise is generated by manual mining using hand tools.

Mitigation measures:

- Properly maintained vehicles will be used for transportation.
- Blowing of horns will be prohibited.
- Workers will be educated regarding health hazards of noise, permissible noise levels and PPE's

6. Ecological & biodiversity:

No effluent will be generated from the process and the air emissions are negligible. These affects are short-lived. Hence, no significant impacts will be there.

Mitigation measures:

- No tree cutting will be done during mining.
- Plantation will be done in the lease area outside the safety zone.

Socio-economic:

Anticipated impacts:

- The project will generate employment opportunities for around 170-175 locals in addition to the indirect employment for many.
- The project will contribute to the social and environmental well-being by way of CSR & CER.
- Ancillary development in the area.

Solid-waste:

There will not be generation of solid waste from the project as all the mined material will be processed at crusher.

Mitigation measures:

- Domestic sewage after septic treatment at nearly crusher site will be disposed on to land for plantation.
- The silt & clay mixture generated during mining will be processed at crusher along with minerals.

7. Traffic environment:

Anticipated impacts:

- There will be increase in traffic density which will lead to air pollution in terms of particulates & gaseous emissions.
- The vehicular movement results in noise pollution.

Mitigation measures:

- Only PUC certified vehicles will be used for transportation.
- Unnecessary blowing of horns will be prohibited.
- Workers will be periodically examined for health checkups.

8. ADDITIONAL STUDIES:

Mining is proposed in government auctioned land in the mild stepping river bed to protect adjoining area from erosions. Replenishment study of the river bed is the propagative of the concerned department of GoHP.

9. PROJECT BENEFIT:

The project will bring overall improvement in the surrounding area by way of employment opportunities and the state by revenue generation. There will be improvement in the economic condition of the people and the enhancement in the quality of life through employment.

10. CER ACTIVITIES (CORPORATE ENVIRONMENTAL RESPONSIBILITY):

Requisite amount against the CER activities will be deposited in the account of Directorate of Environment, Science & Technology (DEST), GoHP along with the Environment Clearance of the proposal. The CER activities will be decided and executed by the DEST itself.

11. ENVIRONMENTAL MANAGEMENT PLAN:

No major environmental impacts are associated in the river bed mining except the generation of fugitive emissions from handling of minerals. The preventive measures will be in place to keep the pollutants in the prescribed levels. Plantation as proposed will further improve the air quality in the area. A budgetary provision of 13.0 lacs as capital cost and 4.35 lacs as recurring cost has been made for environmental management. In addition, provision has been made for occupational health & safety of workers. Regular Environmental Monitoring has been instituted in the environmental monitoring program.

12. BUDGET ALLOCATION OF ENVIRONMENT MANAGEMENT PLAN.

Details of expenditure on environment given below.

Expenditure on environmental measures

S. No.	Title	Capital Cost (Rs. Lacs)	Recurring Cost (Rs. Lacs/annum)	Time frame to Implement
1.	Air pollution control- Management of haulage road including water sprinkling with the help of tanker through contract supply.	--	1.5	Twice a day & as per requirement
2.	Plantation & its maintenance for five years.	4.0	0.80	With affect from the first monsoon after the grant of EC & completion within two years.
3.	Waste management.	2.0	0.4	As per mining plan
4.	Check dams/ retaining structures & its maintenance	6.0	1.2	As per mining plan
5.	Testing of air, water and noise parameters as per norms of HP Pollution Control Board.	----	0.25	As per SPCB
6.	Occupational health measures- Provision of PPE, first aid and other miscellaneous.	1.0	0.20	As per mining regulations.
Total		**13.0**	**4.35**	

Conclusion: As the proposed project results in the economic, social & environmental upliftment of the area and the initiative through the CSR & CER, there will be positive impact in the region. The project may therefore be implemented at the earliest.

CHAPTER-1.0
INTRODUCTION

1.1 PURPOSE OF THE REPORT:

Environmental Impact Assessment (EIA) is the management tool to ensure the sustainable development and it is a process, used to identify the environmental, social and economic impacts of a project prior to decision-making. It is a decision-making tool, which guides the decision makers in taking appropriate decisions for undertaking any project. EIA systematically examines both beneficial and adverse consequences of the proposed project on the surrounding environment and ensure that these impacts are taken into account during the project execution ***Smt. Rama Sharma, Prop. Sidhi Vinayak Stone Crusher.***

1.2 CATEGORY OF THE PROJECT:

As per amended MoEF&CC notification no. S.O 3977 (E) dated 14th August, 2018, the lease area being <100 ha, the project is categorized as 'B1' and its 'EC' will be provided from State Level Impact Assessment Authority Himachal Pradesh.

1.3 IDENTIFICATION OF THE PROJECT & PROJECT PROPONENT:

1.3.1 IDENTIFICATION OF THE PROJECT:

The proposed mining area is a government land which is a river bed of Soan river comprising area of 09-96-64 ha falls at Mohal Ranoh, Tehsil- Jaswan, District- Kangra, Himachal Pradesh.

1.4 PROJECT PROPONENT:

Smt. Rama Sharma is individually involved in this business considering motive of sustainable and ecofriendly work culture and no harm to surrounding environment from the project activities.

1.5 LEGAL PROVISION:

The proponent satisfies all legal requirements necessary for the projects such as **Letter of Intent** attached as Annexure-I, approval letter of mine plan from concerned authority as Annexure-II,

500-meter radius certificate as Annexure-III and duly signed joint inspection report as Annexure-IV.

1.6 BRIEF DESCRIPTION:

1.6.1 NATURE OF THE PROJECT:

The Mining area lies within the river bed of Soan river which contains Boulders, Sand, Bajri and silt. Siwalik rocks are present in the upstream as well as in and around Mining area and sediments of quartzite, granite and sandstone are noticeable which are in the shape of round to subround. It has also observed that in this type of stream, the replenishment factor is 100% of the material excavated during the year. Additionally, in the mining area there are sufficient chance of deposition of minor minerals that's why mining shall be done every year as the material excavated up to the one-meter depth would be replenished during the rainy seasons.

1.6.2 SIZE OF THE PROJECT

This is a small project for mining of Stone, Sand and Bajri having an area of about 09-96-64 Hect which is proposed for mining for five years amounting to total saleable minerals of 10,23,750 MT.

1.6.3 LOCATION OF THE PROJECT:

The mining area is situated in the river bed of Soan Khad. The total Lease area of mining measuring 09-96-64 hectare at an altitude of 458 meters above mean sea levels. The lease area is river deposit and located at Mohal Ranoh, Tehsil- Jaswan, District- Kangra, State-Himachal Pradesh. The details for the same given in table 1.1 The global coordinates of the site as Latitude are 31°51'31.51"N, 31°51'21.93"N, 31°51'12.74"N & Longitude is 75°57'42.91"E, 75°57'43.92"E, 75°57'44.75"E, respectively. Key plan of the project site is provided as figure 1.1, approach map of the project site is provided as figure 1.2 and Figure 1.3 shows satellite image of the project.

1.1 Detail of Mining Lease Area

Khasra Number	79/1 and 447/1
Area in Hectares	09-96-64
Mauza & Mohal	Ranoh

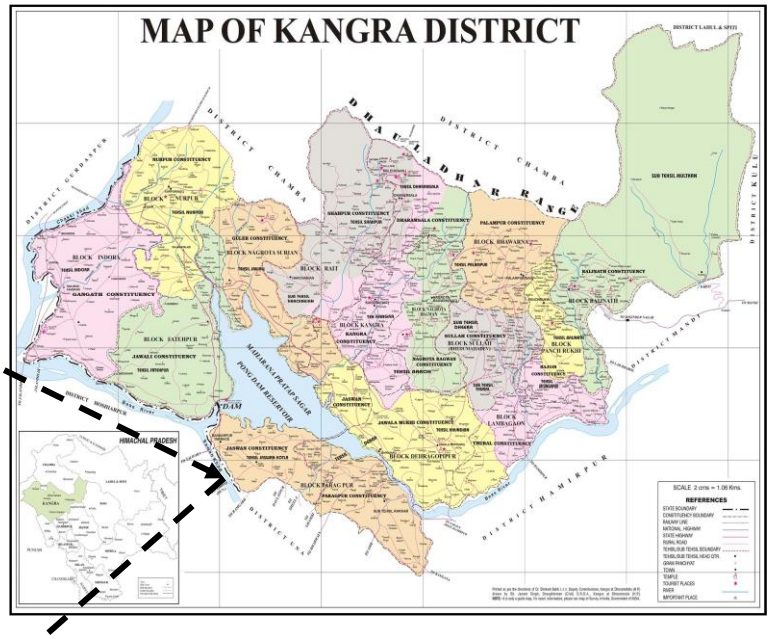
Kisam	Gair Mumkin Khad
Land Owner	Government land
Name of the Panchayat	Amroh and Haler

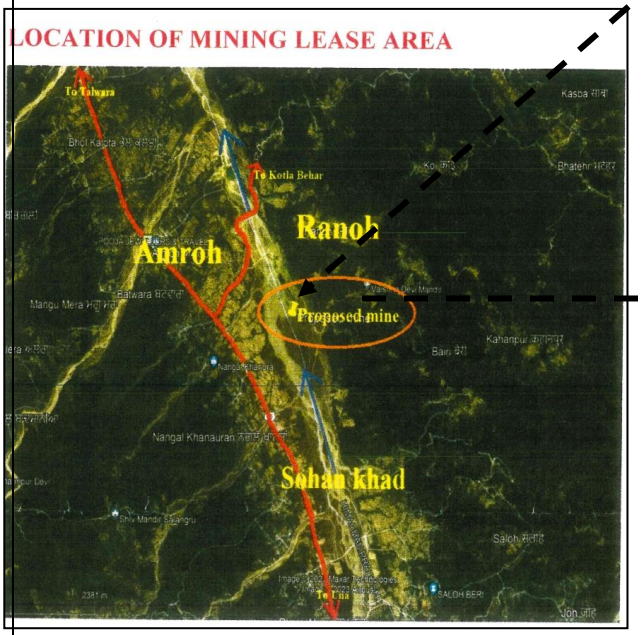
1.6.4 DETAIL OF ROAD TRANSPORT:

The proposed Mining lease area is located in the river bed of Soan Khad. The extracted mineral material will be transported to the stone crusher site located at a distance of about 1.0 kms from the mining site. The average rate of production of various constituents of river borne deposit like sand, stone, bajri and silt/clay is proposed around 204750 metric tonnes per year. Taking into consideration, 300 working days in a year (or as allowed by the competent authority), roughly 682.5 MT mineral is likely to be extracted per day for which about 75 to 76 trucks of 9.0 metric tonnes capacity would be used to carry the mineral material to the stone crusher site. Almost equal number of vehicles will be used for transportation of finished material to the market.

FIGURE – 1.1

Location Map (From India Map to Local Map)





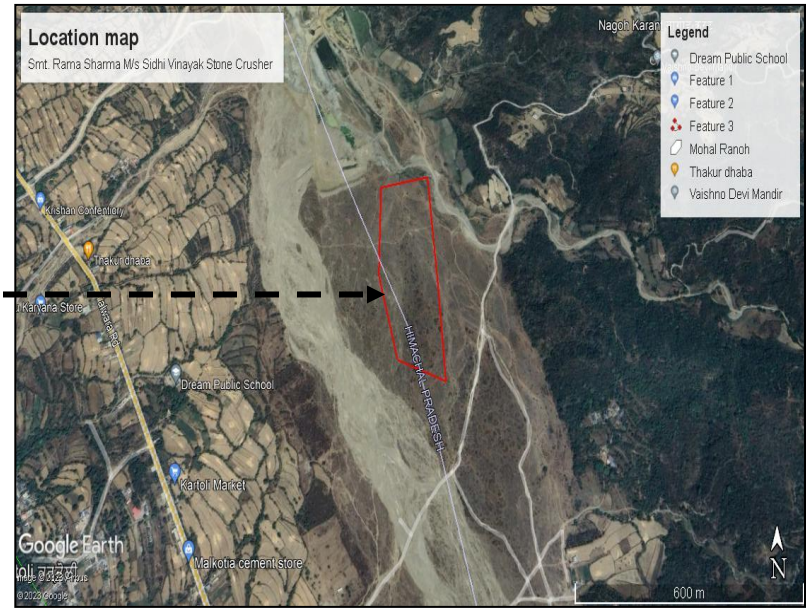
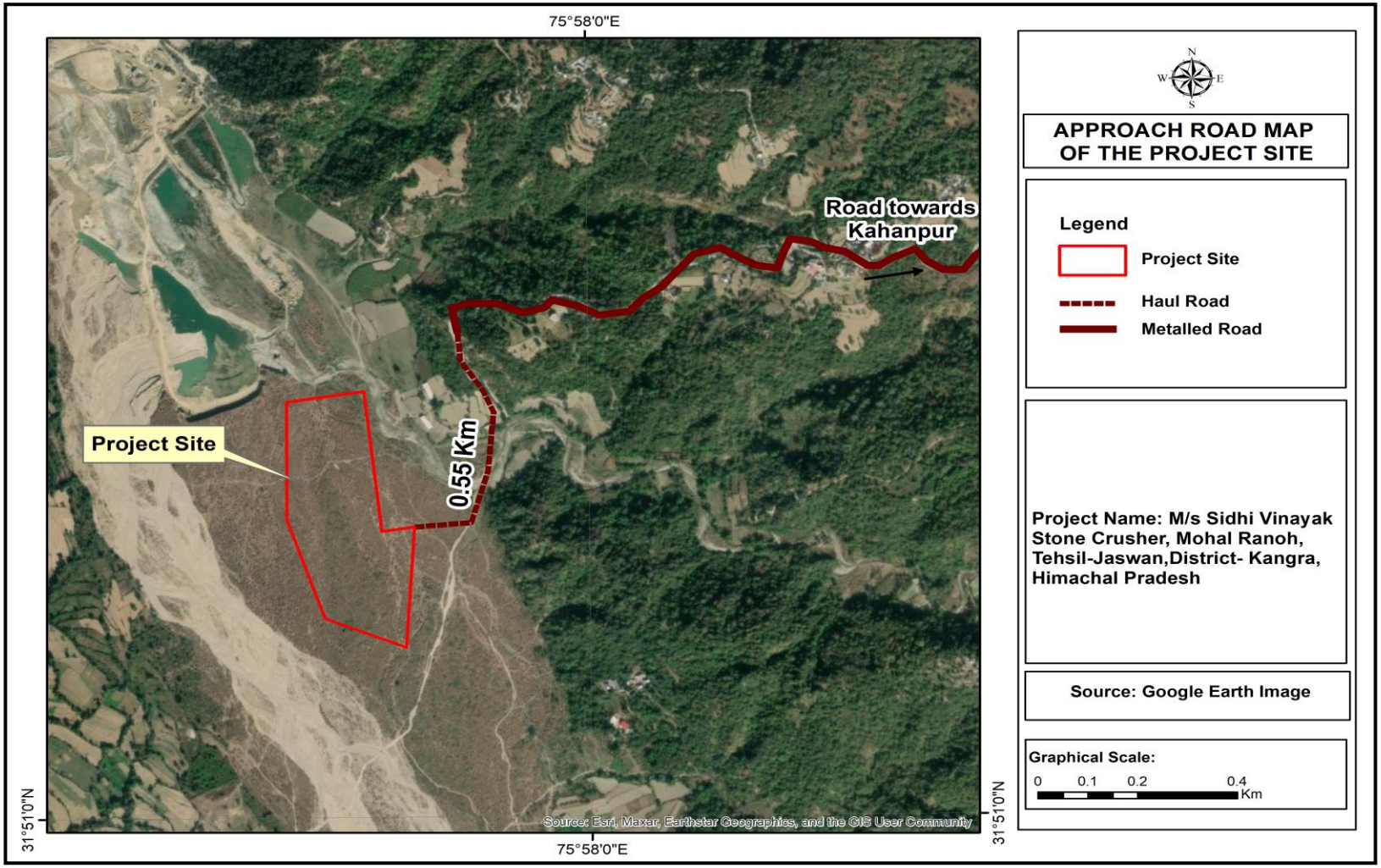
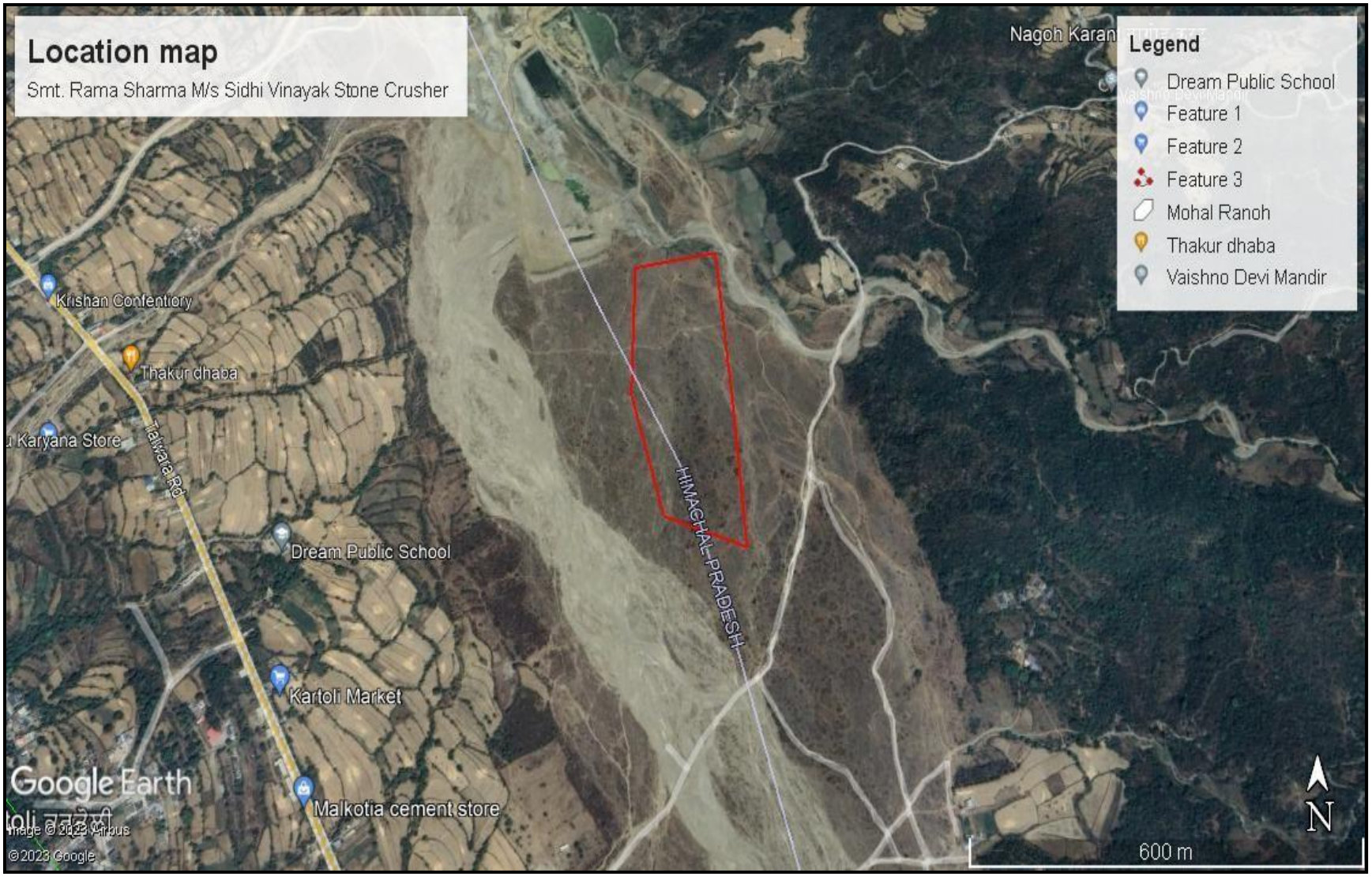


FIGURE 1.2 APPROACH ROAD TO THE MINING AREA



The mine lease area is located in Swan Khad at a distance of approx. 40 Kms from Dehra and can be approached by Dehra-Chintpurni- Kotla- Jaswan – Kuthehar- Ranoh road.

FIGURE 1.3 LOCATION MAP OF THE MINING AREA



1.7 SCOPE OF THE STUDY:

This study contains various information on the Environmental factors viz-a-viz contribution of pollution by the proposed unit. These factors include air, water, noise, health, socio economic, land use and agricultural pattern, hydrological conditions, geomorphological and physiographical study. It discusses the predicted impact of the proposed plant activities on these factors. Broadly, under the scope it is envisaged:

To assess the present status of air, water, land, noise, biological & socio-economic hydrological components of environment.

- To identify, quantify & evaluate positive or negative impacts of various operations on different environmental components.
- To evaluate proposed pollution control measures and to suggest additional control strategies, if any, to mitigate the adverse effects.
- To identify risk factors & suggest their mitigation including occupational health of the workers.
- To prepare Environmental Management Plan for utilization and adoption of safety measures.
- To delineate future Environmental quality monitoring programme.
- To identify the needs of the study area and suggest supportive measures under Corporate Social Responsibility.

1.7.1 METHODOLOGY:

- Various steps involved in Environmental Impact Assessment study of the proposed project are divided into the following phases:
- Identification of significant environmental parameters and to study the existing status within the impact zone with respect to air, water, noise, soil and socio-economic and hydrological components of the environment
- Study of various activities of the proposed project for manufacture of final product and to identify the area's leading to impact/change in environmental quality.
- Identification/prediction of impacts for the identified activities and to study levels of impacts on various environmental components.

- Evaluation of final levels of various parameters after superimposing the predicted impacts over the baseline quality.
- Formulation of Environmental management plan for implementation in the proposed project.

1.8 IMPORTANCE TO THE COUNTRY OR REGION:

The extraction of minor minerals especially Sand Silt and clay play a pivotal role in economic wellbeing of the state and to the nation. These words are found in the legislative and surface minelaw and reflects the importance of mining to our society. The law also goes on to say that the effects of mining must be regulated to provide for the protection and conservation of the natural resources of the State and district and the reclamation of lands impacted by mining.

The demand of stone, Bajri and sand in the area is increasing day by day both for private construction activities and infrastructure development by the Government Agencies. The State Governments has launched several projects of road construction, road widening, bridge construction and buildings for offices, school and other social activities. Thus, the stone (after crushing), Bajri, and sand extracted from the mining lease area contribute to the development of infrastructure and prosperity of the area/region.

1.9 DEMAND AND SUPPLY:

There is large demand of stone, Bajri and sand for construction activities in the region. It is essential raw material for construction of buildings, roads, bridges; check dams, etc in the area. As compared to demand the supply of the crushed stone, Bajri and sand is short. Domestic Market The demand for stone grit is limited to regional domestic market and it has no potential for export. The sand stone and Bajri will be sold in the open market. Moreover, the construction industry using the raw material from the mine will generate employment to many forskilled and semi-skilled workers. Thus, the production of construction aggregates, such as sand, stone and Bajri has tremendous impact on multiple generation of employment in downstream activities. Economy of the area will get a boost and there will be an overall growth of the region in terms of standard of living, education, health and transport.

CHAPTER-2

PROJECT DESCRIPTION

2.0 GENERAL:

Smt. Rama Sharma has proposed a new project of non-coal mining for obtaining E.C from the concerned authority having ***production capacity is 10,23,750 metric tons for five years***. According to EIA notification and subsequent amendments it is a ***B1-Category*** project of serial no. 1(a) of EIA notification. In this project, mining of minor minerals is semi mechanized and area for mining is river bed of Soan River having an area measuring **09-96-64 Hectares**. The mine plan has been prepared by registered H.P. R.Q.P. and approved by industry department of Himachal Pradesh. Description of mine development and information associated with this project has been furnished in this chapter.

2.1 YEAR WISE-PRODUCTION PROGRAMME:

The reserve of all the constituents of river borne material have been calculated for the mineable area of 99664 sqm meters. The reserves have been calculated year wise for five years mining assuming that the excavated pits during previous year mining will be fully replenished with the new crop of minerals.

Details of the production of the stone from various benches from first to fifth year are given below.

Table: - 2.1 Showing year-wise production programme of mining in mineable area

Period	Proposed area in sqm	Quantity of Boulders in MT	Quantity of Bajri in MT	Quantity of Sand in MT	Quantity of Silt and clay in MT	Quantity of mineral deposit
1st year	91000	81900	51188	40950	30712	204750
2nd year	91000	81900	51188	40950	30712	204750
3rd year	91000	81900	51188	40950	30712	204750
4th year	91000	81900	51188	40950	30712	204750
5th year	91000	81900	51188	40950	30712	204750
Total						**10,23,750**

Thus, the total production during five years will be **10,23,750 metric tons.**

2.1.1 DEVELOPMENT AND PRODUCTION:

The mining land area lies in the riverbed of Soan river gets adequately replenished during monsoon as well as during winter rains when the river gets heavy load for a short period. The river levels rises upto 2 meters during monsoon rains/ rainy season. The mining has been planned in thefull block up to a depth of 1.00 meter to give a better chance for replenishment. The worked-out block shall get replenishment during monsoon and winter rains for recharging the worked-out areaand the worked-out area shall be fully replenished. Total 99664 square meters of area shall be available for working every year. Geological plan for the same given as **figure 2.1.**

2.1.2 DEVELOPMENT AND PRODUCTION AT THE END OF 1ST YEAR:

- Mining of **91000** square meters of material is proposed to be mined in from the lease area.
- 81900 metric tons of Boulder, 51188 metric tons of Bajri and 40950 metric tons of sand will beproduced as a saleable mineral.

- 30712 metric tons of silt & clay will be generated as waste.

Hence, no topsoil is generated.

The production of each mineral constituent is as under: -

Production of mineral and mine waste during first year in metric tonnes:

Name of mineral	Quantity in metric tones
Boulder	81900
Bajri	51188
Sand	40950
Clay/Silt	30712
Total	204750

2.1.3 DEVELOPMENT AND PRODUCTION AT THE END OF 2ND YEAR:

- Mining is proposed in 91000 Sqm area in the river bed.
- 81,900 metric tons of boulders and 51,188 metric tons of bajri will be produced for manufacturing of Grit.
- 40,950 metric tons of sand will be produced as a saleable mineral.
- 30,712 metric tons of silt/clay as mine waste will be generated.

No top soil will be generated.

The production of each mineral constituent is as under: -

Production of mineral and mine waste during second year in metric tonnes:

Name of mineral	Quantity in metric tones
Boulder	81900
Bajri	51188
Sand	40950
Clay/Silt	30712
Total	204750

2.1.4 DEVELOPMENT AND PRODUCTION AT END OF 3rd YEAR:

- Mining is proposed in 91,000 sqm area in the river bed.

- 81,900 metric tonnes of boulders and 51,188 metric tonnes of bajri will be produced formanufacturing of grit.
- 40950 metric tonnes of sand will be produced as a saleable mineral
- 30712 metric tonnes of silt/clay as mine waste will be generated

No top soil will be generated.

The production of each mineral constituent is as under: -

Production of mineral and mine waste during third year in metric tonnes:

Name of mineral	Quantity in metric tones
Boulder	81900
Bajri	51188
Sand	40950
Clay/Silt	30712
Total	204750

2.1.5 DEVELOPMENT AND PRODUCTION AT END OF 4th YEAR.

- Mining is proposed in 91,000 sqm area in the river bed.
- 81,900 metric tonnes of boulders and 51,188 metric tonnes of bajri will be produced for manufacturing ofgrit.
- 40,950 metric tonnes of sand will be produced as a saleable mineral
- 30,712 metric tonnes of silt/clay as mine waste will be generated

No top soil will be generated.

The production of each mineral constituent is as under: -

Production of mineral and mine waste during fourth year in metric tonnes:

Name of mineral	Quantity in metric tones
Boulder	81900
Bajri	51188

Sand	40950
Clay/Silt	30712
Total	204750

2.1.6 DEVELOPMENT AND PRODUCTION AT END OF FIFTH YEAR:

- Mining is proposed in 91,000 sqm area in the river bed.
- 81,900 metric tonnes of boulders and 51,188 metric tonnes of bajri will be produced for manufacturing of grit.
- 40,950 metric tonnes of sand will be produced as a saleable mineral
- 30,712 metric tonnes of silt/clay as mine waste will be generated

No top soil will be generated.

The production of each mineral constituent is as under: -

Production of mineral and mine waste during first year in metric tonnes:

Name of mineral	Quantity in metric tones
Boulder	81900
Bajri	51188
Sand	40950
Clay/Silt	30712
Total	204750

2.2 END USE OF MINERAL:

The stone and bajri shall be used for manufacturing of grit and mineral sand will be sold in the market as per demand.

2.3 GEOLOGY:

The geology of the catchment Area:

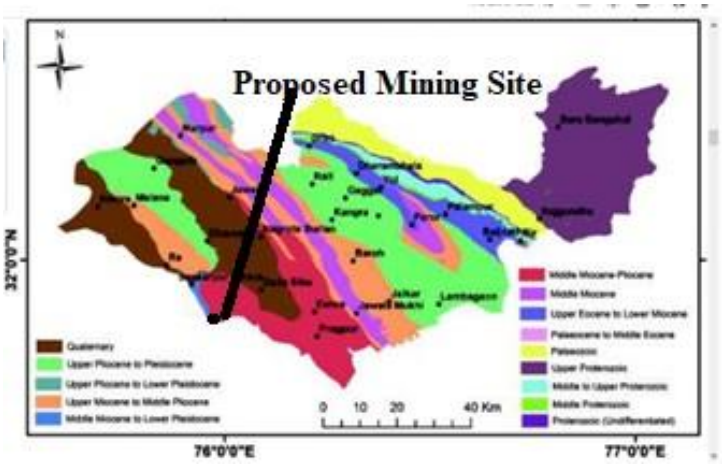
The rock deposits in the proposed mine lease area belongs to the Siwalik group broadly. The Siwalik Group in the Himachal Himalaya forms a parallel foot-hill belt in the Sub- Himalayan zone, occurring almost from the J & K, Hoshiarpur in Punjab and running along the foot hills of

Himalayas upto as far as Arunachal Pradesh. The Kangra district lithological and stratigraphical sequence follows the Shiwalik group comprising of conglomerates, boulders, pebbles, shingles, grit derived from Moraines of Neocene to Paleocene period of glacial era.

Therefore, the assemblage of the rock types amongst the boulders and other wide and big fragments over the river beds and present Soan Khad consist of granites, gneisses, schists, limestone etc. from older beds in main Himalayas.

The Siwalik group of rocks are dominantly sedimentary in origin and comprise of breccia, shales, boulder beds and other rock fragments derived from glaciated activities.

The geological map prepared by GSI as referred to by the corresponding Research Author for Kangra District has been displayed below. It also shows the location of proposed stone mining project on the Soan river bed. The age of the river bed sediments is from middle Miocene to Pliocene indicating strong glaciating moraine sedimentary deposits of classified boulders and assorted fragments.



Source: GSI-Benidhar Deshmukh-Himalayan Geology, Vol. 35 (1), 2014, pp. 47-55.

Fig No-xxx Map showing the Geology of Kangra District with location of proposed Stone Mining Site

Table 2.2 Showing Lithostratigraphy of the Siwalik Group

Sub Group	Lithology	Thickness (approx.)
Upper Siwalik	B) Predominantly massive boulders with red orange clay as matrix and minor sandstone andearth, buff and brown clay stone A) Sandstone, clay and conglomerate alternation.	2300 m
Middle Siwalik	B) Massive sandstone with minor conglomerateand local variegated clay stone. A) Predominantly medium to coarse- gained sandstone and red clay alternation, soft pebbly with subordinate clay stone, locally thick prism of conglomerate.	1400 m to 2000m
Lower Siwalik	B) Alternation of fine to medium-grainsporadically pebbly sandstone, calcareous cement a prominent chocolate and maroon clays tone in the middle part. A) Red and mauve clay stone with thin intercalation of medium to fine-grained sandstone.	1600m

2.4 GEOLOGY OF THE PROJECT SITE:

The proposed mining site is a part of riverbed of Soan (Khad) near Ranoh village containing channel alluvium comprising of Boulders, Cobbles, Pebbles, River borne Bajri, Sand and Clay deposits. Siwalik rocks are present in the upstream as well as in and around mining area and river bed sediments varying in size of boulders – pebbles of quartzite, granite and sandstone are noticeable which are rounded to sub rounded. The boulders, cobbles and pebbles are hard in nature and suitable for use as building material which can be easily fed to the crusher for production of sand crush, grit, sand etc as per requirements. The river sediment bed has thickness varying between 5cm to 25 cm along the river bed depending upon the locations within the river-khad bed. The *Soan river is perennial* in nature and therefore the occurrence of river bed materials for seasonal mining after monsoon till end of summer is practical.

The proposed river bed stone project belongs to the Upper Siwalik formation of rocks which are mainly loose and brecciated sedimentary beds.

The description of Annual Deposition with respect to geology of catchment area:

As the stream is perennial in nature, it comprises Tertiary and Quaternary age of sandstone, conglomerate, clay, gravels beds, sand with pebbles of sandstone and lenses of clay. The banks also comprise of boulder bed. These rocks are soft in nature, unconsolidated, fractured and jointed due to structural discontinuities prone to erosion. The annual deposition of 5.0 cm to 25.0 is observed in the area depending upon the location and site conditions.

2.5 RESERVES ESTIMATE:

2.5.1 Percentage wise Distribution of stone, gravel sand etc.

The different constituents of river borne deposits such as Boulder, Bajri, Sand and silt, clay based on size classification were considered for reserve calculation. Although it is not possible to mark these units separately on the geological map therefore, two pits at different locations of 1x1x1 meter dimensions were got dug in the Mining Area and material so excavated was separated into different size and their percentage was worked out and the percentage was taken in to account during calculation of reserves. The results of the test pit dug are given in the following table 2.3

Table 2.3: showing %age of minor mineral constituents

Table showing %age of minor mineral constituents	
BOULDERS	40%
BAJRI	25%
SAND	20%
SILT & CLAY	15%

2.5.2 ESTIMATE OF GEOLOGICAL RESERVES OF EACH MINERAL:

An average specific gravity i.e., 2.25 is taken into consideration for the calculation of mineral potential in the area mining for mining purpose. As per information gathered on previous and ongoing development works like construction of Bridges and Bore wells by the PWD and IPH department respectively, the average depth of sediments in and around the Mining Area is less than 3.0 meters. However, for calculation of Geological reserves, the depth has been taken upto 2.0 meters. The geological reserves are shown under:

Showing Geological Reserves in metric Tonnes

Area (in sqm.)	Specific gravity	Depth in meters	Geological Reserves (in MT)
99664	2.25	2.0	448488

2.6 RECLAMATION PLAN:

The mined area being part of the river course cannot be reclaimed for any other purpose. The mining depth will be upto 2 meter or up to water level whichever is less, thus water regime will not be disturbed. The entire quarried area will be replenished and reclaimed by the river during monsoon. Thus, the topography or land use of the river bed will not change.

2.7 WASTE DISPOSAL ARRANGEMENT:

The applicant is intending to install mechanical screener for sorting the different sizes constituent of river borne material for sale in the open market. The silt/clay are likely to be generated as a

mine waste because this material does not have a ready to sell market. Since, the mining lease area is a part of river bed, as such, on such land form, there is no possibility of occurrence of any soil cover. The year wise generation of silt/clay is shown in the following table 2.4.

Table: - 2.4 Showing Year wise generation of silt and clay

S. No.	Year	Quantity of Silt and clay (MT)
1.	**1st year**	30,712
2.	**2nd year**	30,712
3.	**3rd year**	30,712
4.	**4th year**	30,712
5.	**5th year**	30,712
Total		**1,53,560**

2.7.1 YEAR WISE DISPOSAL OF MINE WASTE:

As the silt and clay are inseparable mine waste it will be stacked at the site after screening and washing. Moreover, waste material will shall be used for the maintenance of road to the applied mining lease area. If required waste material shall be dumped in the private land of the applied mining lease holder near the stone crusher unit.

2.8. TOPSOIL UTILISATION:

Since the mining lease area is part of river bed, as such there is no possibility of presence of any soil cover on such land form.

2.9 PREVENTIVE RETAINING STRUCTURES:

The check dams will be constructed at suitable locations to protect bank erosion during rainy season. Five nos. of check dams of 10.0 meters in length, 1.0 meters width and 1.5 metres in height have been proposed to be raised in five years. The following table shows the location of check dams, their dimensions and tentative cost of construction.

Table 2.5: List of Check Dams (year wise)

Year	Location	Length (m)	Height (m)	Width (m)	Tentative cost (Rs.)
1st year	**C-1**	10.0	1.5	1.0	1,20,000
2nd year	**C-2**	10.0	1.5	1.0	1,20,000
3rd year	**C-3**	10.0	1.5	1.0	1,20,000
4th year	**C-4**	10.0	1.5	1.0	1,20,000
5th year	**C-5**	10.0	1.5	1.0	1,20,000
Total					**6,00,000**

2.10 PLANTATION WORK:

Plantation work/ afforestation shall be done in order to improve the environment and ecological balance of the area. Grasses and bushes which have fibrous roots and give the binding property to the soil. Therefore, planation will be done alongside riverbed in non-mining zone of lease area.

Table: 2.6

The year wise plantation plan is given in the table below:

Sr. No.	Year	Area in Sq. mtrs	No of plants to be planted
1.	**1st Year**	2000	200
2.	**2nd Year**	2000	200
3.	**3rd Year**	2000	200
4.	**4th Year**	2000	200
5.	**5th Year**	2000	200
Total		**10000**	**1000**

The total cost of plantation including its maintenance for five years shall be approx. 4.0 Lacs. The cost includes cost of plants, mineable and other labour activities. The estimated survival rate proposed to be achieved shall be 80%.

2.11 MANPOWER DEVELOPMENT:

Total production for five years = 10,23,750

Total production for one year = 2,04,750 MT

Total production for one day = 682 MT

No. of labours required for mining 682 tons/day of minerals = 170 persons.

An estimated 170 persons, mostly locals will be employed for day-to-day operation of the project as per the following details given in table below:

CATEGORY	NUMBERS
Mining Engineer	01
Geologist	01
Foreman	01
Operators/ Drivers	28
Labors	139
Total	170

2.12 TYPE OF MINING & MINING METHOD:

The mining will be manual as well as semi mechanical. The mining method shall be adopted to facilitate the replenishment of the excavated pits during rainy season. The Mining is suggested on rotation basis in such a way that pit of previous year mining will act as depository for the post monsoon season. Thus, each block will be mined to a depth of one meter alternately in the alternate year.

The mining method adopted is of open cast mining.

- The depth of mining will be one meter only.
- No blasting will be involved.
- The mining is manual as well as semi mechanized.
- The mining operations in the lease area are confined to day light hours, from 9 A.M. to 6 P. M.
- The material is sorted manually at mining site and sand is separated from stone and Bajri.
- The sorted stone and Bajri is than loaded into tipper trucks / tractor trolleys by shovels and pans and mechanically and transported to already established crusher.

2.13 WATER REQUIREMENT:

Total amount of water required for the project is 3.5 KLD. Water will be sourced from water storage supply available at crusher site. A water storage tank of appropriate capacity shall be provided for domestic use. About 1.5 KLD will be required for dust suppression and plantation purpose and about 2.0 KLD for domestic purposes.

FIGURE-2.1

GEOLOGICAL PLAN

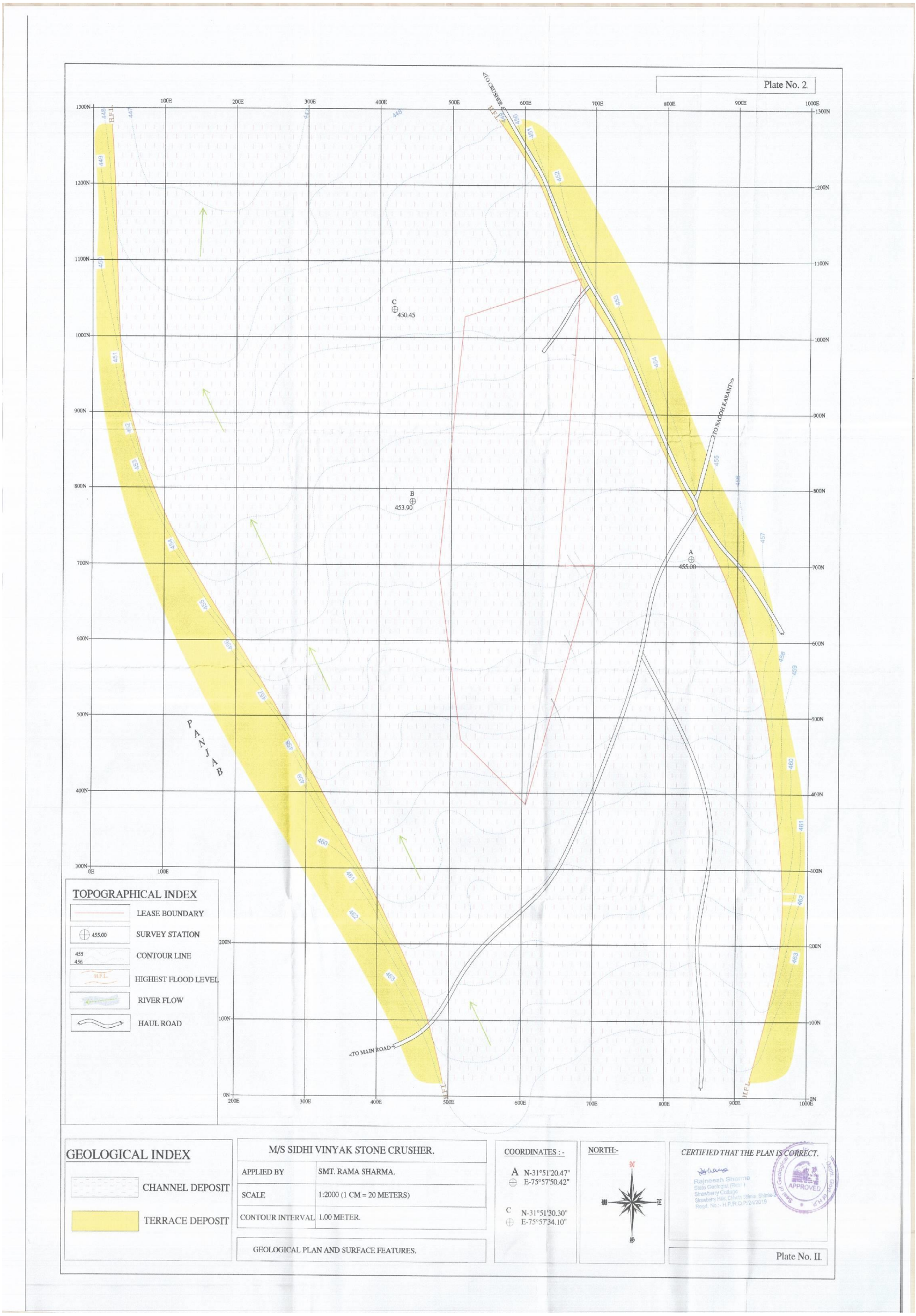


FIGURE-2.2

PIT PLAN

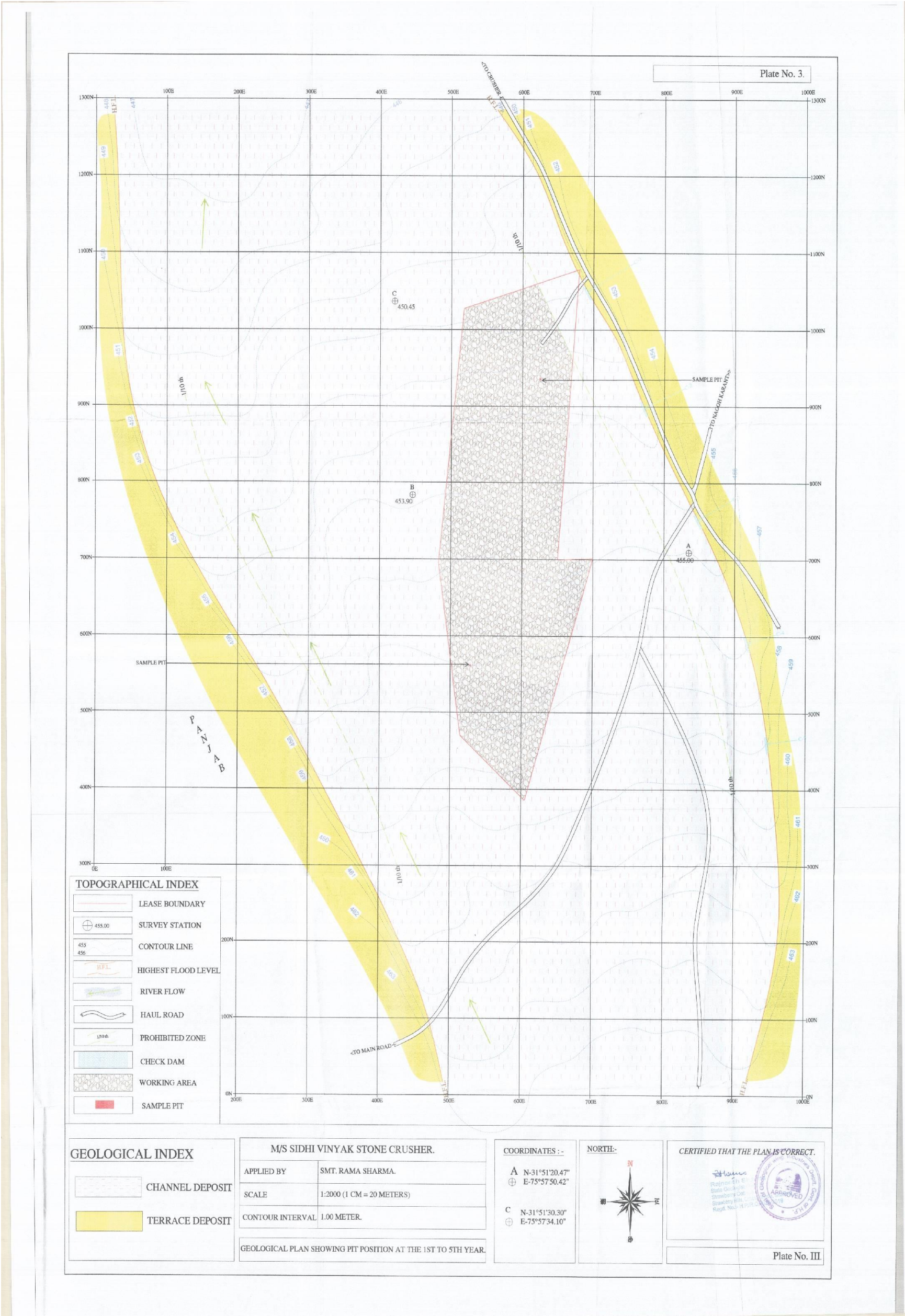


FIGURE 2.3

CROSS SECTION MAP ACROSS THE MINING AREA

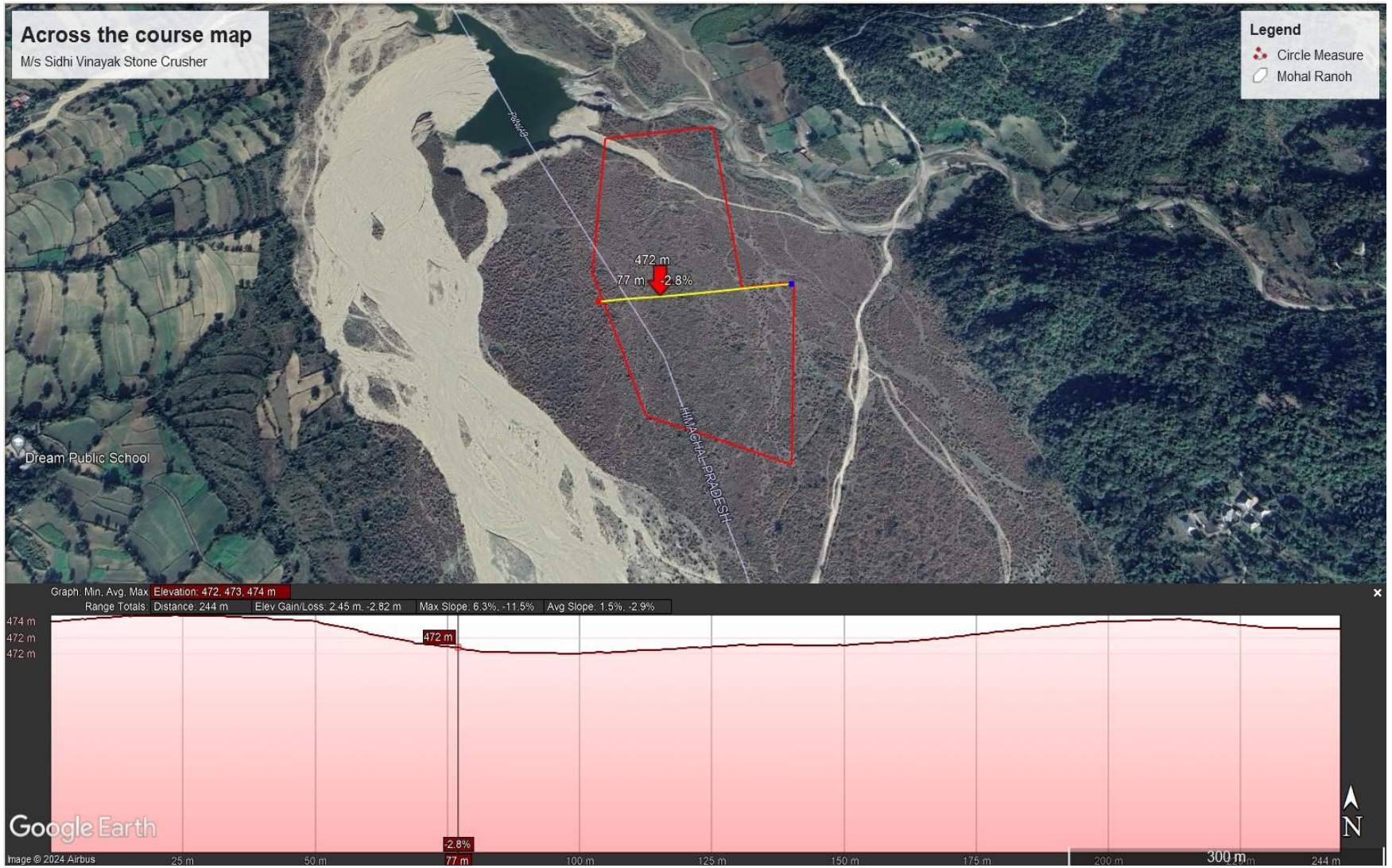
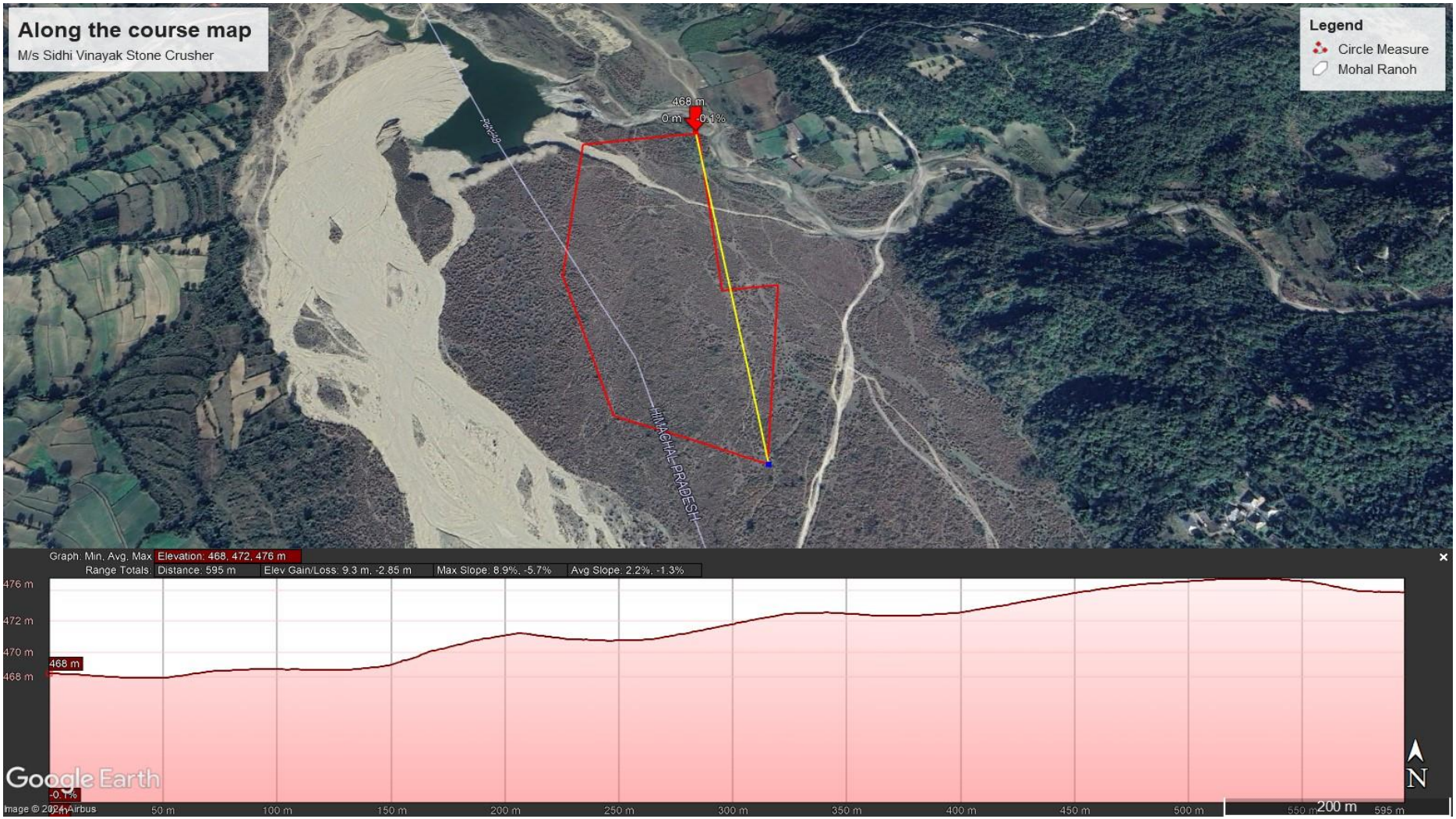


FIGURE 2.4

CROSS SECTION MAP ALONG THE MINING AREA



CHAPTER-3.0

BASELINE SETTINGS

3.0 THE STATE:

Himachal Pradesh having world's mightiest mountain ranges is one of the hilly States situated in the Northern part of India. It is blessed with some of the most spectacular and beautiful landscapes. It came into being in November, 1966 after the re-organization of States. Earlier, it was part of the combined State of Punjab. The various hill towns in the State not only provide visitors reprieve from the heat of the planes, but offer beautiful scenic sites which are real treat to the eyes. Kullu and Kangra valleys offer natural beauty which is no less than Kashmir Valley. Valleys and streams, snow clad mountains and temperate forests offer tourists and sportsmen all they want.

Earlier the economy of the State mostly depended on tourism and a large number of tourists sites had been developed by the State. However, after the re-organization, the State has made big strides in the field of industrialization also. The State has good deposits of minerals like gypsum, lime stone and slate etc. It has bigreserve of minerals which can be used in various types of industries. Mining of minor minerals is also, therefore, an extensive Industry in the State. Industries like Cement, Electronics, Fertilizers, Pharmaceuticals and Liquor can be found in good number at different places in the State. Hydel Power in the State has given a big boost to the industries. A number of Industrial areas have been developed in the State, where all facilities are provided to the entrepreneurs. Parwanoo, Barotiwala, Baddi, Paonta Sahib and Raja Ka Bag are some of the important industrial areas developed by the State in the last two decades.

3.1 KANGRA DISTRICT:

Kangra district is one of the twelve districts of the state of Himachal Pradesh, India. The District forms a north-western part of the Himachal Pradesh, bounded in the north by Chamba district, on the north-east it touches Lahul & Spiti district, On the east it is bounded by Kullu district, on the South by Mandi, Hamirpur and Una district and on the West by Punjab state. The district lies between 31°41′0" and 32°28′05" in north latitudes and between 75°35′34" and 77°04′46" in east longitudes. The district has a total area of 5739 sq.kms which covers 10.31 percent area of the state. The district consists of series of parallel mountain ranges divided by longitudinal the general direction of which, from north-west to south-east, has determined the shape of the district. Dhauladhar is the most important mountain range of the district which stretched out beautifully facing the fertile valleys of Palampur and Kangra. Dhauladhar range starts from the right bank of

the river Beas and forms boundary of the district with Kullu district. Therefore, the range passes through Banghal area above Kangra and Palampur valley covering Bara Banghal ridge. The Paprola range shuts out Bara banghal from kangra valley and this range after crossing Binwa at Paprola runs on to Mandi where it acquires the name of Sikandar Dhar. Kangra is also a home to mango trees. Kangra have the "Hilly & Chilly" type of climate found in most of Himachal Pradesh. During winter, the climate is cold but pleasant when woolens are required after August upto end of April. During summer the temperature is hot and cottons are recommended. Temperature does sometimes cross the 31.6°C mark in summers.

3.2 PROJECT SITE:

The mining area lies in the river bed of Soan Khad containing channel alluvium comprising of boulders, cobbles, pebbles, river borne bajri, sand, silt and clay deposits. The lease area is a government land located in village Ranoh, Post Office Kanpur, Tehsil Jaswan, District Kangra. Features within 10 km radius are given in Table-3.1. Location Map showing 10 km radius is given in Figure 3.1. Pillar coordinates of the Mining lease area showing in Fig. 3.2 and 500-meter radius map given in figure 3.3.

TABLE 3.1

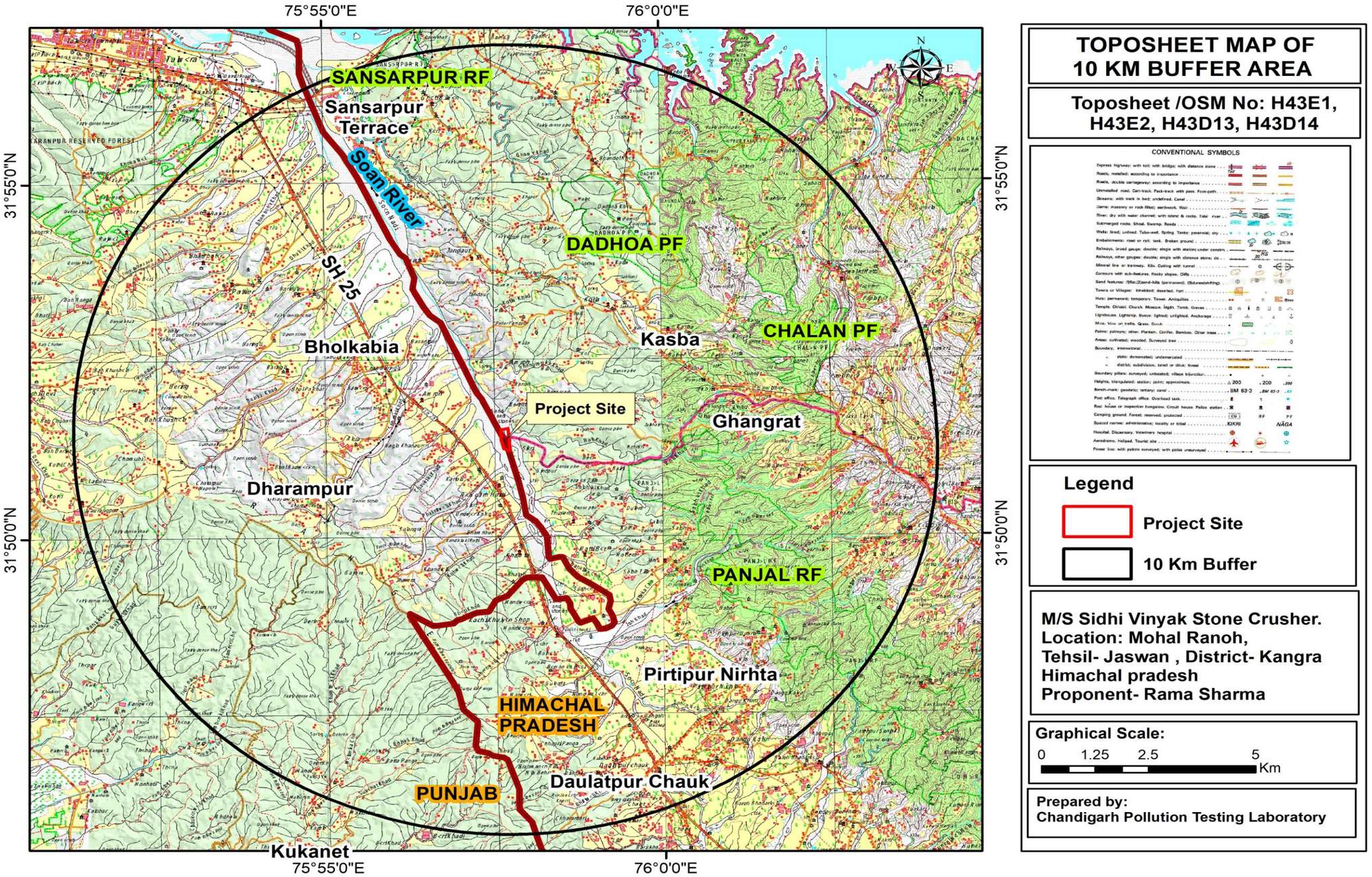
SALIENT FEATURES OF THE PROJECT

<table>
<tr><th>S. No.</th><th>Particulars</th><th>Details</th></tr>
<tr><td>1.</td><td>Location</td><td></td></tr>
<tr><td>a)</td><td>Mauza/ Mohal</td><td>Ranoh</td></tr>
<tr><td>b)</td><td>Tehsil</td><td>Jaswan</td></tr>
<tr><td>c)</td><td>District</td><td>Kangra</td></tr>
<tr><td>d)</td><td>State</td><td>Himachal Pradesh</td></tr>
<tr><td>e)</td><td>Lease Area Co-ordinates</td><td><table><tr><th>Latitude</th><th>Longitude</th></tr><tr><td>31°51'31.51"N</td><td>75°57'42.91"E</td></tr><tr><td>31°51'21.93"N</td><td>75°57'43.92"E</td></tr><tr><td>31°51'12.74"N</td><td>75°57'44.75"E</td></tr><tr><td>31°51'12.74"N</td><td>75°57'44.75"E</td></tr><tr><td>31°51'21.75"N</td><td>75°57'36.70"E</td></tr></table></td></tr>
<tr><td>2.</td><td>Elevation</td><td>The highest point of the project site is 458 meters above MSL and the lowest point is 451 meters above MSL.</td></tr>
<tr><td>3.</td><td>Climatic Conditions</td><td></td></tr>
<tr><td>i.</td><td>Temperature Min/Max</td><td><table><tr><td>Winter C°</td><td>Summer C°</td><td>Rainy C°</td></tr><tr><td>Min 5.7</td><td>Min 20.7</td><td>Min. 19.2</td></tr><tr><td>Max. 15.9</td><td>Max. 30.6</td><td>Max. 28.2</td></tr></table></td></tr>
<tr><td>ii.</td><td>Rainfall: Average,</td><td>1920.9 mm approx.</td></tr>
<tr><td>iii.</td><td>Relative Humidity, % (average annually)</td><td>Summer 55%, Monsoon 99%.</td></tr>
<tr><td>iv.</td><td>Wind speed, Kms/hour</td><td>05-10 Km (approx.)</td></tr>
<tr><td>4.</td><td>Nearest highway</td><td>State Highway -25 Talwara Rd (0.80 Km in W direction)</td></tr>
<tr><td>5.</td><td>Nearest railhead/Railway station</td><td>Dasuya 44.6 km in W direction</td></tr>
<tr><td>6.</td><td>Nearest airport</td><td>Kangra Airport (101 km towards NE direction)</td></tr>
<tr><td>7.</td><td>Nearest Major City</td><td>Daulatpur 11.0 Km</td></tr>
<tr><td>8.</td><td>Nearest Major Settlement.</td><td>Daulatpur 11.0 Km</td></tr>
</table>

Features within 5 kms		
i.	**Archaeological important places.**	Nil
ii.	**Wild life/ Elephant & Tiger pl sanctuaries**	Nil
iii.	**Industries**	Nil
iv.	**State boundary**	Punjab
v.	**Mining type**	Manual mining in the river bed of Soan Khad.

FIG. 3.1

LOCATION MAP ON 10 KM TOPOSHEET



TOPOSHEET MAP OF 10 KM BUFFER AREA

Toposheet /OSM No: H43E1, H43E2, H43D13, H43D14

Legend

- Project Site
- 10 Km Buffer

M/S Sidhi Vinyak Stone Crusher.
Location: Mohal Ranoh,
Tehsil- Jaswan , District- Kangra
Himachal pradesh
Proponent- Rama Sharma

Graphical Scale:

0 1.25 2.5 5 Km

Prepared by:
Chandigarh Pollution Testing Laboratory

FIG: 3.2

PILLAR CO-ORDINATES MAP

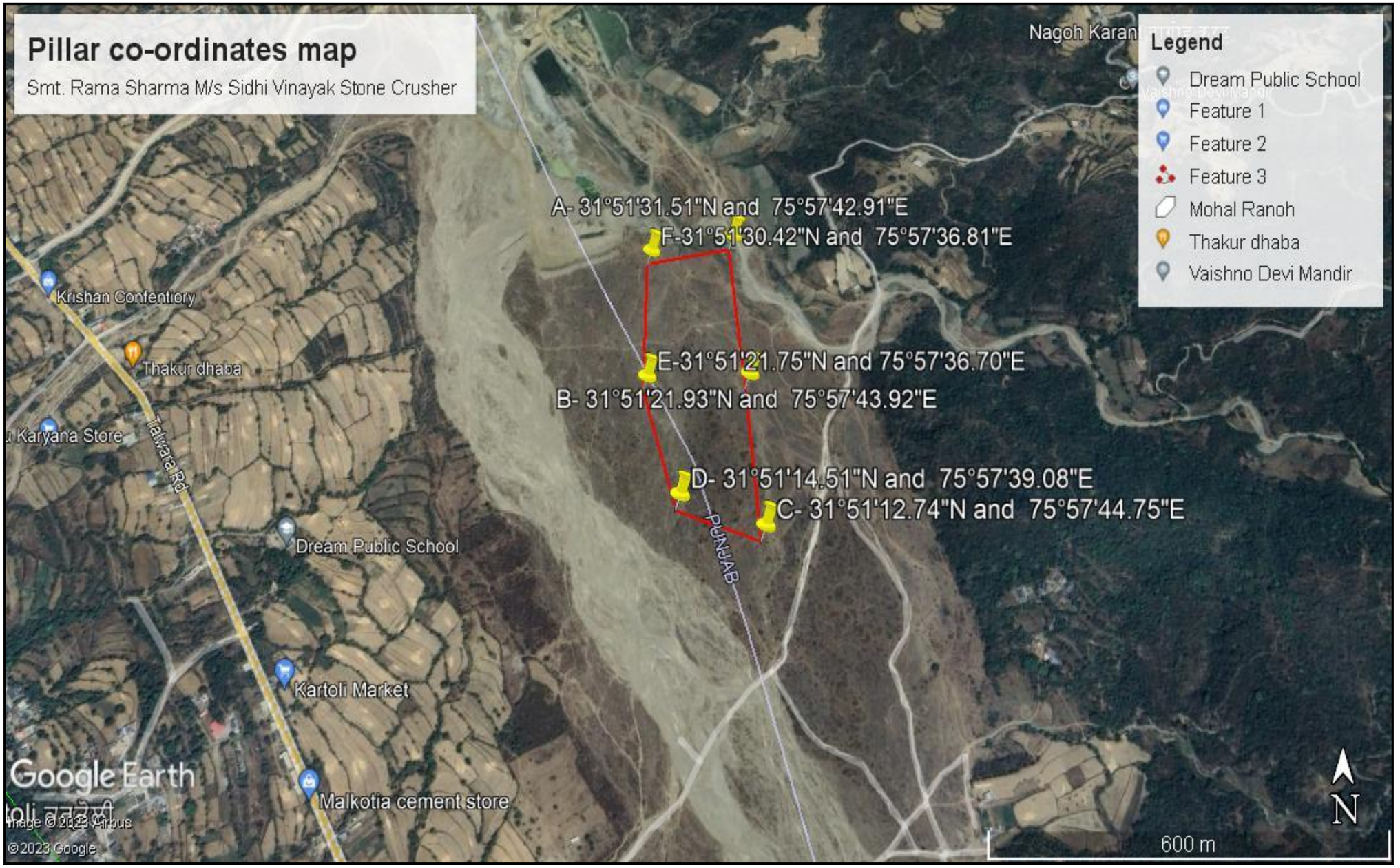
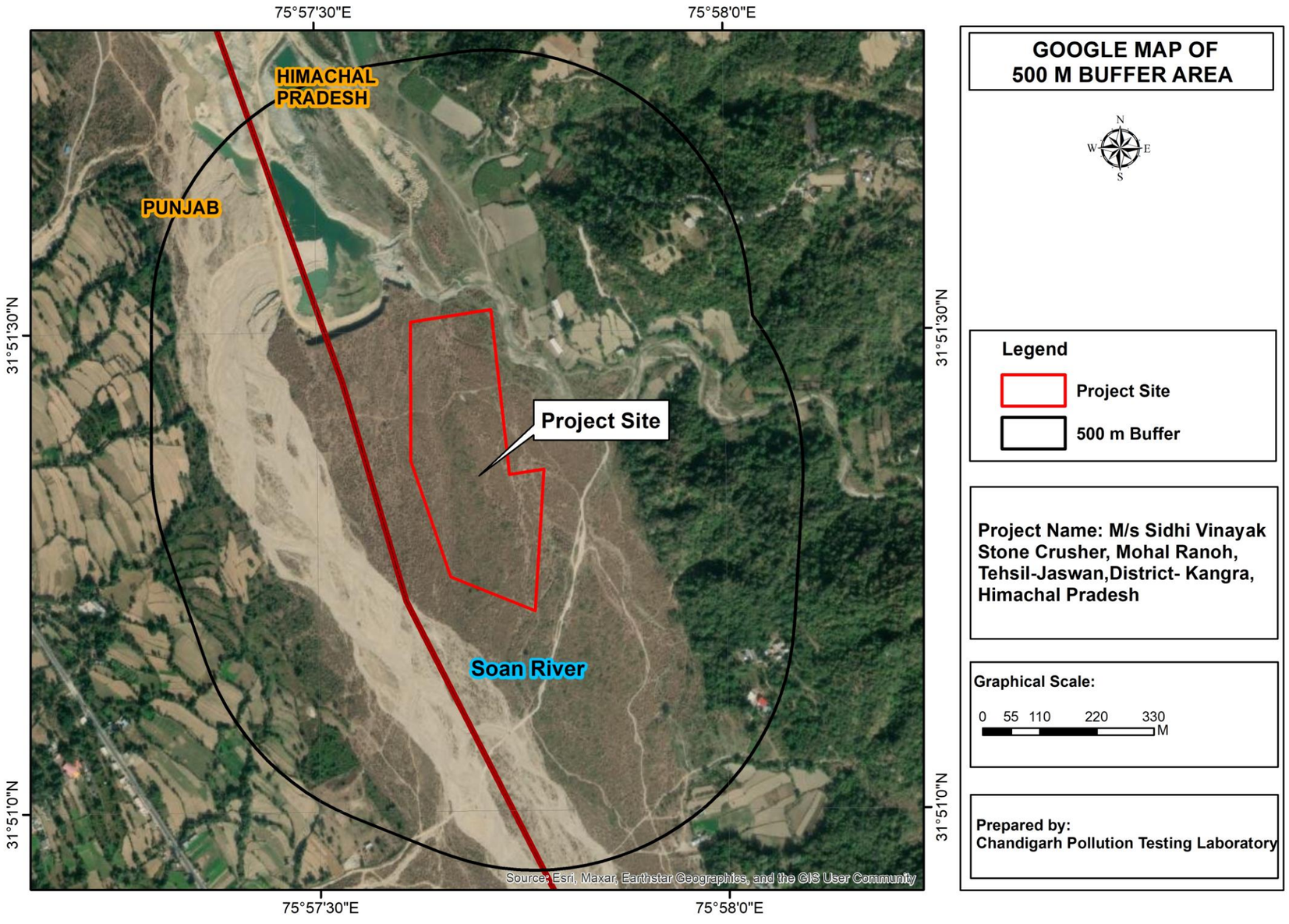


FIG: 3.3

500M RADIUS MAP



3.2.1 STUDY PERIOD;

The environmental monitoring for the EIA study, for the project has been conducted for the winter season. Initially, a reconnaissance survey of the study area was carried out and then field monitoring for measuring meteorological parameters, ambient air quality, water quality, soil quality and noise levels was carried out following CPTLE/QSPM-06/01–CPTLE/QSPM-06/09 as per the QMS of the organization from *15 October 2023 to 15 January 2024.* In addition, certain aspects like land area, socio-economic status, past meteorological conditions, etc., have been analyzed based on secondary information available from sources like district census reports, district gazetteers, Indian meteorological department, etc. The baseline status of various environmental components is described in the succeeding sections.

3.2.2 COMPONENTS OF STUDY;

This chapter contains information on existing environmental scenario for the following parameters.

1. Land Environment
2. Meteorology
3. Air Environment
4. Noise Environment
5. Water Environment
6. Soil Environment
7. Biological Environment
8. Socio-economic Environment

3.2.3 METHODOLOGY:

For the present study, all the sampling locations are marked with the help of Google maps and site visits. The land use/ land cover map has been generated on 1:50,000 scale using Satellite imagery and ground truth information. The baseline environmental quality has been assessed during the period from 15 October 2023 to 15 January 2024. Samples of Air, Water, Noise and Soil from the site and nearby areas has been collected and analyzed for the study of existing condition. Primary

and secondary data collection has been done by the Ecology and Biodiversity team for the study of flora and fauna in the study area. The baseline data is generated through field study within the impact zone for various components of the environment viz. Air, Noise, Water, Land, Ecology and Socioeconomic. While generating the baseline status of physical and Biological Environment biological environment of the study area, the concept of impact zone has been considered. The impact zone selection is based on preliminary screening and modelling studies. The methodologies for various environmental facets is as follow:

I. Ambient Air Quality

The ambient air quality monitoring was done to assess the ambient air quality in one season. Monitoring was carried out from 15 October 2023 to 15 January 2024.

The guidelines for selections of ambient air monitoring stations given in IS – 5182 part 14, 2000 and 'Guidelines for AmbientAir Quality Monitoring' by CPCB were followed.

II. Water Quality

To assess the water quality of the proposed area, sampling was done as per the standard practice. Grab sampling was done for ground and surface water. Water samples were taken as per the standard methods (IS 10500: 2012 & APHA, 23rd Edition). Necessary precautions were taken for preservation of samples. The physical parameters viz. pH, temperature and conductivity were measured at site.

III. Ambient Noise Quality

At each station noise levels were monitored for day and night time once in a season.

IV. Soil Quality

For soil, augur method was used and samples were collected at 15-25 cm depth after removing the upper crust.

V. Land Use

The land use/ land cover map has been generated on 1:50,000 scale using Satellite imagery and ground truth information.

VI. Biological Environment

Primary and secondary data collection has been done by the Ecology and Biodiversity team for the study of flora and fauna in the core and Buffer Zone.

VII. Socio Economic Environment

For demography and socioeconomics, block wise data has been collected and used for the assessment of impacts.

VIII. Micro-Meteorological Data

Meteorological data of the project site has been used for the study. The important parameters considered are temperature, humidity, wind speed, wind direction, and rainfall.

3.3 ENVIRONMENTAL BASELINE DATA COLLECTION:

Baseline data for the proposed plant was collected immediately after the monsoon season**.** Primary data has been collected by monitoring & surveying various environmental components/ parameters in the core zone during the study period, details of which are given here.

PRIMARY DATA

S. No.	PARAMETERS	DESCRIPTION
1.	Meteorology	Meteorological parameters on hourly basis at project site. Parameters: Temperature, Relative humidity, Wind Speed & Wind Direction.
2.	Air	Ambient air quality monitoring (24 hourly), twice a week. Parameters are PM_{10}, $PM_{2.5}$, SO_2, NO_2 & CO. No. of Locations: 8 locations in core and buffer zone.
3.	Noise	Noise level monitoring (Day & Night time), once in aseason. No. of Locations: 8 locations in core and buffer zone.
4.	Water	Ground water sampling, once in a season. No. of Locations: 8 locations in core and buffer zone.Tested for physical and chemical parameters.
5.	Soil	Soil sampling, once in a season. No. of Locations: 8 locations in core and buffer zone.

6.	Biological Factors	Biodiversity survey, once in a season. Location: Core and buffer zone.
7.	Socio-economic Environment	Socio-economic survey, once in a season. Location: Core and buffer zone.

3.4 METEOROLOGY:

Meteorology plays a vital role in affecting the dispersion of pollutants. Since meteorological factors show wide fluctuations with time, meaningful interpretations can be drawn only from long term reliable data. The source of such data is the Indian meteorological Department (IMD), which maintains a network of meteorological stations at several important locations. The nearest stations of the study are Kangra.

3.5 CLIMATE:

The region has four distinct seasons. The area experiences severe winter from October to mid - March followed by severe summer season lasting from mid-March to June. The area receives rain fall under the influence of south- west monsoon from July to September followed by post - monsoon season lasting up to November.

3.6 TEMPERATURE:

The area is hilly with steep slopes and has Semi-arid climate. December and January are the coldest months whereas in May and June the heat is quite intense. The wettest months of the seasons are July, August and September. The temperature varies from about 2.8^{o} C minimum to about 31.6^{o} C maximum during the year. Monthly average temperatures of the area are given in **Table-3.2**

Table - 3.2

Monthly Average Temperature

Month	**Mean Temperature (^{o}C)**	
	Daily Maximum	**Daily Minimum**
Jan	**9.3**	**2.8**
Feb	**14.7**	**5.9**
Mar	**16.4**	**7.9**
Apr	**22.0**	**11.2**
May	**26.0**	**15.0**

Jun	**28.9**	**18.3**
Jul	**31.6**	**19.0**
Aug	**27.2**	**18.2**
Sep	**28.9**	**17.4**
Oct	**24.9**	**14.6**
Nov	**17.0**	**8.4**
Dec	**13.9**	**4.6**

3.7 RAINFALL:

Rainfall varies significantly with altitude of the area. The catchment area receives rainfall due to western disturbances that pass over the north – western part of the country during winter months. Rainy season generally starts from July and extends up to last week of August. As per IMD Year wise rainfall data for this zone is given in **Table-3.3**

TABLE - 3.3

YEAR WISE AVERAGE RAINFALL (mm)

Year	2015	2016	2017	2018	2019	2020	2021
Average Rainfall in mm (Kangra District)	1996.5	1602.5	1993.1	2019.8	1920.9	1781.0	1787.7
Average Rainfall in mm (Himachal Pradesh)	1225.4	917.7	1544.5	1182.2	1232.2	1149.5	1031.6

Source: approved mining plan

3.8 HUMIDITY:

During summer season, humidity is lowest 36%. During monsoon month, it goes as high as 80-90%. The average humidity during synoptic hours is 53% and 62% respectively. The highest level of humidity are observed in the month of August.

3.9 CLOUDINESS:

During monsoon season skies are over cast with moderate to heavy clouds. During rest of the year, the sky is mostly clear. It is lightly clouded occasionally during winter season.

3.10 WINDS:

The Wind direction in the area is mostly from South-West to North-East. During January to May the winds are quite strong while July to October is calm months. The general trends of various meteorological data from meteorological observatory are used to draw Wind Rose Diagram.

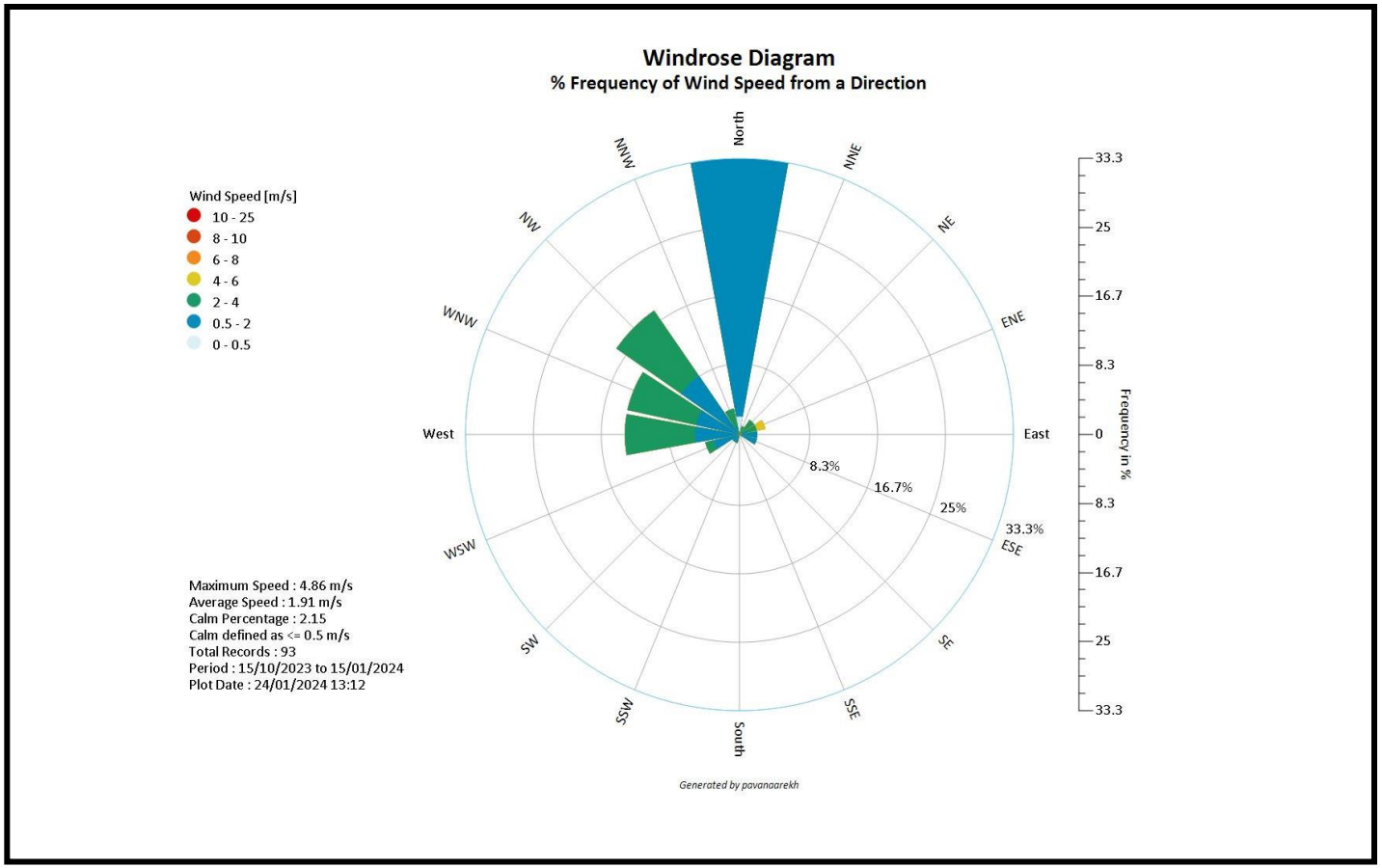
3.11 MICRO METEOROLOGY AT SITE:

Meteorological station was set-up at site to record surface meteorological parameter during the study period. Summary of the micro-meteorology at site is given below**.**

Table: 3.4 Showing Meteorology at Site

Month	Temperature(ºC)		Relative Humidity (%)
	Max.	Min.	(Average)
October	32.38	16.0	33.71
November	26.13	12.0	34.5
December	20.73	6.0	37.77
January	19.11	5.0	41.51

FIG. 3.4 WIND ROSE DIAGRAM FOR STUDY PERIOD



3.12 AMBIENT AIR QUALITY:

The ambient air quality monitoring was done to assess the ambient air quality. Monitoring was carried out at eight stations from 15 October 2023 to 15 January 2024. The guidelines for selections of ambient air monitoring stations given in IS – 5182 part 14, 2000 and CPCB guidelines were followed. These guidelines state that, "when the objective of air sampling is to identify the contribution from specific sources of pollution, the sampling locations should be located in upwind and the downwind direction of such sources".

The location of air quality monitoring stations should satisfy the following conditions:

1. The site should be representative of the area selected;
2. Certain physical requirements should be satisfied at the site.

METHODOLOGY:

The prime objective of the baseline study with respect to ambient air quality is to establish the present air quality and its conformity to National Ambient Air Quality Standards. This data has been further used during impact assessment to predict the final air quality. This section describes the sampling locations, frequency of sampling and methodology adopted for monitoring ambient air quality.

To quantify the impact of the project on the ambient air quality, it is necessary at first to evaluate the existing ambient air quality of the area. The existing ambient air quality, in terms of Particulate Matter- 10(PM_{10}), Particulate Matter-2.5 ($PM_{2.5}$), Sulphur-dioxide (SO_2), Oxides of Nitrogen (NO_2), and Carbon Monoxide (CO), has been measured through a planned field monitoring.

SAMPLING STATIONS:

To select the air sampling locations, meteorological data with respect to temperature, relative humidity, wind speed and direction plays a vital role. Predominant wind direction plays an important role in determining location of monitoring stations. The monitoring stations were located in areas that were downwind from the source. List of Air sampling stations are given in Table 3.5 and Location Air Sampling Stations are given in Figure 3.5

Table 3.5

Ambient Air Monitoring Stations

S. No.	Sample Code	Name of Village/ Location	Upwind/Downwind
1.	**AAQ-1**	Project site	---
2.	**AAQ-2**	Amroh	Upwind
3.	**AAQ-3**	Bhatehar	Upwind
4.	**AAQ-4**	Ranoh	Upwind
5.	**AAQ-5**	Bhated	Downwind
6.	**AAQ-6**	Joh	Downwind
7.	**AAQ-7**	Mandwara	Downwind
8.	**AAQ-8**	Palahar	Upwind

MONITORING SCHEDULE:

Ambient air quality monitoring was carried out twice a week with a frequency of 24 hours for 12 weeks.

METHODS OF SAMPLING AND ANALYSIS:

Sampling was done as per guideline laid down in IS – 5182 part 14, 2000 and respective IS-methods for the analysis of various air pollutants. The instruments/ equipment's used for sampling are calibrated by NABL approved instructions. In addition, collated sampling was undertaken one each for upwind, downwind & crosswind direction to project site, the result of which reveals that the air quality is quite satisfactory both in terms of NAAQ standards and the overall AQI for that period and station.

Fine particulate Sampler APM-550 & RDS APM-460 were used for monitoring of Particulate Matter (PM2.5 and PM10); gaseous pollutants like SO2, and NO2 were collected by Gaseous attachment. The analysis was done as per methods mentioned below:

S. No.	Parameters and units of measurement	Analysis Method
1.	PM_{10} µg/m^3	IS:5182, (Part-23) 2006, By Gravimetric Method: 2006
2.	$PM_{2.5}$ µg/m^3	SP-57, Issue Date-01- 05-2019, CPCB Guideline Vol-I: 2011
3.	SO_2 µg/m^3	IS 5182 (P-2):2001 1st Rev (RA: 2012): 2001
4.	NOx µg/m^3	IS:5182, (P-6), RA 2012: 2006
5.	CO mg/m^3	IS 5182 (P- 10):RA2014: 1999

Sample Transportation and Sample Preservation:

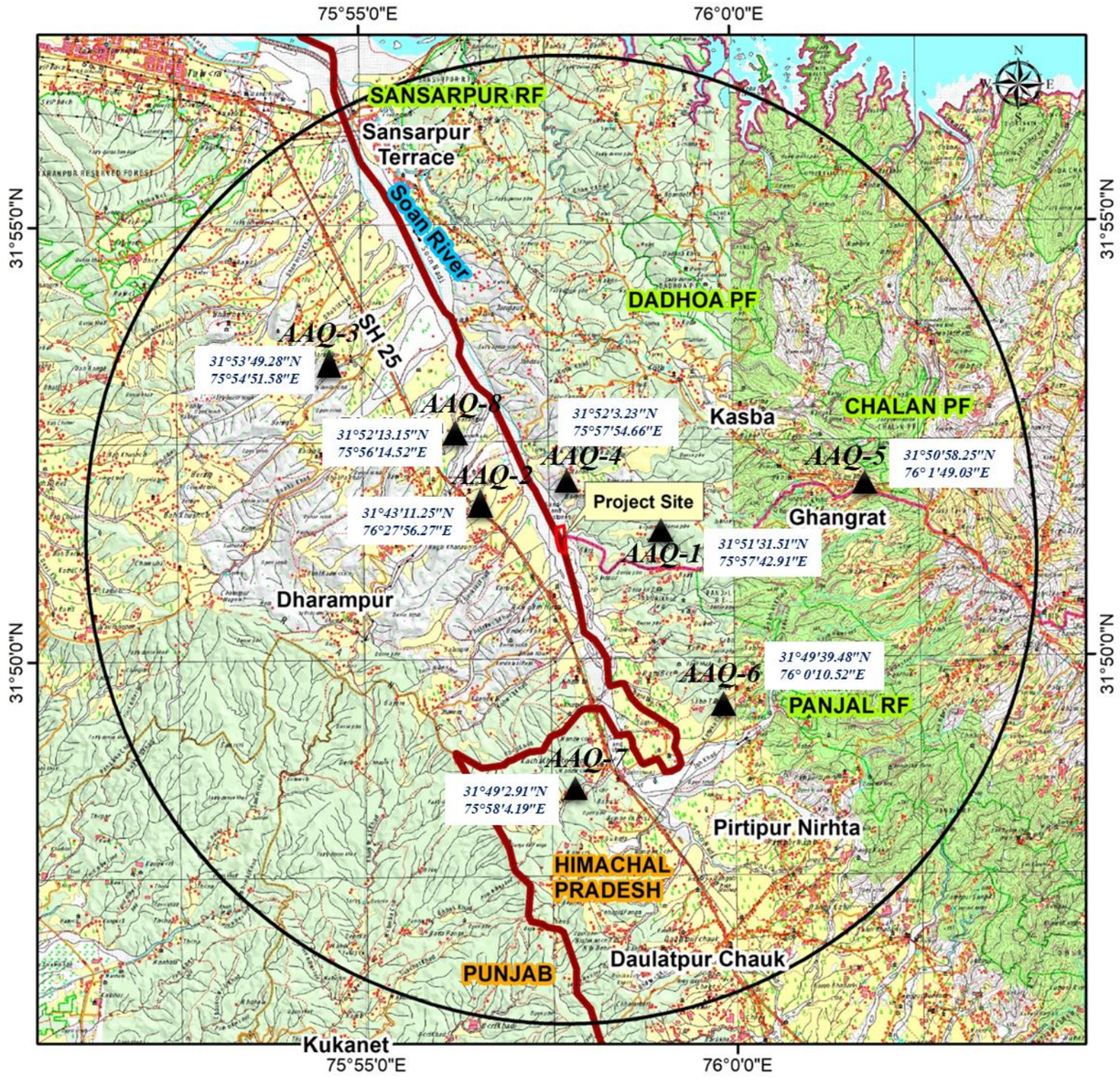
Proper preservation of samples was done after sampling. The Gaseous samples were preserved in an ice box (below 4°C) and transported to the laboratory for analysis. The filter papers were collected using forceps and stored in polythene bags and stored in dry containers during transportation

Results:

The results given in Table-3.**6** when compared with National Ambient Air Quality Standards (NAAQS) of Central Pollution Control Board (CPCB) for "Industrial, Residential, Rural and Other Areas" show that the average values of ambient air quality parameters are well within the stipulated limit.

FIGURE. 3.5

LOCATIONS OF AIR MONITORING STATIONS



TOPOSHEET MAP OF 10 KM BUFFER AREA	
Toposheet /OSM No: H43E1, H43E2, H43D13, H43D14	
Monitoring Locations (▲)	
Project Site(AAQ1)	
Amroh (AAQ2)	2.08 km NW
Bhatehar(AAQ3)	6.08 km NW
Ranoh (AAQ4)	1.12 km N
Bhated (AAQ5)	6.35 km SE
Joh (AAQ6)	4.77 km SE
Mandwara(AAQ7)	4.01 km S
Palahar (AAQ8)	3.45 km N

Legend

Project Site

10 Km Buffer

M/S Sidhi Vinyak Stone Crusher.
Location: Mohal Ranoh,
Tehsil- Jaswan , District- Kangra
Himachal pradesh
Proponent- Rama Sharma

Graphical Scale:

0 1.25 2.5 5 Km

Prepared by:
Chandigarh Pollution Testing Laboratory

TABLE-3.6

AMBIENT AIR QUALITY MONITORING RESULTS (Average value)

Ambient Air Quality Abstract (15th October 2023 to 15th January 2024)

Locations	PM_{10} (µg/m^3)			$PM_{2.5}$ (µg/m^3)			SO_2 (µg/m^3)			NO_x (µg/m^3)			CO (mg/m^3)		
	Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	Min	Max	Avg.	Max	Min	Avg.
Project site	66.2	70.4	68.3	31.2	35.1	33.15	5.2	5.8	5.5	9.2	10.8	10	ND	ND	ND
Amroh	63.4	68.8	66.1	33.8	37.4	35.6	5.0	5.6	5.3	8.6	10.2	9.4	ND	ND	ND
Bhatehar	58.6	64.2	61.4	31.2	35.4	33.3	5.4	6.2	5.8	9.1	11.7	10.4	ND	ND	ND
Ranoh	60.8	65.4	63.1	37.4	40.0	38.7	5.1	5.5	5.3	8.0	8.8	8.4	ND	ND	ND
Bhated	66.2	71.2	68.7	33.3	36.1	34.7	5.2	6.6	5.9	8.6	9.4	9	ND	ND	ND
Joh	61.6	68.8	65.2	31.2	34.6	32.9	5.2	6.0	5.6	9.6	11.0	10.3	ND	ND	ND
Mandwara	60.2	65.4	62.8	33.0	36.0	34.5	5.0	5.4	5.2	8.0	8.6	8.3	ND	ND	ND
Palahar	61.5	67.3	64.4	30.8	35.4	33.1	4.4	5.0	4.7	8.2	9.0	8.6	ND	ND	ND
P98	**64.9**			**35.4**			**5.5**			**9.85**			**ND**		
CPCB Stds.	**100**			**60**			**80**			**80**			**4.0**		

INTERPRETATION:

Respirable Suspended Particulate Matter (PM10)

As is evident from the data, PM10 concentration observed in the study area during the study period is minimum at Bhatehar i.e. 58.4 µg/m^3 and maximum at Bhated 71.2 µg/m^3. P98 remained as 64.9 µg/m^3 during this period.

Respirable Suspended Particulate Matter (PM2.5)

It is minimum of 30.8 µg/m^3 at Palahar and maximum of 40.0 µg/m^3 at Ranoh. P98 remained as 35.4 µg/m^3 during this period.

Sulphur Dioxide (SO2)

The SO_2 levels were minimum of 4.4 µg/m^3 at Palahar and maximum of 6.6 µg/m3 at Bhated. The situation in the study area as far as SO_2 concentration is concerned is satisfactory. P98 remained as 5.5 µg/m^3 during this period.

Oxides of Nitrogen (NO_X)

NO_X concentration in the study area varied from minimum of 8.0 µg/m^3 at Mandwara and maximum of 11.7 µg/m^3 at Bhatehar. P98 remained as 9.85 µg/m^3 during this period.

Carbon Monoxide (CO)

CO concentration is found to be not detectable.

Conclusion

On the whole the above results show that the ambient air in the mining area is environmentally quite clean and all parameters are within the permissible limits.

3.13 LAND ENVIRONMENT:

The objective of assessing the land use details of the area is to know the existing land use pattern of the area and enable one to know about the land that can be used for the proposed development

activities in the study area. It also enables to envisage the scenario emerging due to the increasein demand for land with increase in population and the impacts arising due to the interface with the various project activities.

a) Geographical location of the study area

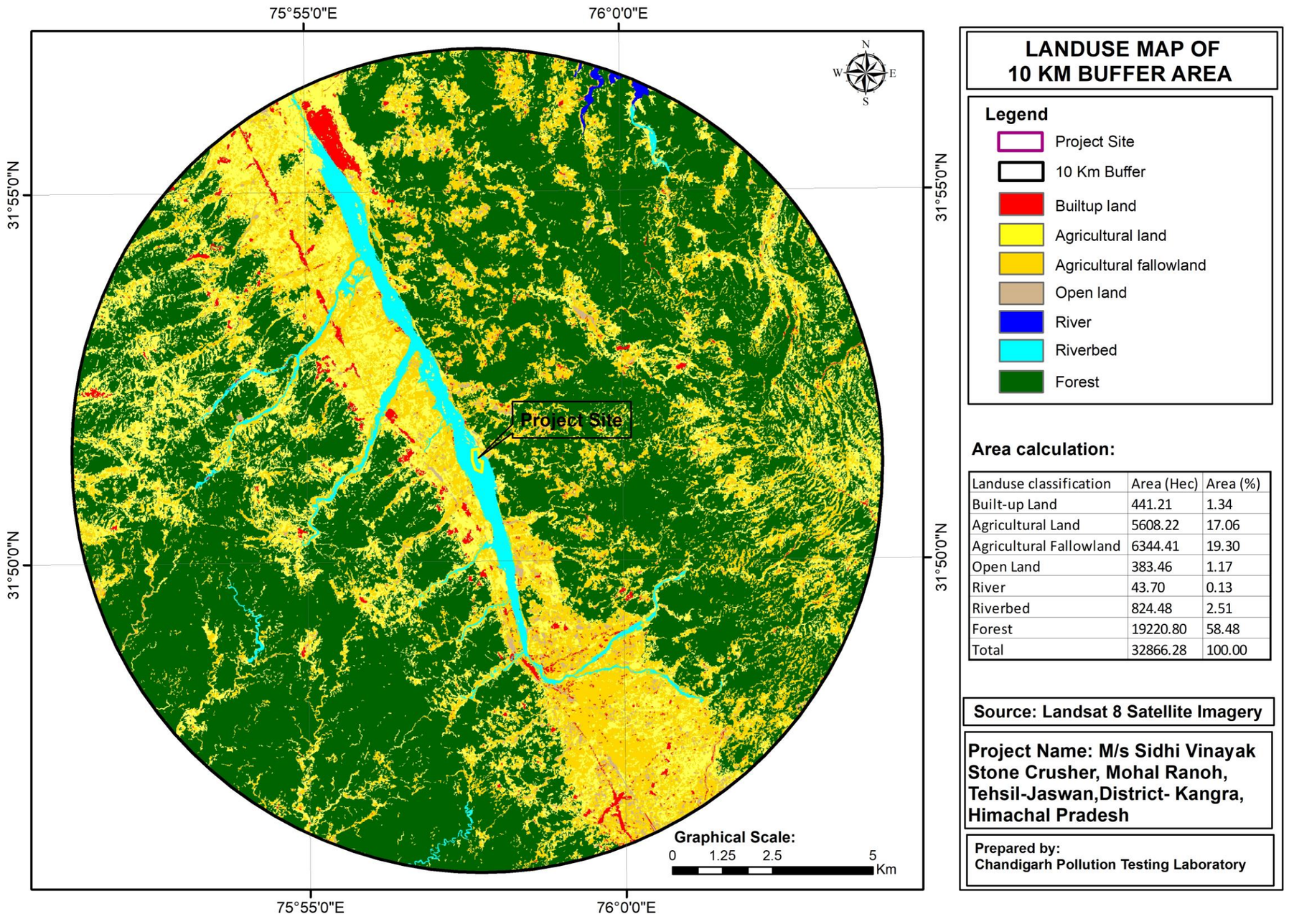
The study area comprises 10km around the project site. The study area is falling under the Survey of India Toposheet/OSM No: H43E1, H43E2, H43D13, H43D14.

B) DATA COLLECTION AND QUALITY ASSURANCE Satellite data

The Indian Remote Sensing satellite data (Landsat 8 satellite Imagery) is being used for the analysis of Land Use and Land Cover around 10 KM of the study area and a 10 Km radius False Color Composite satellite map surrounding the project site is provided in **figure 3.6 and figure 3.7** respectively.

FIGURE 3.6

10 KM RADIUS LAND USE AND LAND COVER MAP



Area calculation:

Landuse classification	Area (Hec)	Area (%)
Built-up Land	441.21	1.34
Agricultural Land	5608.22	17.06
Agricultural Fallowland	6344.41	19.30
Open Land	383.46	1.17
River	43.70	0.13
Riverbed	824.48	2.51
Forest	19220.80	58.48
Total	32866.28	100.00

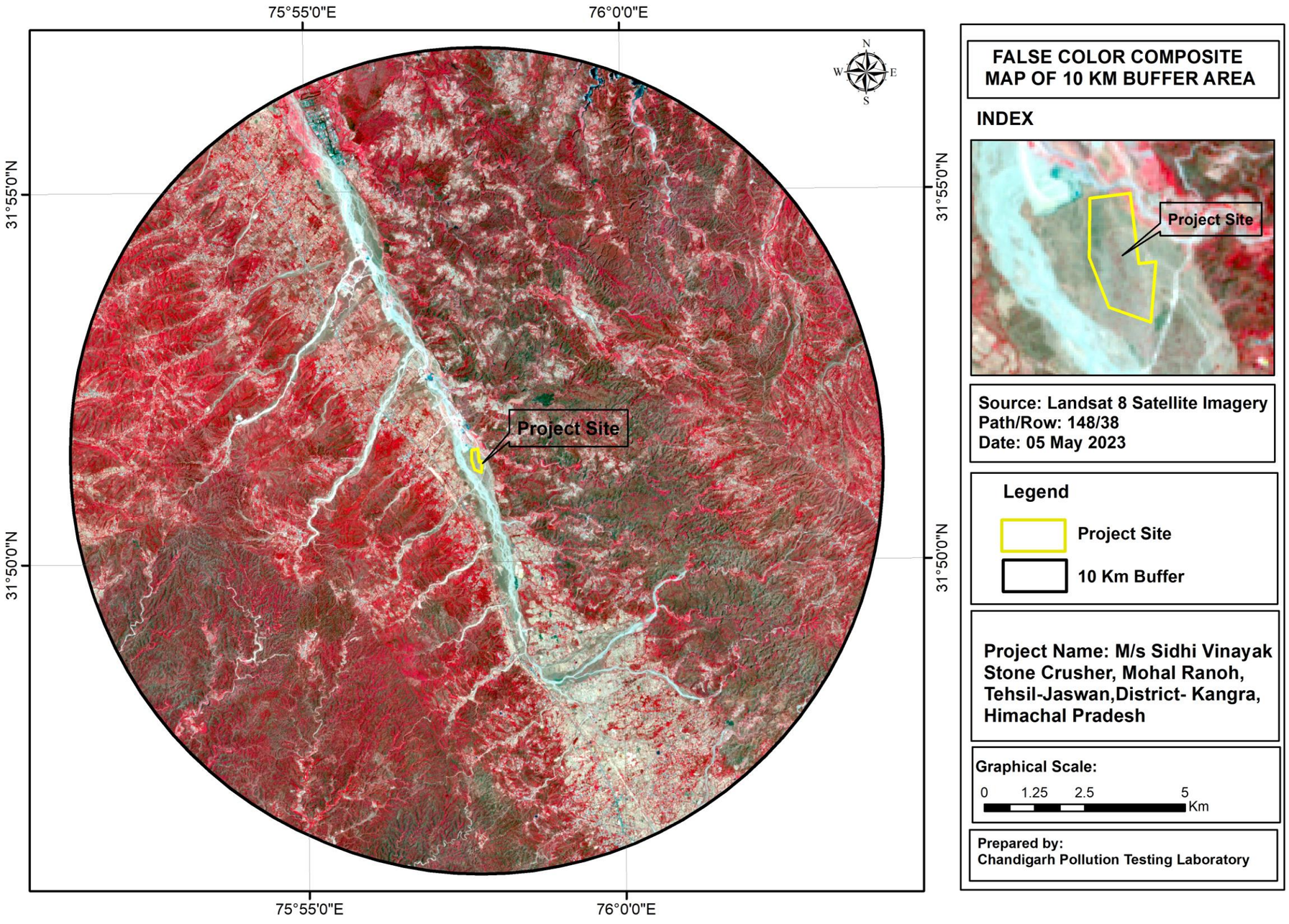
Source: Landsat 8 Satellite Imagery

Project Name: M/s Sidhi Vinayak Stone Crusher, Mohal Ranoh, Tehsil-Jaswan,District- Kangra, Himachal Pradesh

Prepared by:
Chandigarh Pollution Testing Laboratory

FIGURE 3.7

10 KM RADIUS FALSE COLOR COMPOSITE SATELLITE



c) METHODOLOGY

The land use / land cover map is prepared by adopting the interpretation techniques of the image in conjunction with collateral data such as Survey of India topographical maps and census records. Image classification has been done by using visual interpretation techniques and digital classification using ERDAS image processing 10.0 software and ARC/GIS 10.0 software. The various activities for preparation of LULC include preprocessing, rectification, enhancements and classifying the satellite data for assessing the change in land use land cover due to proposed developmental activities.

The imagery is interpreted and ground checked for corrections. The final map is prepared after field check. The different land use/land cover categories in the study area have been carried out based on the NRSC land use / land cover classification system.

Flowchart showing the methodology adopted for land use/land cover mapping is provided as Fig 3.7.

LAND USE / LAND COVER STUDY

The land use land cover study has been done through digital image processing and visual interpretation technique to generate output of Land use / Land cover map of study area on 1:50,000 scale. Land Use / Land Cover Map of Study Area (10 Km Buffer) **Fig 3.8.**

Fig 3.8: Flowchart showing the methodology adopted for land use/land cover mapping

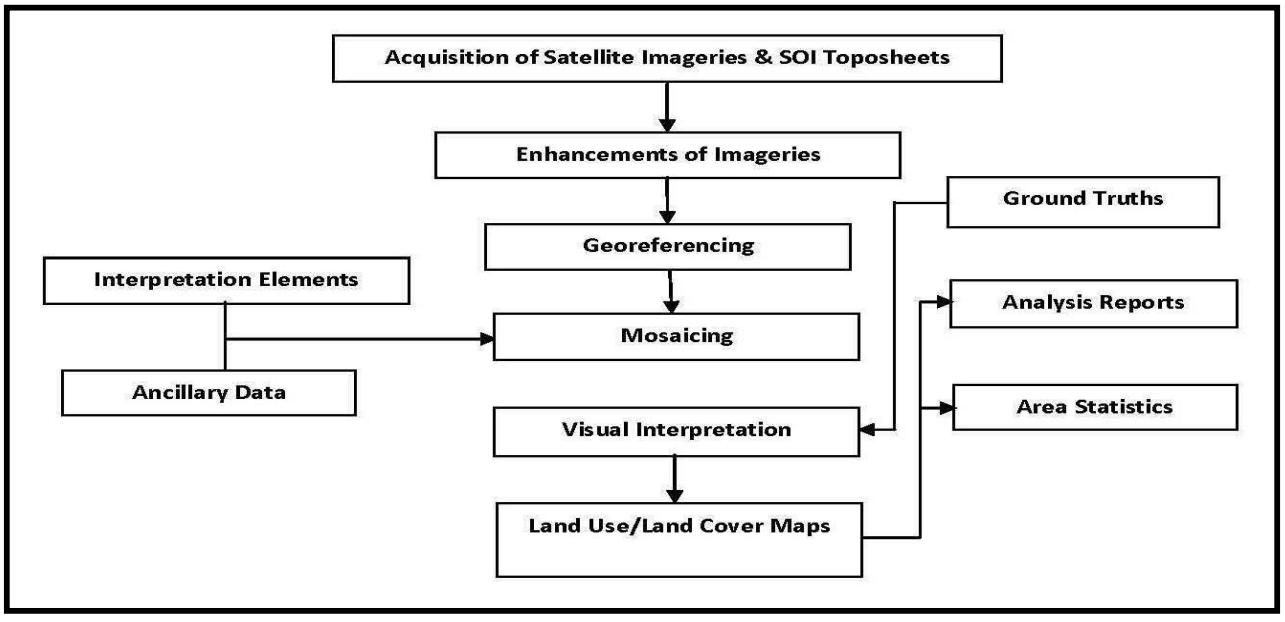


Table 3.7

Land Use/Land Cover Area Statistics

Land Use/Land Cover	Area (Hectare)	Area Percentage
Built-up Land	441.21	1.34
Agriculture land	5608.22	17.06
Agriculture Fallow land	6344.41	19.30
Open land	383.46	1.17
River	43.70	0.13
River-bed	824.48	2.51
Forest	19220.80	58.48
Total	32866.28	100.00

Source: Land use Land cover map

CONCLUSION & DISCUSSION

Based on the perusal of field visit and interaction with farmers, it is seen that over the period of time variants of fruits, vegetable and fodder have been successfully grown in the study area are indicator of healthy & conducive land environment.

3.15 SOIL QUALITY:

PHYSICAL CHARACTERISTICS:

Soil is generally considered as the upper layer of the earth that is dug or ploughed, especially the loose material in which plants grow. It is generally unconsolidated material composed of soil particles produced by disintegration of rocks. The void spaces between the particles may contain Air, Water or both.

(i) Texture

(ii) Porosity

(iii)Bulk density

(i) Texture

On the basis of texture, the study area may be classified as loamy sand, sandy loam and silty loam.

(ii) Porosity

Volume of soil mass that is not occupied by soil particles and usually occupied by air & water are known as pore space. The plant roots grow & exist in the pore spaces. Porosity, therefore, refers to that percentage of soil volume which is occupied by pore spaces.

(iii) Bulk Density

The bulk density weight of a unit of volume of soil inclusive of pore spaces is called bulk density. Generally, the soil with low bulk density has favorable physical conditions.

CHEMICAL CHARACTERISTICS:

Locations of soil monitoring stations are given in **Figure 3.9.** List of soil monitoring station are given **in Table 3.8.** Chemical characteristics of soil observed in the study area are given in **Table 3.9.**

Table 3.8

Detail List of Soil Quality Monitoring Stations

S. No.	Sample Code	Name of Village/Location
1.	**SQ-1**	Project site
2.	**SQ-2**	Amroh
3.	**SQ-3**	Bhatehar
4.	**SQ-4**	Ranoh
5.	**SQ-5**	Bhated
6.	**SQ-6**	Joh
7.	**SQ-7**	Mandwara
8.	**SQ-8**	Palahar

FIGURE -3.9

LOCATION OF SOIL MONITORING STATIONS

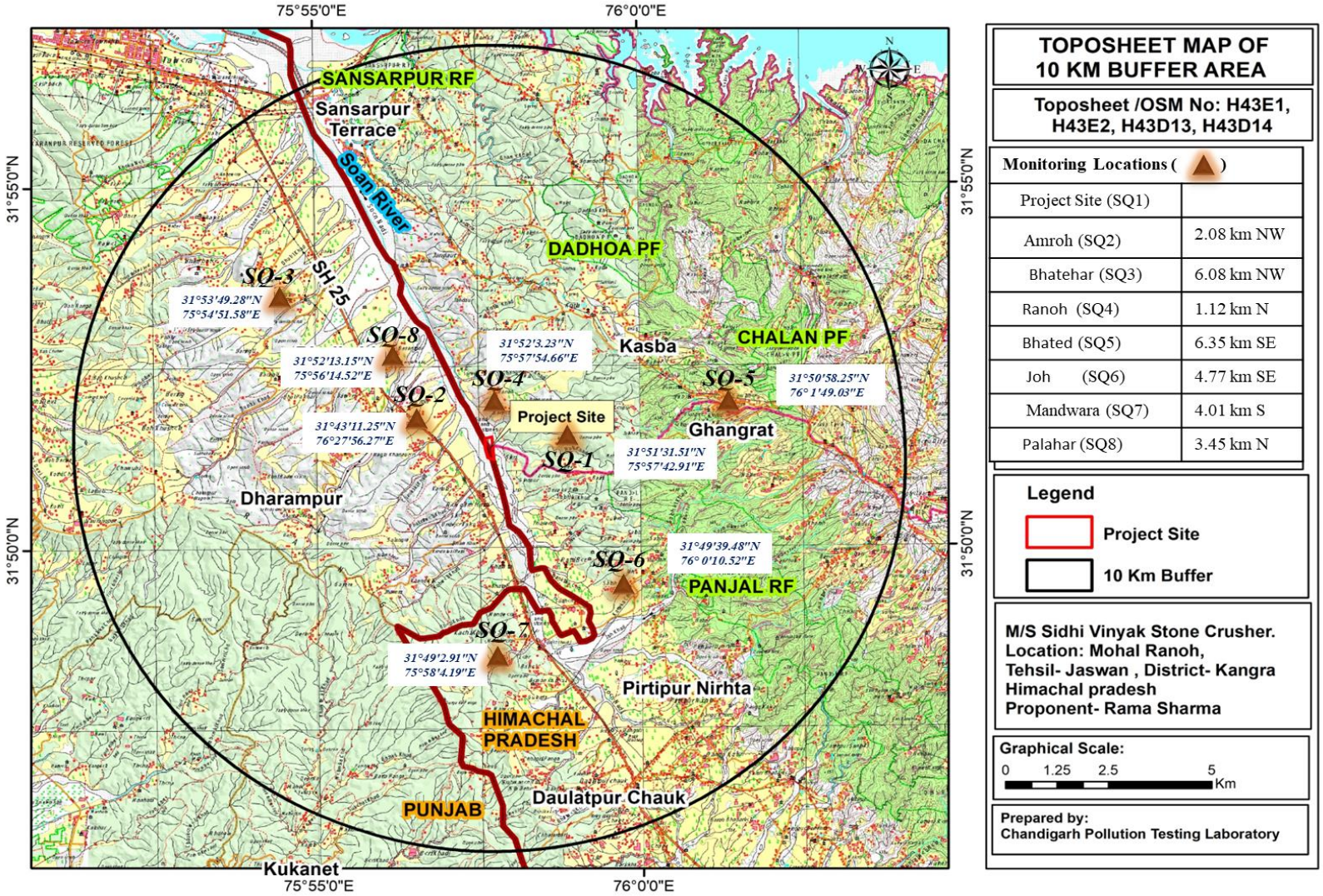


Table –3.9

Result of Soil Samples (% W/W except pH)

S. No.	Parameter	Unit	SQ_1	SQ_2	SQ_3	SQ_4	SQ_5	SQ_6	SQ_7	SQ_8	Test Methods	Detection Limit
1.	**pH (1:2.5)**	--	7.66	7.52	7.39	7.15	7.58	7.25	7.84	7.87	IS 2720(P-26),1987	1
2.	**Electrical Conductivity (1:2)**	µmhos/cm	365	352	338	341	354	332	328	336	IS 14767,2000	2µs/cm
3.	**Texture**	--	Sandy loam	Sandy loam	Sandy loam	Sandy loam	Sandy loam	Sandy loam	Sandy loam	Sandy loam	CPTL, Lab SOP No. 58	--
4.	**Bulk Density**	(gm/cm^3)	1.24	1.36	1.18	1.28	1.36	1.45	1.28	1.36	IS 2720(P-3),1983	1g/cc
5.	**Soil Moisture Content**	%	6.8	8.2	6.6	7.8	6.6	7.6	8.2	5.6	IS 2720(P-2,1973	1%
6.	**Color/ Visual Observation**	--	Brown	Brown	Light Brown	Brown	Brown	Brown	Light Brown	Brown	Handbook of Agriculture, ICAR	--
7.	**Available Calcium**	(mg/kg)	44.6	58.2	60.6	50.4	48.6	52.8	59.9	48.9	Handbook of Agriculture ,ICAR	--

8.	**Available Magnesium**	(mg/kg)	32.4	26.4	28.8	20.8	18.9	22.2	26.4	18.4	Handbook of Agriculture, ICAR	--
9.	**Available Sodium**	(mg/hac)	126	118	128	132	145	126	118	122	CPTL, Lab SOP No. 59	--
10.	**Available Potassium**	(kg/hac)	32.8	22.2	18.6	36.2	28.6	26.4	24.8	22.6	CPTL, Lab SOP No.59	1.0 kg/ha
11.	**Available Nitrogen**	(%)	1.28	1.10	1.32	1.44	1.54	1.36	1.28	1.54	CPTL, Lab SOP No. 62	10%
12.	**Organic Matter**	(%)	0.42	0.38	0.26	0.38	0.58	0.46	0.38	0.49	IS 2720(P-22),2001	0.1%
13.	**Available Phosphorus**	Kg/hac	6.8	8.3	5.6	4.8	7.8	9.9	8.8	5.9	CPTL, Lab SOP No. 59	1.0 kg/ha
14.	**Cation Exchange Capacity**	(meq/100gm)	0.49	0.58	0.44	0.46	0.49	0.58	0.44	0.46	CPTL, Lab SOP No. 58	--
15.	**Iron as Fe**	(mg/kg)	1.54	1.42	1.55	1.44	1.59	1.33	1.28	1.38	CPTL, Lab SOP No. 63	--
16.	**Zinc as Zn**	(mg/kg)	ND	ND	ND	ND	ND	ND	ND	ND	CPTL, Lab SOP No. 63	1.0 mg/kg
17.	**Lead as Pb**	(mg/kg)	ND	ND	ND	ND	ND	ND	ND	ND	CPTL, Lab SOP No. 63	1.0 mg/kg

18.	**Manganese as Mn**	(mg/kg)	ND	ND	ND	ND	ND	ND	ND	ND	CPTL, Lab SOP No. 63	1.0 mg/kg
19.	**Chromium as Cr**	(mg/kg)	ND	ND	ND	ND	ND	ND	ND	ND	CPTL, Lab SOP No. 63	1.0 mg/kg
20.	**Cadmium as Cd**	(mg/kg)	ND	ND	ND	ND	ND	ND	ND	ND	CPTL, Lab SOP No. 63	1.0 mg/kg
21.	**Copper as Cu**	(mg/kg)	ND	ND	ND	ND	ND	ND	ND	ND	CPTL, Lab SOP No. 63	1.0 mg/kg

3.15.1 CONCLUSION:

The analytical results of the soil samples collected during the study period are summarized below.

The pH of the soil is an important property; vegetation cannot grow in low and high pH value soils. soils are falling in slightly alkaline to moderately alkaline. Based on the electrical conductivity, the soils are classified into four groups (Normal, Critical forgermination, Critical for growth of the sensitive crops, Injurious to most crops). The electricalconductivity in the study area is varying from 365 to 328 µmhos/cm.

The other important parameters for characterization of soil for irrigation are the primary nutrients

– Nitrogen, Phosphorus and Potassium (N, P, K) and the secondary nutrients—Calcium, Magnesium and Sulphur (Ca, Mg, S). The primary and secondary nutrient elements are known asmajor elements. This classification is based on their relative abundance, and not on their relative importance.

Nitrogen encourages the vegetative development of plants by imparting a healthy green color to the leaves. The available Nitrogen as N in the study area is varying from 1.10 to 1.54 %. Phosphorus influences the vigor of plants and improves the quality of crops. In the study area available, Phosphorus was found in varying quantities of 4.8 to 9.9 kg/ha.

Potassium enhances the ability of the plants to resist diseases, insect attacks, cold and other adverse conditions. The available potassium in the study area varies between 22.6 to 36.2 Kg/ hac. This is deficient for crops.

Organic Matter in the study area ranges from 0.26% to 0.58 %. This is average to sufficient for the crops.

As per physical data, the soils in the study area are coarse to modularity fine texture, having modulated build density and impressively modulate water holding capacity. As per physical characteristics, the soils are rated as moderately to good for agriculture. Based on the observation during field visit of 10km buffer zone from the boundary of cement plant, the soils are sandy loam predominantly. These soils can be classified as modularity good soil with traces or gentle slopes and is modulate land for sustained agriculture as per USDA.

3.16 WATER ENVIRONMENT

3.16.1 WATER QUALITY

Water quality assessment is one of the essential components of EIA study. Such assessment helps in evaluating the existing health of water body and suggesting appropriate mitigation measures to minimize the potential impact from development projects. Water quality of ground resources in the crusher site area has been studied for assessing the water environment and to evaluate the impact of the project. To assess the water quality of the proposed area, sampling was done as per the standard practice. Grab sampling was done for ground and surface water. Water samples were taken as per the Standard Methods (IS & APHA, 23rd Edition 2012). Necessary precautions were taken for preservation of samples. The physical parameters viz. pH, temperature and conductivity were measured at site.

SAMPLING FREQUENCY AND TECHNIQUE

Parameters for analysis of water quality were selected based on the utility of the particular source of water as per MoEF&CC guidance. Hence quality of ground water was compared with IS: 10500: 2012 for drinking purposes. As per the standard practice, one sample was taken in the study period. Sampling was done by standard sampling technique and analyzed as per the Standard Methods. Necessary precautions were taken for the preservation of samples. Sampling location of surface water & ground water are given in **Figure 3.10** and list of surface & ground water sample is given in **Table 3.10 & 3.12** respectively. The results surface water & ground water are given in **Table 3.11 & 3.13** respectively.

Table 3.10

Surface Water Sampling Stations

Station	Sampling Location
SW-1	Soan River

Table – 3.11

Results of surface water

S.No.	Parameters	Unit	Upstream	Downstream	Detection Limit
1.	**pH**	-	7.33	7.28	3
2.	**Color**	H. U	<5	<5	5.0 HU
3.	**Odour**	--	Agreeable	Agreeable	--
4.	**Turbidity**	NTU	<2	<2	0.5 NTU
5.	**Dissolved Oxygen**	mg/l	6.4	6.9	1.0 mg/l
6.	**Chemical Oxygen Demand**	mg/l	6.4	6.6	5.0 mg/l
7.	**BOD at 27 ºC for 3 days**	mg/l	2.0	2.4	2.0 mg/l
8.	**Total Dissolved Solids**	mg/l	174	178	1.0 mg/l
9.	**Total Suspended Solids**	mg/l	8.4	8.2	1.0 mg/l
10.	**Total Hardness as $CaCO_3$**	mg/l	110	114	1.0 mg/l
11.	**Chlorides as Cl**	mg/l	4.9	6.4	1.0 mg/l
12.	**Sulphates as SO_4**	mg/l	10.2	12.4	1.0 mg/l
13.	**Total alkalinity as $CaCO_3$**	mg/l	70.0	80.0	0 mg/l
14.	**Magnesium as Mg**	mg/l	18.2	22.4	1.0 mg/l
15.	**Calcium as Ca**	mg/l	40.4	42.2	1.0 mg/l
16.	**Nitrate as NO_3**	mg/l	2.2	2.6	1.0 mg/l
17.	**Zinc as Zn**	mg/l	1.18	1.12	0.5 mg/l
18.	**Iron as Fe**	mg/l	1.2	1.20	0.1 mg/l
19.	**Fluoride as F**	mg/l	1.10	1.14	0.1 mg/l
20.	**Sodium as Na**	mg/l	22.2	26.4	1 mg/l
21.	**Potassium as K**	mg/l	7.8	8.4	1 mg/l
22.	**Cadmium as Cd**	mg/l	ND	ND	0.01 mg/l
23.	**Total Chromium as Cr**	mg/l	ND	ND	0.0.45 mg/l
24.	**Mercury as Hg**	mg/l	ND	ND	0.001 mg/l
25.	**Aluminum as Al**	mg/l	ND	ND	0.01 mg/l
26.	**Boron as B**	mg/l	ND	ND	0.1 mg/l
27.	**Fecal Coliform**	MPN/100 ml	110	130	<2MPN/100ml

28.	**Total Coliform**	MPN/100 ml	80.0	90.0	<2MPN/100ml
29.	**Total Ammonia**	Mg/l	0.1	0.1	0.5

Table – 3.11(a)

CPCB water Quality Criteria for Surface water as per use

S. No.	Parameters	Class A	Class B	Class C	Class D	Class E
1.	pH	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5
2.	Dissolved Oxygen	6	5	4	4	-
3.	BOD, 3days at 27^0C, max	2	3	3	-	-
4.	Total coliform organism, MPN/100ML, max	50	500	5000	-	-
5.	Free Ammonia (as N), mg/l, max	-	-	-	1.2	-
6.	Electrical Conductivity, µmhos/cm, max	-	-	-	-	2250
7.	Sodium absorption ratio, max	-	-	-	-	26
8.	Boron (as B), mg/l, max.	-	-	-	-	2

Class A: Drinking water source without conventional treatment but after disinfection.

Class B: Outdoor bathing (organized).

Class C: Drinking water source after conventional treatment and after disinfection.

Class D: Propagation of wild life fisheries.

Class E: Irrigation, Industrial cooling, controlled waste disposal.

Below E: Not meeting A, B, C, D & E Criteria

Surface water quality results are summarized below:

- pH of the surface water collected ranged from 7.33– 7.28
- TDS was found to be 174-178 mg/l. The tolerance limit is 1,500 mg/l as per IS:2296
- Total hardness was found to be 110-114 mg/l.
- Total Coliform in water was 110-130 MPN/100ml. The likely source of bacteriological contamination may be due to the proximity to residential area
- All the heavy metals were not detectable.

B) GROUND WATER:

Groundwater has been found as an important source for the local needs of water consumption for various purposes, mainly domestic and agriculture. Keeping in view the importance of groundwater to the local population, samples of ground water were collected from the study area for the monitoring and assessment of groundwater quality.

The Quality of ground water was studied by collecting 8 water samples from representative hand pumps, tube wells. Sampling points were decided using Google imagery and field survey. Standard procedures were followed for the sampling and analysis of physico–chemical parameters of water.

Table 3.12 shows the details of location of water sampling stations and results of different parameters are given in **Table 3.13.**

Table-3.12

Details of Ground Water Monitoring Stations

S. No.	Sample Code	Name of Village/Location
1.	GW-1	Project site
2.	GW-2	Amroh
3.	GW-3	Bhatehar
4.	GW-4	Ranoh
5.	GW-5	Bhated
6.	GW-6	Joh
7.	GW-7	Mandwara
8.	GW-8	Palahar

FIGURE -3.10

LOCATIONS OF SURFACE WATER & GROUND WATER

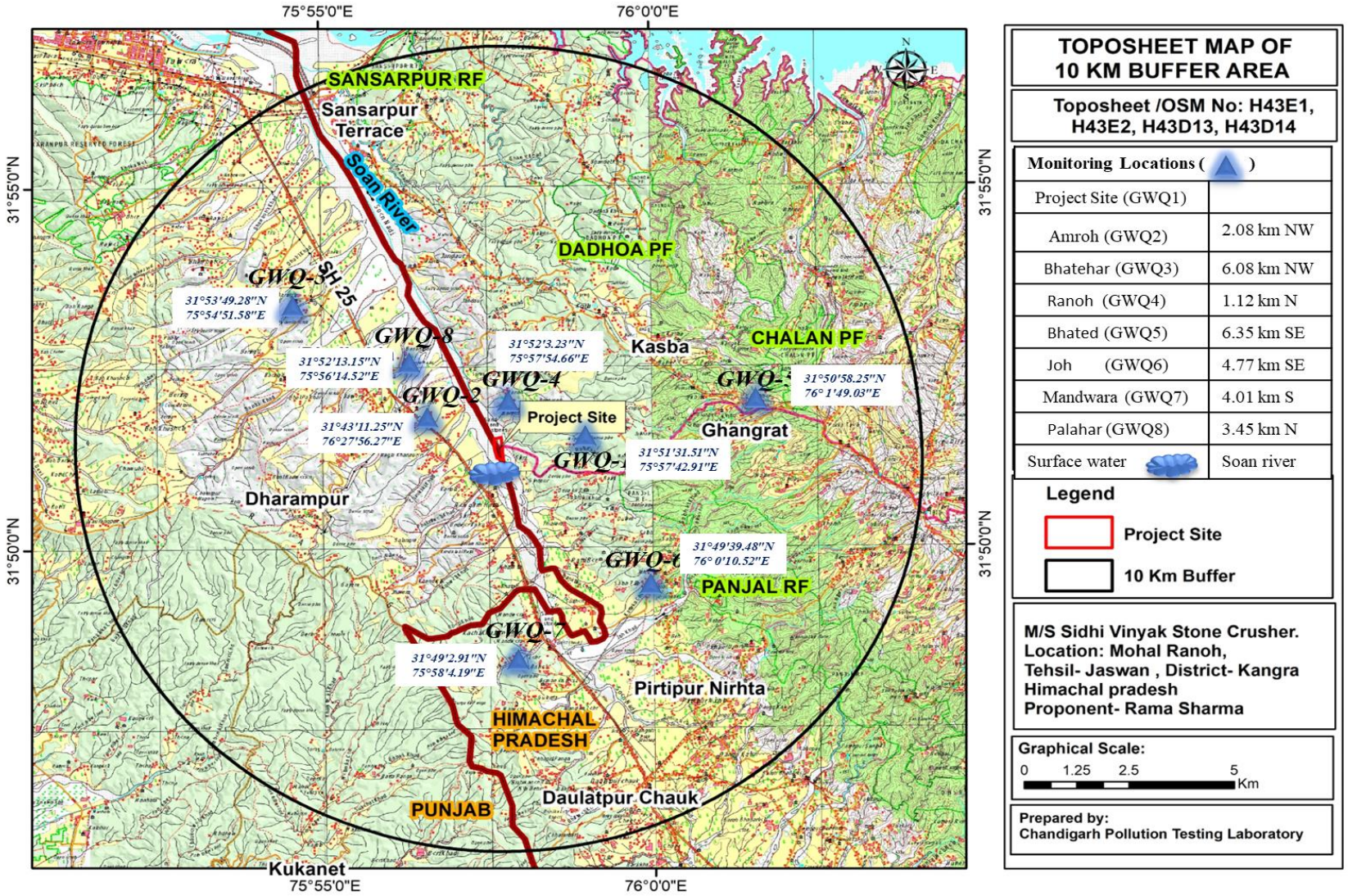


TABLE – 3.13

RESULTS OF GROUND WATER SAMPLES

Parameters	Unit	GW1	GW2	GW3	GW4	GW5	GW6	GW7	GW8	Acceptable Limits	Permissible Limit
pH	-	7.84	7.32	7.45	7.58	7.25	7.46	7.38	7.49	6.5-8.5	No relaxation
Colour	Hazen	<5	<5	<5	<5	<5	<5	<5	<5	5.0	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable e	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity	NTU	<1	<1	<1	<1	<1	<1	<1	<1	1.0	5
Total Dissolved Solids	mg/l	258	262	247	258	246	258	259	253	500	2000
Total Hardness as CaCO3	mg/l	244	250	232	242	240	252	245	248	200	600
Calcium as Ca	mg/l	34.2	36.8	28.2	26.4	36.4	32.2	40.0	38.6	75	200
Magnesium as Mg	mg/l	12.6	16.4	18.2	14.4	14.2	12.8	16.6	18.8	30	100
Total Alkalinity (as CaCO3), mg/l	mg/l	230	242	230	230	236	255	245	240	200	600
Chloride (as Cl), mg/l	mg/l	12.4	14.6	14.9	18.6	16.0	14.4	12.6	10.4	250	1000

Sulphate (as SO4), mg/l	mg/l	18.8	20.2	22.6	18.8	16.2	22.4	14.8	16.3	200	400
Iron (as Fe), mg/l	mg/l	0.10	0.10	0.12	0.12	0.12	0.11	0.11	0.10	1.0	No relaxation
Zinc (as Zn), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	5	15
Nitrate (as NO3), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	45	No relaxation
Chromium (as Cr), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.05	No relaxation
Manganese (as Mn), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.1	0.3
Mercury (as Hg), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.001	No relaxation
Cadmium (as Cd), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	0.003	No relaxation
Fluoride (as F), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	1.0	1.5
Residual Chlorine (as Cl2), mg/l	mg/l	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
E. coli/100ml	---	Absen	Absent	Absent	Absent	Absent	Absen	Absent	Absen	Absent	Absent

		t					t		t		
Total Coliform, MPN/100ml	---	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2

3.16.2 CONCLUSION:

All the above parameters at the various locations in the study area are within permissible and tolerable limits for drinking purpose. The underground water in the area is thus potable.

In the study area since the samples have been collected from different sites at isolated places, the level of concentration of different elements vary quite considerably which may be due to small aquifers. However, the levels of the various components are within permissible norms for drinking water.

3.17 NOISE ENVIRONMENT:

Noise is one of the most undesirable and unwanted by-products of our modern life style. It may not seem as insidious or harmful as air and water pollutants but it affects human health and wellbeing and can contribute to deterioration of human well-being in general and cause neurological disturbances and physiological damage to the hearing mechanism in particular. It is therefore, necessary to measure both the quality as well as the quantity of noise in and around the site.

METHODOLOGY:

The intensity of sound energy in the environment is measured in a logarithmic scale and is expressed in a decibel, dB (A) scale. In a sophisticated type of sound level meter, an additional circuit (filters) is provided, which modifies the received signal in such a way that it replicates the sound signal as received by the human ear and the magnitude of sound level in this scale is denoted as dB (A). The sound levels are expressed in dB (A) scale for the purpose of comparison of noise levels, which is universally accepted by the international community.

The day noise levels have been monitored during 6.00 am to 10.00 pm and night noise levels, during 10.00 pm to 6.00 am at all the 8 locations, which covers residential areas, commercial area, industrial area and silence zone within 10 km radius of the study area.

SAMPLING LOCATIONS

A preliminary survey was undertaken to identify the major noise generating sources in the area. The noise survey was conducted to assess the background noise levels in different zones.

Gazettes Notification {S.O. 123(E)} of MoEF & CC dated February 14, 2000 on ambient air quality standards has different noise levels for different zones viz industrial, commercial, and residential and silence zones. Eight sampling locations were selected for the sampling of noise levels.

Noise levels recorded at each station are computed for equivalent noise levels. Equivalent noise level is a single number descriptor for describing time varying noise levels. Location of noise monitoring station in Toposheet is given in **Figure 3.11.** Details list of noise monitoring stations are shown in **Table 3.14.**

FIGURE -3.11

LOCATIONS OF NOISE MONITORING STATIONS

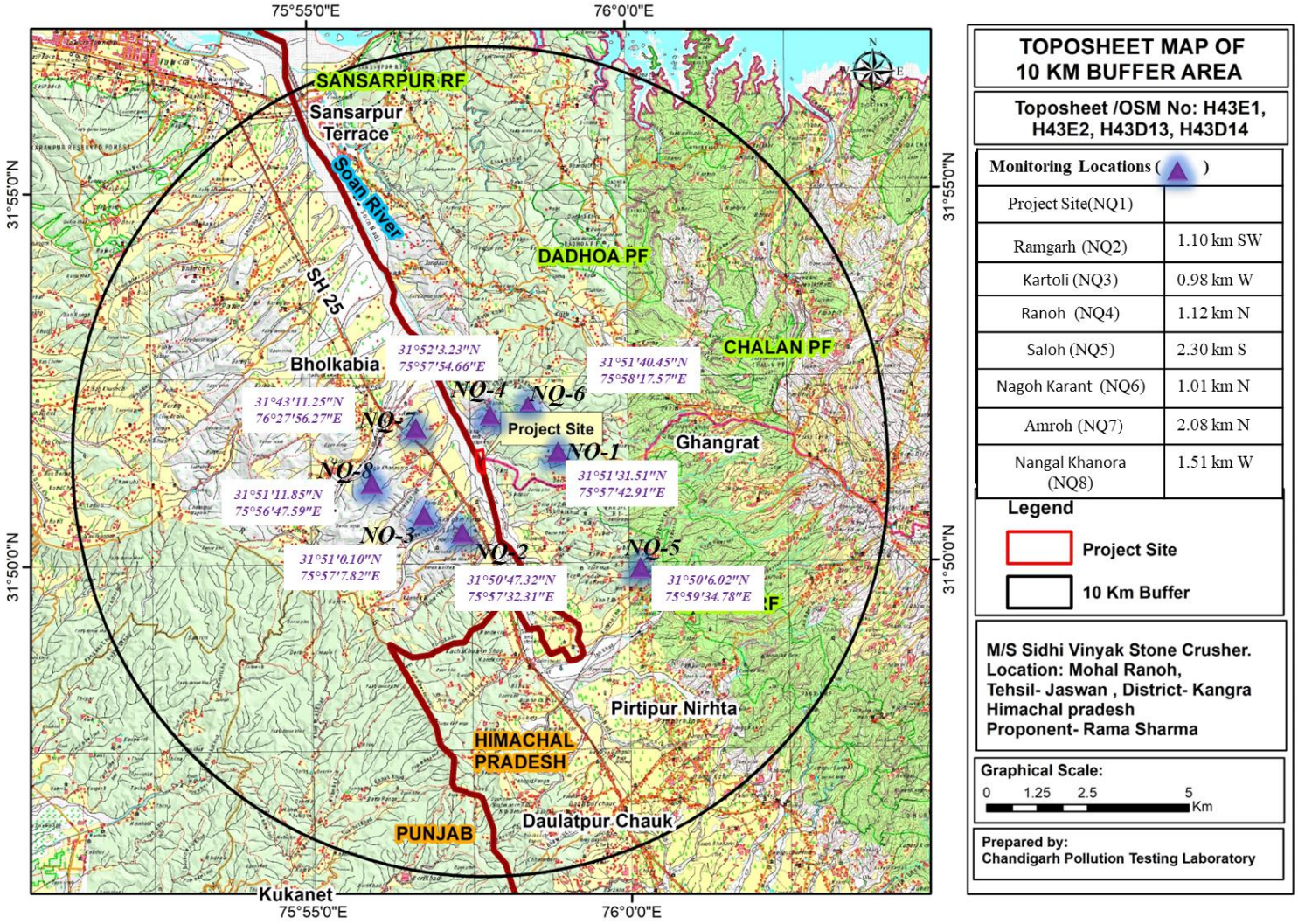


Table 3.14

Details of Noise Monitoring Stations

S. No.	Sample Code	Name of Village/Location
1.	**NQ-1**	Project site
2.	**NQ-2**	Ramgarh
3.	**NQ-3**	Kartoli
4.	**NQ-4**	Ranoh
5.	**NQ-5**	Saloh
6.	**NQ-6**	Nagoh Karant
7.	**NQ-7**	Amroh
8.	**NQ-8**	Nangal Khanora

Detailed results of noise levels are shown in **Table 3.15.** Ambient air standards in respect of noise aregiven in **Table 3.16.**

Table 3.15

Noise Level Results Leq. dB (A) in and Around Project Area

S. No.	Locations	Value in dB(A) (Average)		Test Method
		Day Time (1Hour)	Night Time (1 Hour)	
01.	Project site	47.5	39.4	IS 9989:1981(Rev.2001)
02.	Ramgarh	40.3	31.5	IS 9989:1981(Rev.2001)
03.	Kartoli	42.4	32.5	IS 9989:1981(Rev.2001)
04.	Ranoh	41.6	31.6	IS 9989:1981(Rev.2001)
05.	Saloh	42.5	33.6	IS 9989:1981(Rev.2001)
06.	Nagoh Karant	43.2	32.5	IS 9989:1981(Rev.2001)
07.	Amroh	41.4	33.6	IS 9989:1981(Rev.2001)
08.	Nangal Khanora	40.5	31.7	IS 9989:1981(Rev.2001)

Day time is reckoned as 6.00 A.M. to 10.00 pm and night time is reckoned as 10.00 pm to 6.00 A.M.

Table 3.16

Noise Standards

Area Code	Category of Area	Noise dB(A) Leq	
		Day Time (6.0am-10pm)	Night Time (10.0pm-6.0am)
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

CONCLUSION

Ambient noise levels were measured at 08 locations in the study area. Equivalent noise level varies from 40.3 to 47.5 dB (A) during day time and 31.5 to 39.4 dB (A) during night time. Thus, noise levels at all locations were within the prescribed limits.

From the above study and discussions, it can be concluded that noise levels in the study area are well within the prescribed limits as prescribed by the CPCB. Since, there will be no noise generating machinery, the impact on noise level after unit operation shall be insignificant.

3.18 BIOLOGICAL ENVIRONMENT

A natural ecosystem is a structural and functional unit of nature. It has different biological and physical components, which are interrelated to each other and survive by interdependence. An ecosystem has self-sustaining ability and controls the number of organisms at any level by cybernetic rules. The basic purpose to explore the biological environment under Environmental Impact Assessment (EIA) is to assist the decision-making process and to ensure that the project options under consideration are environmental-friendly. An ecological survey of the study area was conducted, particularly with reference to listing of species and assessment of the existing baseline ecological conditions in the study area. The main objectives of the ecological survey were aimed at assessing the existing flora and fauna components in the study area, to understand the possible impacts on the biological environment caused by the proposed project activities, and to formulate, if necessary, the appropriate mitigation/preventive measures for such impacts. Data has

been collected through secondary sources and by site visits.

The present study was carried out in two separate headings for floral and faunal community. The

aspects to be covered in the study for the project are given in **Table 3.17.**

Table-3.17

Aspect to be covered in the study area

Aspect of Environment	Impacts
A. Terrestrial Ecology	Impacts on terrestrial flora and fauna
	Impacts on Rare-Endangered-Threatened (RET) wildlife
	Impacts on socially/ economically/ genetically/ biologically important species
B. Aquatic Ecology	Impacts on aquatic fauna/flora
	Impacts on spawning and breeding grounds for aquatic species

The information presented in this chapter has been collected through field studies, consultation with various government departments and collation of available literature with various institutions and organizations. The summary of data collected from these sources as a part of the EIA study is outlined in **Table 3.18.**

Table-3.18

Summary of Data Collected from various sources

Aspect	Mode of data collection	Parameters Monitored	Frequency	Source(s)
Terrestrial Ecology	Primary field survey and secondary literature survey	Floral and Faunal Diversity and Their Importance	One Season (Winter)	Field studies, Forest & wild life Department and literature review
Aquatic Ecology	Primary field survey and secondary literature survey	Diversity of Species and their Importance	One Season (Winter)	Field studies, Forest/ wild life Department and literature review

With the change in environmental conditions, the vegetation cover as well as animals reflects several changes in its structure, density and composition. The present study was carried out separately for flora and faunal community respectively.

Sampling:

For field assessment, i.e., primary data collection, a standard statistical sampling method was followed. The sampling design followed random sampling method. The sampling area was decided based on prior land-use map of the project influence zone (within the 10 km radius around the project area), outlining forest areas and other types of habitats, topographic features and build-up area.

Flora:

Methodology for floral study

1. **Secondary literature survey:** Published literature, including those from relevant organizations like the Botanical Survey of India (BSI), the Wildlife Institute of India (WII-Dehradun), the respective Forest Department of the State concerned etc., research papers, articles, books and reliable websites, available within and adjacent to the study area were

compiled andinventoried as "Secondary Floral Diversity Database".

2. **Primary field survey**: *herbs*: Herbaceous plants were studied using the quadrat method as followed during vegetation survey. The size of each quadrat for herb survey was 1m x 1m. Field identification of the species and later identification through photographs were followed. Unidentified herbs were collected following proper procedure and prepared into herbarium sheets for later identification. For mosses, lichens and other plants the plot size was taken as 0.1m x 0.1m.

3. **Primary field survey**: *shrubs*: Shrubs were studied using the quadrat method as followed during vegetation survey. The size of each quadrat for shrub survey was 5m x 5m for shrubs of 3m height. Field identification of the species and later identification through photographs were followed. Unidentified shrubs were collected following proper procedure and preparedinto herbarium sheets for later identification.

4. **Primary field survey**: *trees*: Trees were studied using the quadrat method as followed during vegetation survey. The size of each quadrat for tree survey was 20m x 20m. Field identification of the species and later identification through photographs were followed. Samples of unidentified trees were collected following proper procedure and prepared into herbarium sheets for later identification.

5. **Primary database:** Data generated from the field survey within and adjacent to the study areawere meticulously compiled and inventoried as "Primary Floral Diversity Database".

6. **Field instruments/materials for floral study:** Measuring tape/s, herbarium sheets, newspaper,herbarium press, polythene bags (incl. zip-locked pouches), 78 clinometers, and magnifyingglass, camera, and GPS unit.

B) FAUNA:

Majority of Kangra district consists of chill forest. Under the second category of the forest the Khair is Predominant species. The third category consists of broad leaves species but have lot of bushygrowth as well.

The forest in the district, have been divided in to three categories:

1. Lower Shivalik Chil Pine Forest
2. Northern dry mixed deciduous scrub forest
3. Broad Leaved Forest

TABLE-3.19

RESULTS OF FLORAL STUDY AND FAUNA STUDY

FLORA

S. No.	Botanical Name	Common Name
1.	*Phoenix sylvestris*	Khajoor
2.	*Calotropis procera*	Aak
3.	*Cryptolepis buchananii*	Jaman khumb
4.	*Ageratum conyzoides*	Gha buti
5.	*Stereospermum chelonoides*	Padal
6.	*Oroxylum indicum*	Tatplanga Simal
7.	*Bombax cieba*	Simbal
8.	*Shorea robust*	Sal
9.	*Diospyros cordifolia*	Kala dhao
10.	*Cordia vestita*	Kumbhi
11.	*Cordia dichotoma*	Lasura
12.	*Ehretia acuminata*	Sakar
13.	*Euphorbia royleana*	Chhun
14.	*Cassia fistula*	Amaltas
15.	*Cassia occidentalis*	Chakunda
16.	*Bauhinia variegata*	Kachnar, Karal
17.	*Urena lobata*	Unga
18	*Melia azedarach*	Drek
19.	*Azadirachta indica*	Neem
20.	*Cayratia trifolia*	Chamar bel

FAUNA

Due to rich forest cover in the buffer zone many fauna is expected to be found in this area and it include mammals, reptiles, birds, etc.

List of Mammals in the Study area

S. No.	*Zoological Name*	Common English Name
1.	*Boselaphus tragocamelus*	Blue Bull
2.	*Sus scrofa*	Wild boar
3.	*Cervas unicolor*	Sambhar
4.	*Herpestes edwardsi*	Common Mongoose
5.	*Macaca mulatta*	Rhesus Monkey
6.	*Lepus nigricollis ruficaudatus*	Rufous tailed hare
7.	*Presbytis entellus*	Langur
8.	*Funambulus pennant*	Five striped Palm Squirrel
9.	*Mus booduga*	Indian Field Mouse
10.	*Rattus rattus*	Common House Rat
11.	*Mus muscu/us*	House Mouse
12.	*Pteropus giganteus*	Flying Fox
13.	*Rousettus leschenaultia*	Fruit bat

List of Reptiles in the Study area

S. No.	*Zoological Name*	Common English name
1	*Lacerta vivipara*	Common lizard
2	*Calotes versicolor*	Garden lizard
3	*Bangarus caeruleus*	Common Indian crait
4	*Ancistrodon himalayanus*	Himalayan pit viper
5	*Naja naja*	Indian Cobra

List of Birds in the Study area

S. No.	Zoological Name	Common English name
1.	*Pycnonotus cafer*	Red vented Bulbul
2.	*Acridotheres ginginianus*	Bank myna
3.	*Dicrurus macrocercus*	Black drango
4.	*Dendrocitta vagabunda*	Indian Treepie
5.	*Corms splendens*	House crow
6.	*Corvus macrorhynchos*	Jungle Crow
7.	*Copsychus saularis*	Oriental Magpie Robin
8.	*Saxicoloides fidicata*	Indian Robin
9.	*Lonchura punctulata*	Spotted munia
10.	*Passer domesticus*	House Sparrow

List of Amphibians in the Study area

S. No.	*Zoological Name*	Common English name
1.	*Amolops sp.*	Cascade frogs
2.	*Rana sp.*	Pond frogs
3.	*Bufo melanastictus*	Common Asian Toad

List of Fishes in the Study area

S. No.	*Zoological Name*	Common English name
1.	*Labeo rohita*	Rohu
2.	*Catla catla*	Catla
3.	*Barbus (tor) putitora*	Mahaseer
4.	*Clarias batrachus*	Mangur

3.19. SOCIO ECONOMIC

Social aspects can be defined as the consequences to people of any proposed action that changes the way they live, work, relate to one another, organize themselves and function as individuals and members of society. This includes social-psychological changes, for example to people's values, attitudes and perceptions of themselves and their community and environment.

Broadly social aspects could be classified as under: -

i) Lifestyle aspects- These are the way people behave and relate to family, friends and cohorts on a day-to-day basis.

ii) Cultural aspects - These are shared customs, obligations, values, language, and religious belief another element, which make a social or ethnic group distinct.

iii) Community aspects - These are infrastructure, services, voluntary organizations, activity networks and cohesion.

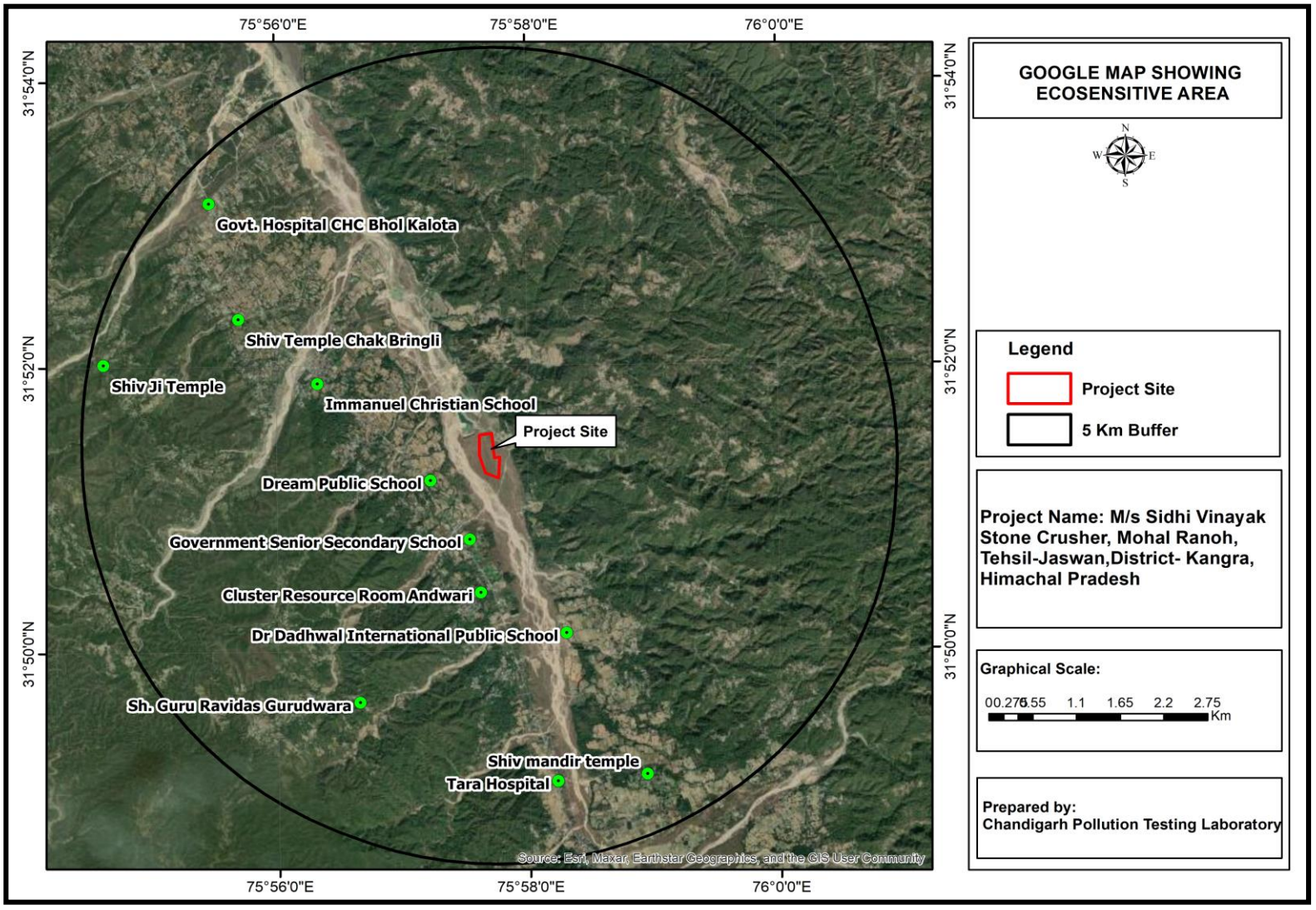
iv) Health aspects - These includes mental, physical and social wellbeing.

v) Rehabilitation and Resettlement- These include displacement of families beyond defined thresholds and the impact on public and community properties, assets. Accordingly, ameliorative measures for addressing the said impact are also required to be taken.

The above aspects have been considered while assessing the social impact of the project.

FIGURE- 3.12

5KM BUFFER MAP SHOWING ECO-SENSITIVE AREAS



3.19.1 FOREST/ WILD LIFE SANCTUARIES

There are no Notified Wild Life Sanctuaries in the study area. List of Protected Forests in the Study area, i.e., within 10 kms from the project area is given in Table 3.20 and also shown in Figure- 3.1. This shows that there are Protected Forests in the Study Area which are located almost in all directions from the site.

TABLE-3.20

List of Protected and Reserved forests in the Study Area

S. No.	Protected/ Reserved Forests	Direction
1.	Sansarpur RF	Towards N
2.	Dadhoa PF	Towards NE
3.	Challan PF	Towards NE
4.	Panjal RF	Towards SE

3.19.2 Demography and Socio-Economic Scenario:

Demography is one of the important pointers of environmental health of an area. It includes description of demography, occupational pattern, available basic amenities like housing, medical care, services, transportation, education, water supply, roads, transport, etc.

Amenities prevalent in the study area have been extracted from the Census of 2011 and site visits and it has been found that:

Almost every village situated within the study area are having Education facility, medical facility, Drinking water and Electricity.

About 90-95% houses are pucca.

Most of the villages are approachable with metalled road.

As per census 2011, the significant demographic and socio-economic statistics of the district are summarized and given in **Table 3.21**

Table-3.21

DEMOGRAPHY & SOCIO-ECONOMY

Name of villages	No. of Households	Total Population	Male	Female	Child (0-6)	Literacy (%)		Scheduled Caste	Scheduled Tribe	Total workers	Main workers	Marginal workers
						Male	Female					
Amroh	35	166	70	96	22	96.61	82.35	12	0	132	19	113
Bhatehar	22	86	45	41	5	97.62	92.31	4	0	22	12	10
Ranoh	42	190	86	104	35	83.82	81.61	68	0	142	31	111
Nagoh Karant	45	208	101	107	21	93.55	79.79	45	0	166	7	159
Nangal Khanora	82	350	164	186	38	88.57	84.30	84	0	74	40	34
Koi	73	301	140	161	35	93.70	84.89	0	0	243	39	204

Ref: Census of India 2011

3.20 TRAFFIC STUDY:

The applied lease is in the river bed and there is very low to no traffic from the Auctioned Area till the main road. However, for the transportation of the loaded vehicles to the nearest approach road, the vehicles may pass through private as well as govt. land. The project proponent shall made necessary arrangements between landowners (Pvt. & Govt.) and will take care of other issues if any at his own for material transportation to the nearest road.

The main connectivity of this is with the Una-Daulatpur- Talwara road. Even on this road, the traffic is not that too high. The road is in enough good condition to bear the additional truck/ transport created by the mining operations Only 682 metric tonnes of material shall be transported at an average per day (Total working days 300/year) for which average 75 trucks with 9 metric tonnes capacity are required.

Total Production for 5 years	1023750 MT
Total Production for 1 year	204750 MT
No. of working days	300
Total production for 1 one day	682 MT
Capacity of tipper	9 Ton
No. of tipper truck trips	682/9 = 75

3.21 Hydrology and Drainage Pattern:

Geomorphology

Kangra district presents an intricate mosaic of mountain ranges, hills and valleys. It is primarily a hilly district, with altitudes ranging from 350 m amsl to 4880 m amsl in the hills of Dauladhar. The elevation of the proposed river bed stone mining project is about 468 m (amsl).

Physiographically, the district can be divided into six units-viz. (i) high hills, which cover almost 60% of the district (ii) Fluvio glacial outwash terraces, which is located in the north eastern part of the district (iii) structural terraces, in the central part (iv) valley fills (v) piedmont plain and (vi) flood plain.

The project site belongs to the piedmont plains meaning the plains created due to glacial moraines transportation causing plainer surface forming the present day topography and river bed landscape.

Hydrogeology

The Beas River forms the major drainage system in the district. The river Beas and its tributaries drain almost the entire district, except the north eastern part which is drained by the river Ravi. The proposed river bed stone mining of Siddhivinayak Stone Crusher falls on the Soan River (Khad) which is perennial tributary of Beas. It joins Beas almost near to the state border of Punjab and Himachal Pradesh, in the district jurisdiction of Kangra.

The ground water aquifers are formed either by the solid rocks of the Conglomerate, Boulder and Sandstone Middle Siwaliks Micaceous sandstone and shale belonging to middle and upper Siwaliks. The Soan river derives its perennial water through the discharge of ground water from these rock assemblage. These hard rocks have varying primary porosity and therefore similar permeabilities. In the context of the river bed of Soan , the relative plain surface of the bed which is mainly boulders and fragments of various rocks are the parent source of ground water when these boulder and conglomerate beds occur in situ in their respective stratigraphical horizons. These boulder beds in natural occurrence have higher porosity and permeability and therefore discharge ground water profusely.

The proposed mining shall be not be within the active river channel but on the dry bed of deposited sediments. This is as per the Standard Sand Mining Guidelines 2016.

Profile of River Bed:		
1.1	**Name of the River/ Stream Bed on which the mining lease is situated**	The mining lease area lies in the Soan River which is the main tributary of the Beas River.
1.2	**Drainage System**	It forms a part of the Beas drainage system.
1.3	**Type of drainage**	The River Soan forms a Sub-dendritic & Dendritic type of drainage Pattern.
1.4	**Origin of river / stream**	Soan river originates at an altitude of 1018 meters above mean sea level, in Una district and lies in the Survey of India, Toposheet No. 43P/15).
1.5	**Altitude of the origin**	Soan river originates at a height of 1018 metres above mean sea level, in Una district. The highest point of the mining of the lease area is 458 metres above mean sea level and lowest point is 451 metres above MSL.
1.6	**Geometry of the catchment of the Soan river impacting the replenishment of deposits.**	Total area of catchment = 198.50 Sq. Km Area of catchment up to mining site = 74.33 Sq. km
The following are the different ingredients of the Soan river		
a.)	**Number of tributaries**	3 (i.e. Roli Khad, Ghangret ki Khad and Kotla Khad)
b.)	**Maximum length of the watershed**	13 Km
c.)	**Maximum breadth of the watershed**	300 m
d.)	**Elevation at origin**	1018 m
e.)	**Elevation at lease area**	451 meters to 458 meters above MSL
f.)	**Total length of Khad up to mining lease**	22.00 Km
g.)	**Total elevation of Loss up to mining lease**	51.54 m per Km

- **Cycle of erosion of Mining site:**

The Soan river flows in mature stage forming zones of deposition in the study area.

- **The Annual Deposition on River /Stream:**

The river rises 1080 metres above sea-level near Tipri in Una district and joins with the Beas river at an elevation of around 434 m above MSL on the northeast side of Talwara township. The river is glacier fed and also rainfed at lower elevations. The catchment area up to mining lease area covers around 74.33 sq.kms. Moreover, the precipitation in the catchment area is also high and the rainfall ranges from 1602.5mm to around 2019.8mm per annum. As such during rainy season, the discharge in the stream is very high full of sediment load which is annually deposited in the stream bed. The annual deposition of 5.0cms to 25.0cms.

The level of H.F.L

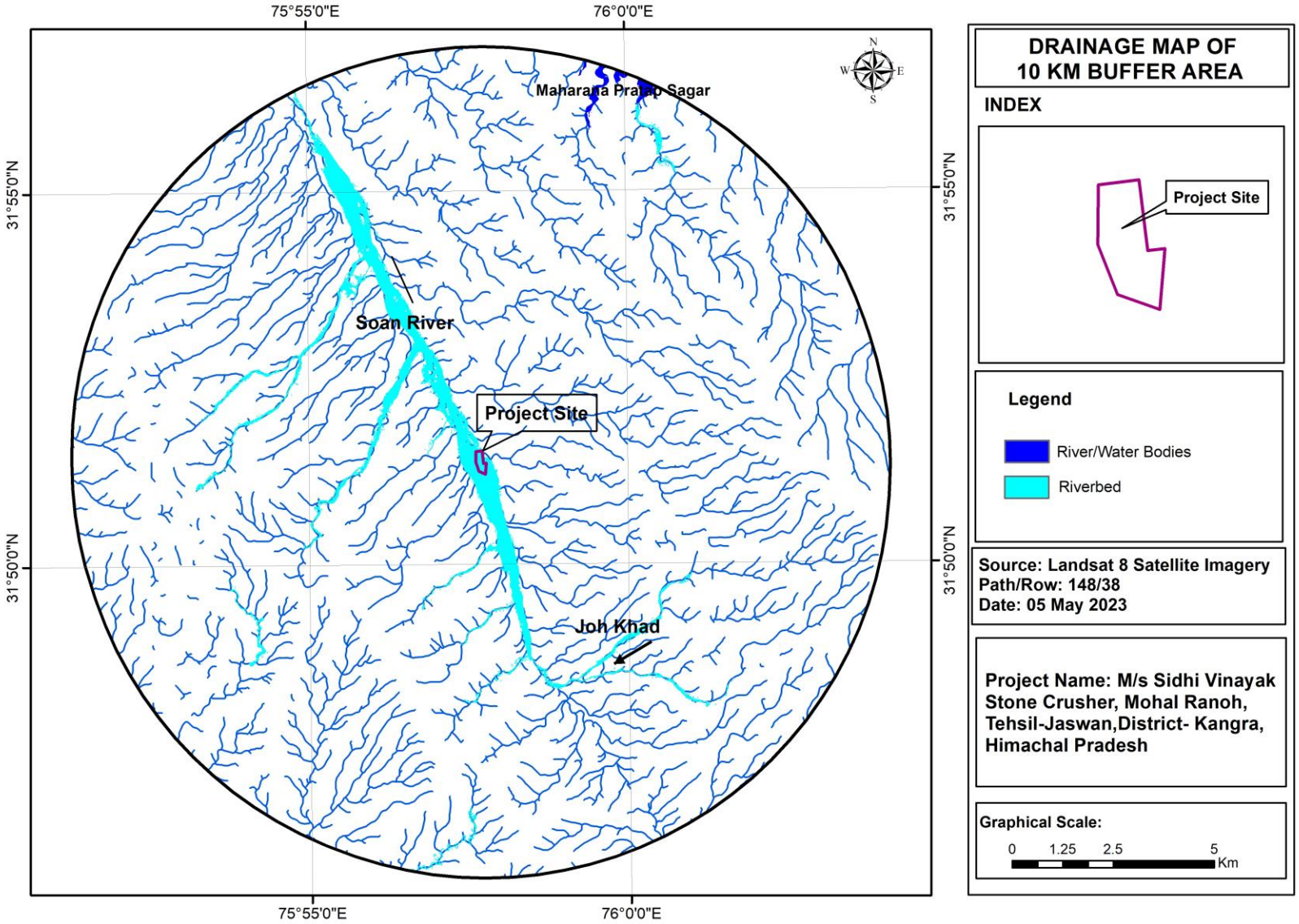
During Monsoon, the water level rises to about one metre to two metres and during non-monsoon period the river remains dry.

Description of Ground Water Table in The Mining area before Post Monsoon.

The Soan khad in district Kangra carved a wide valley and khad bed is occupied with river borne deposits comprising boulders, cobbles, pebbles, river borne bajri, sand, silt and clay deposits. These rivers borne deposits act as a good aquifer for ground water occurrence. Major potential area for the ground water development are the valley fill deposits, occurring along Beas River. As per information gathered from the field, it is revealed that the ground water table is below 50m to 100m below ground surface.

Figure- 3.13

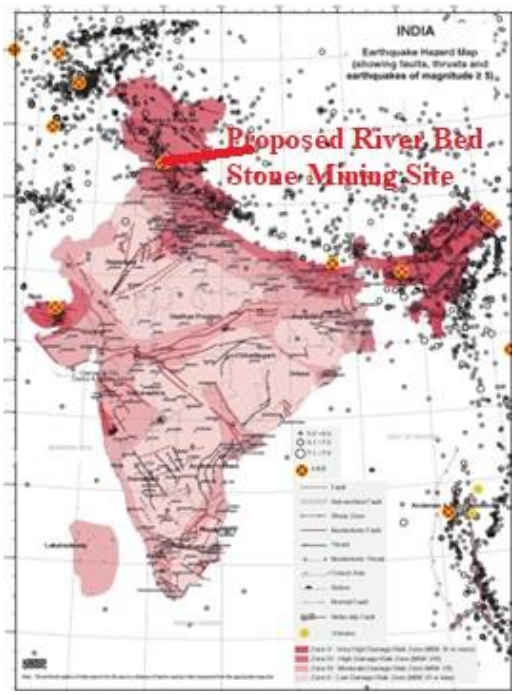
DRAINAGE MAP OF THE PROPOSED MINING AREA



Seismicity

The location of the proposed River bed stone mining project of Sidhi Vinayak Stone Crusher falls under the BIS Classified severe intensity earthquake zone V of intensity MSK IX. The Figure given below displays the location on the Seismic Intensity Map of India prepared by the NDMA (National Disaster Management Authority).

In this context it may be said that the project site falls under most severe intensity of earthquake likely affecting the area particularly the whole of Kangra District as mentioned by NDMA. It is true also in the context of geological events that have taken place in the geological history of the region. The Siwalik beds are originated due to the continual upheaval activities that were taking place in Pliocene and Neocene era of geological time scale which means of recent geological history. The tectonic belt in which Kangra and other surrounding region falls is highly prone to such disturbing events of seismicity.



Source : National Disaster Management Authority-GOI

Fig No. xxx Map indicating the location of proposed river bed stone mining project.

CHAPTER 4.0

ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

4.1 GENERAL:

Prediction of impacts is the most important component in the Environmental Impact Assessment studies. Several scientific techniques and methodologies are available to predict impacts of developmental activities on physical, ecological and socio-economic environments. Such predictions are superimposed over the baseline (pre-project) status of environmental quality to derive the ultimate (post-project) scenario of environmental conditions. The prediction of impacts helps to minimize the adverse impacts on environmental quality during pre and post project execution. Generally, the environmental impacts can be categorized as either primary or secondary. Primary impacts are those, which are attributed directly by the project and secondary impacts are those, which are indirectly induced and typically include the associated investment and changed patterns of social and economic activities by the proposed actions2

The primary function of an environmental impact assessment is to ascertain the potential impacts of project on environmental components such as air, water, noise, soil, flora, fauna, land and Socio-economic and their magnitude during construction and operation for adoption of possible mitigation measure.

The Impacts of project are divided into two categories i.e., impacts during construction phase and impacts during operation phase. Major project impacts will occur during operation phase as no construction stage is envisaged in this project.

Environmental parameters considered for impact analysis during operation phase are: -

1. Air Environment
2. Water Environment
3. Noise Environment
4. Landform and Topography
5. Soil Environment
6. Biological Environment
7. Socioeconomic Environment
8. Solid Waste.
9. Risk and Hazards.

4.2 AMBIENT AIR QUALITY

Impacts:

As the mining is proposed in 91,000 sqm area over river bed upto a depth of 1.0 meter by excavating shallow pits manually without any use of blasting. Due to inherent moisture in the minerals, there will be no generation of any dust pollution during mining operation leading to risein suspended particulate matter. However opencast mining operations are generally prone to generation of high levels of PM_{10} and to a limited extent SO_2, NO_x due to fossil fuel-based vehicles, machines. Air pollution mainly due to PM_{10}, SO_2 and NOx may result in irritation and inflammation of eyes and congestion of throat and infection in lungs. The respirable dust has serious impact on the health of the workers. Lung functions are impaired due to the both respirable and non-respirable dust particles. Chronic exposure leads to respiratory illness like asthma, emphysema, severe dyspnoea (shortness of breath) and bronchitis in extreme cases pneumoconiosis or the black lung disease of miners. The effect of dust may be harmful to the human health. The major contribution of air pollution is by opencast mining, such as excavation, loading and transportation etc. which will lead to short-term rise in the respirable particulate matter(PM_{10}). The dust liberated in mining and other related operations is injurious to heath if inhaled in sufficient quantity.

Mitigation measures

- Emissions inventory for SPM, RSPM, SO_2, NO_x shall be undertaken to satisfy the statuary requirements.
- Dust suppressions shall be done by water sprayers, avoiding overloads of transportedvehicles, water spray on access routes.
- Transportation of material in tarpaulin covered vehicles to crusher site, and shall be carried outin day time only.
- Mining shall be done in a controlled manner.
- Green belt shall be developed in the buffer zone
- The speed of dumpers plying on the haul road should limited to avoid generation of dust.
- Haul road shall be covered with gravels.

Air Pollution Impact Prediction through Modeling:

• Aermod Cloud AERMOD is an air dispersion-modeling package, which seamlessly incorporates the popular USEPA Models, ISCST3, ISC-PRIME and AERMOD into one interface without any modifications to the models. These models are used extensively to assess pollution concentration and deposition from a wide variety of sources.

•Aermod Model The AMS/EPA REGULATORY MODEL (AERMOD) was specially designed to support the Environmental Regulatory Modeling Programs. AERMOD is a regulatory steady – state modeling system with three separate components;

•AERMOD (AERMIC Dispersion Model);

•AERMAP (AERMOD Terrain Preprocessor);and

•AERMET (AERMOD) Meteorological Preprocessor.

The AERMOD model includes a wide range of options for modeling air quality impacts of pollution sources, making it popular choice among the modeling community for a variety of applications.

AERMOD requires two types of meteorological data files, a file containing surface scalar parameters and a file containing vertical profiles. These two files are provided by AERMET meteorological preprocessor program.

PRIME building downwash algorithms based on the ISC – PRIME model have been added to the AERMOD model;

Use of arrays for data storage;

Incorporation of EVENT processing for analyzing short-term source culpability;

Explicit treatment of multiple – year meteorological data files and the annual average; and Options to specify emissions that vary by season, hour-of-day and day-of-week.

Deposition algorithms have been implemented in the AERMOD model – results can be output for concentration, total deposition flux, dry deposition flux, and / or wet deposition flux. The model contains algorithms for modeling the effects of settling and removal of large articulates and for modeling the effects of precipitation scavenging for gases or particulates.

• ***Aermet***

In order to conduct a refined air dispersion modeling project using the AERMOD short term air quality dispersion model, it is necessary to process the meteorological data representative of the study area being modelled. The collected meteorological data is not always in the format

supported by the model; therefore, the meteorological data needs to be pre-processed using AERMET program. The AERMET program is a meteorological preprocessor, which prepares hourly surface data and upper air data for use in the AERMOD air quality dispersion model. AERMET is designed to allow future enhancements to process other types of data and to compute boundary layer parameters with different algorithms. AERMET processes meteorological data in three stages and from this process two files are generated for use with the AERMOD model. A surface file of hourly boundary layer parameters estimates a profile file of multiple-level observations of wind speed, wind direction, temperature and standard deviation of the fluctuating wind components.

•***Application of AERMOD*** :

The AERMOD model with the following assumptions has been used to predict the cumulative GLC due to emissions from the proposed activity:

➢The stack tip down wash is not considered.

➢Plume rise is estimated by Brigg's formula but the final rise is limited to that of mixing layer.

➢Buoyancy induced dispersion is used to describe the increase in plume dispersion.

➢Calm processing route is used by default.

➢Complex terrain is used in computation.

➢It is assumed that the pollutants don't undergo any physio-chemical transformation and there is no pollutant removal by dry deposition.

➢Wash out due to rain is not considered.

➢Receptors on that terrain with no flag pole have been considered.

Atmospheric Stability: The stability class has been estimated using the hourly monitored wind velocity along with the other computed data.

Mixing Heights : Due to non-availability of site-specific missing heights "Hourly Mixing Heights & Dissimilative Capacity of Atmosphere in India" published by Environment Monitoring & Research Centre, IMD, New Delhi has been referred for hourly mixing heights.

Meteorological Data : The hourly meteorological data recorded at site is converted to the mean hourly meteorological data as specified by CPCB and the same has been used in the model. Hourly mixing heights are taken from the "Atlas of Hourly Mixing Height and Assimilative Capacity of Atmosphere in India" published by India meteorological department, 2008, New

Delhi. The meteorological data recorded during study period continuously on wind speed, wind direction, temperature etc., have been processed to extract the data required for simulation by AERMOD using AERMET.

Dispersion Modeling Results: The 24-hourly average ground level concentration (GLC) values from proposed project have been computed for PM considering topographical featured around the proposed project and applicable stability classes. The predicted 24-hourly short terms Maximum Incremental Concentration values for PM10 from the proposed project are given in Table- 4.1. Corresponding plotted are shown in Figure 4.1.

Table-4.1

Predicted 24 hourly short terms Maximum Incremental Concentrations

Pollutants	Maximum GLC in µg/m3	Baseline concentration in µg/m3	Baseline Concentration after project implementation in µg/m3
PM10	0.05	70.4	70.45

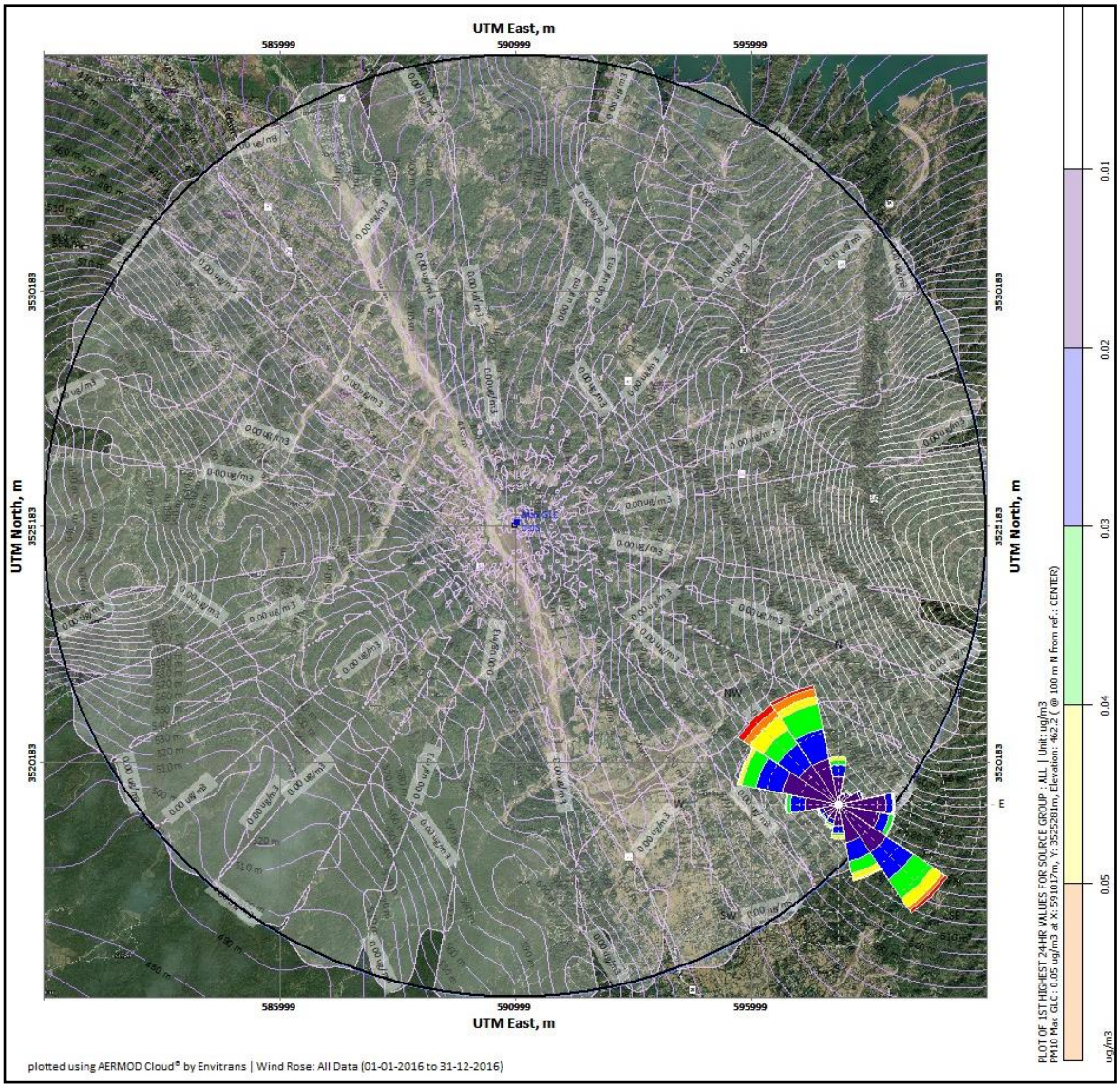
Predicted GLC's of the proposed project:

It is predicted that the maximum contribution in GLC's, with unit's operation will be 70.45 µg/m3 for PM10 at particular elevation from North direction. Since the mining is manual and no blasting is involved impact of the fugitive emission from the unit will be negligible. SPM level due to movement of vehicles will also be checked. The existing Traffic on the road is of the order of about 76 vehicles per day both ways. The present max PM10 is 70.45 µg/m3 and PM2.5 is 35.1 µg/m3 . There will be marginal increase in existing level of ambient air quality (PM10, which will be well within the permissible, limits i.e. 100ug/m3 .

Conclusion:

From the figures available and the studies made, it is concluded that with the mining activity, the ambient air quality in the area is well within the prescribed limits and is not likely to be changed appreciably. With the adoption of the mitigation measures and their strict implementation, the Ambient Air quality is likely to be improved.

Fig 4.1: Isopleths showing 24 hourlies predicted GLC's of PM10



4.3 WATER QUALITY

Impacts

Surface Water Bodies

The location is on the Soan River. Except this, no other surface water body lies around the proposed stone mining location.

The proposed river bed stone mining lease is restricted within the dry river bed and therefore the active river channel of Soan Khad shall be flowing unrestricted as usual and in its natural way. The mining activities shall excavate the dry river bed scrapping of sand, boulders, fragments and grit available within the mining lease but necessarily on the dry river bed.

Mitigation Measures

The approved mining plan restricts the sand mining to be limited to 3.0 m from the highest elevation of the dry river bed sediments. Also the excavation shall be done manually for the sand and other sediment components. Further as per the Standard Sand Mining Guidelines 2016, the excavation for river bed sand or other bigger fragments shall be stopped so as to keep the bottom elevation of the sand pit shall be at least 2.0 m above the water table of the river.

In view of the guidelines, the sand excavations shall not penetrate the ground water table in the flowing river and therefore shall neither damage the quality aspects of river water quality nor affect the quantitative flow of river water in any way.

Ground Water

The location of the proposed river bed stone mining falls over the dry river bed. The elevation of the dry river bed is around 468 m (amsl). The mining of sand and other bigger sediments especially boulders and fragments shall be within the existing dry bed. The flowing water of the river Soan shall be separated and shall be in active river channel.

The approved mining plan allows the working or excavation of river sand within the dry river bd only. This is as per the Standard Sand Mining Guidelines 2016.

Further as per the approved mining plan, the ground water table within the excavations shall not be intercepted or precisely the bottom most elevation of the sand pit shall be at least 2.0 m over the water table in the river. Therefore, the ground water table shall not be intercepted at any location within the mining lease area during course of sand excavations.

Mitigation Measures

During the course of sand mining, as stated above the lowest elevation of the sand pit shall be kept atleast 2.0 m above the water table in the river Soan.

Following provisions of the Standard Sand Mining Guidelines 2016, shall be complied during the 5 year period of sand excavations.

The approach road shall be preferred as to avoid passage of dumpers and trucks across the active channel of the river.

Only a single dumper shall be allowed to enter the dry river bed at a time. No multiple paths for more than 1 dumper shall be made on the dry river bed. This shall prevent compaction of existing river bed and sinking of top surface of sand horizon.

No permanent road shall be made on the dry river bed or in and across the active river channel.

Sand mining operations shall be stopped before monsoon sets in and shall be resumed only upon the receding of monsoon in the area.

The sand mining shall be performed only during dry months after monsoon till monsoon begins.

The dumpers shall be covered over the entire sand laden surface by suitably thick tarpaulin sheet tied securely with the dumper body to prevent generation of fugitive dust.

Washing of dumper shall be prohibited within the active river channel and also no water holes shall be made within the entire mining lease area to tap ground water for any purpose.

Status of Ground Water Development

The CGWB District Ground Water Booklet (2013) states that the exploitation level of ground water is categorised as 'Safe' in the parts of Kangra district under which this Soan river sand mining project falls. Therefore the ground water development has further scope of development in this regard particularly around the proposed sand mining project.

4.4 NOISE LEVEL

The project does not involve any blasting and drilling, therefore there will be negligible impact due to noise & vibrations. However, noise shall be generated due to movement of vehicles for which the following measures shall be implied: -

- "No Horn" sign at prominent places.
- Vehicles to be properly maintained & tuned conforming to the prescribed norms.
- Vehicular movements will be restricted to day time only.
- Replacement of old trucks or their retrofitting.

4.5 LAND ENVIRONMENT

The project area does not consist of any forest land. It does not consist of any human habitations. Land use plan of the mining lease area during pre-operational, operational and post operational is incorporated in the Chapter 2. During the course of mining, the land environment is likely to be impacted as under: -

- Topography & drainage
- Soil quantity
- Soil erosion
- Visual impact

Mitigation measures

A well-planned restoration/reclamation of mined out area shall be in place.

Soil erosion shall be prevented by constructing gully checks, check dams, water weirs etc.

Plantation/afforestation in buffer zone by selecting local species conducive to agro-climatic conditions of the area.

Proper measure to control runoffs will be taken

Landscaping will be done.

4.6 SOIL AND AGRICULTURE

The soil in the study area contains medium level of primary and secondary nutrients. Since no waste is thrown on any agricultural land, agricultural operations will not be affected with the mining. The major crops in the study area are Paddy, Wheat, Maize, Barley and Vegetables. The fugitive emissions from the unit having insignificant pollution load will not be of any threat to the vegetation & soil in this area.

4.7 ECOLOGY & BIODIVERSITY

The area has quite sizable number of forests & local khads having flowing water. These have natural flora & fauna flourishing in the area. The mining activity doesn't involve any blasting & drilling activity; therefore, the project will not disturb habitat of any flora & fauna. Since there is no liquid waste, so the aquatic life in the area is not likely to be affected in any manner. Thus, the

existing ecology & biodiversity of the area shall be maintained & will not be affected.

4.8 DEMOGRAPHIC AND SOCIO-ECONOMIC GROWTH

Villages around the mining have been considered which are mostly with very small population. The project does not intrude on any residential area nor influx of any large population expected. The project does not involve any uprooting of population resulting in rehabilitation. The strength of workers and staff in the unit is about 75 persons. All workers are drawn mostly from the local population. Thus, there is not any appreciable change in population in the nearby villages/towns. In view of the above individual community, life or health of the person in the area is not affected. However, additional employment potential will be generated not only within the unit but in ancillary activities also which are helpful to the local area. **Ultimately this has some positive effect**.

4.9 HAZARDOUS MATERIALS

No hazardous materials are used in the process nor do the finished goods fall in this category. There is no impact on the environment on this score.

4.10 SOLID WASTE GENERATION:

Impacts

It is proposed to employ 170 no. of workers for the sand mining project to meet the target production of sand envisaged.

The solid wastes generation for the estimated 170 workers shall be 85 kg per day as indicated in the Table given below.

Total Workers-Population	Solid waste Categories%	Composition %	Biodegradables	Recyclables	Inerts	Total
			52.00	17.00	31.00	100.00
170.00		Generation-kg/day	44.20	14.45	26.35	85.00

Out of this 85 kg the biodegradables shall be 44.20 kg, recyclables shall be 14.45 kg while the balance 26.35 kg shall be constituted by the inerts.

Mitigation Measures

The biodegradables generated daily shall be about 45 kg which is quite sizeable. These biodegradables may be disposed off at a remote location on the bank of River Soan away from the water channel into a pit which may be about 1 m deep and about a 1m x am in area on the surface. The daily load of biodegradables shall be spread on to the earlier days load which shall be covered with thin layer of loose soil to prevent flies and insects attracted to it. So the pit may be filled up upto the surface of the ground level and then at the end it may be compacted to prevent excavation by rodents or animals. A new pit may be opened when the existing pit exhaust totally.

The recyclables comprising of paper and plastics may be stored at a secured place in the site mine office and disposed off at regular intervals to local recycling agent.

The inerts comprising of broken glass, ceramics also may be disposed off in another pit at a remote corner on the bank of the river but sufficiently away from the water channels. The disposed off inters shall be covered with wastes produced from the mine in the form of rejects to prevent injuries to the workers or inhabitants in the area. The pit when full shall be compacted with soil so that prevailing landscape may be restored.

4.11 OCCUPATIONAL HEALTH AND SAFETY

To control and minimize the risks at workplace, lessee will implement Health, Safety and Environment Policy with the following objectives:

To prevent hazards

To provide safe and healthy environment to all the employees.

To comply with the prevailing regulations and standards.

The lessee, therefore, will adopt occupational, safety and health policy for the safe and healthy environment. There are some health and safety hazards, which may affect the persons employed in the mine. The people may suffer from occupational diseases or may get injured while working in the mine, if proper measures will not be taken to protect the persons from these hazards.

Occupational health surveillance programme:

Occupational health surveillance Programme will include the following facilities:

A. They will have Occupational Health Centre with emergency handling facilities.

B. The occupational health surveillance of the employee shall be done on a regular basis and records of the same will be maintained as per the Mining Act.

SEISMICITY

Anticipated Impacts

The proposed river bed stone mining deposit of M/s Sidhi Vinayak Stone crusher lies in the most vulnerable location for the occurrence of earthquakes of severest intensity causing serious damage to life and property. This indicative of the likely seismic intensity displayed in the Fig no.xxx in Chapter 3. The proposed mining project shall be involving manpower strength of 170.There shall be considerable concentration of human lives within the mining lease which shall be in a relatively smaller area.

Therefore a severe threat to human life is anticipated as per the NDMA Map and also as stated in the District Disaster Management Authority assessment plan.The location falls in the highest intensity of earthquake event likely to occur.

Mitigation Measures

In view of the severe threat to human life as well as property it is of utmost importance that adequate anticipatory prevention measures have to be planned and kept ready for providing fast and timely aid to the affected workers in short span of time.

An important fact needs to be mentioned here. The life of the proposed stone mining project shall be for 5 years which is shorter period to prepare for the likely threats and arrange for the relief.

Therefore, the PP and his team should take prior note of the likely threats and severity of intensities of resulting damages either to human life or property. The BIS has come out with relevant designs for the various structures such as for human dwelling or more precisely the Rest Shelters, office buildings etc need to be built as per the specifications mentioned in BIS standards: IS:13827-Earthen Dwellings; IS:13828 -Low Strength Masonry Structures; IS:13935 - Seismic Strengthening of Structures.

The construction of workers rest shelter, office building etc. on the basis of above referred to BIS standards shall help the various civil structures to withstand the likely intensity of earthquake that may occur in course of mining activities and shall certainly prevent the loss to life and property.

CHAPTER – 5.0

ANALYSIS OF ALTERNATIVES

5.1 General

This is the river bed mining project, where the material will be lifted manually upto the depth of 1.0 meter as per the State Government mining policy, where: -

- No new technology is involved.
- No forest land is involved.
- The site has easy access through approach road.
- Water Requirement only for drinking purpose.
- Manpower availability from nearby areas.
- No resettlement and rehabilitation issues.
- Absence of areas of archeological and historical importance within 10 km radius.

Based on the above criterion, proposed mining land is conducive to undertake for mining of sand stone and Bajri.

CHAPTER – 6.0

ENVIRONMENTAL MONITORING PROGRAM

6.0 PRELUDE

Assessment of environmental and social impacts arising due to implementation of the proposed project activities is at the technical heart of EIA process. An equally essential element of this process is to develop measures to eliminate, offset or reduce impacts to acceptable levels during implementation and operation of projects. The integration of such measures into project implementation and operation is supported by clearly defining the environmental requirements within an Environmental Management Plan (EMP).

6.1 ENVIRONMENT MONITORING PROGRAM

An environmental monitoring program is required for sustenance of the project and maintaining the environment quality of the area. Resultant information shall be used in environmentally responsible management. Such management can be aided by specific data on various environmental parameters such as water, soil and air. Current monitoring consideration is focused on the implementation of mitigation measure.

6.2 OBJECTIVE OF MONITORING PLAN

The basic objective of implementing a monitoring plan on a regular basis is as follows:

- Know the pollution status within the plant and its vicinity. Generate data for corrective action in respect of pollution
- Examine the adequacy of pollution control system.
- Assess the Environmental impacts.

6.3 SCHEDULES FOR ENVIRONMENT MONITORING

As no project can succeed unless it is monitored at regular intervals & results analysed. Keeping this requirement in view an elaborate Monitoring programme has been developed for this project. Regular monitoring of all significant environmental parameters will be carried out to check the compliance status vis-à-vis the environmental laws and regulations.

The objectives of the monitoring will be as follows:

- To verify the results of the Impact Assessment Study with respect to the proposedprojects.
- To study the trend of concentrated values of the parameters, which have been identified as critical and then planning the mitigating measures.
- To check and assess the efficacy of pollution control equipment.
- To ensure that any additional parameters, other than those identified in the impact, donot turn critical after the commissioning of proposed project.

Table: - 6.1 Environmental Monitoring Program

S. No	Item	Parameters to be checked	Frequency
1	Ambient Air	RSPM, SPM, NO_X Silica & SO_2	Every six months
2	Vehicles	PUC	Every six months
3	Noise Level	dB (A)	Once in a year
4	Ground water	As per IS 10500	Once in a year

All the above observations will be compiled and documented to serve the following purposes.

- Identification of any environmental problems that are occurring in the area.
- Initiating or providing solution to those problems through designated channels and verification of the implementation status.
- Controlling activities inside the project, until the environmental problem has been corrected.
- Suitably responding to emergency situations.

6.4 Environment Management Cell

The Environment Management Cell shall include:

- Representative of Management (Head of Environment Cell)
- In charge Maintenance Department

- A representative of Environmental Consultants

The cell shall be constituted immediately at the start of the project so that appropriate actions to protect the Environment are taken from the very beginning. All actions taken by the cell shallbe documented.

CHAPTER – 7.0

ADDITIONAL STUDIES: DISASTER MANAGEMENT

7.1 PUBLIC CONSULTATION:

Present report is for the purpose of public consultation only. The details and proceeding of public hearing will be incorporated in the final report.

- Public hearing proceedings
- Public Hearing Notice Published in prominent newspapers.
- Photographs of Public hearing
- Action plan for the issue raised during public hearing

7.2 IDENTIFICATION OF RISK & HAZARDS:

The mining of sand, stone and bajri will be done manually so, there will not be any major riskhazard associated with the process. The possible scenarios selected for this project are as below:

- Inundation / Flooding
- Accident during sand loading, transporting and dumping
- Accident due to vehicular movement.

INUNDATION/FLOODING:

The consequences of flooding/ inundation are catastrophic or fatal. The likelihood of occurrence of flooding is occasionally possible. As per mining plan the mining work will not be carried out during monsoon season. The likelihood of occurrence of drowning is rare due to dry season mining.

ACCIDENT DURING SAND LOADING, TRANSPORTING AND DUMPING:

The consequences of this scenario are minor which may be taken care with first aid care. This will not lead to any day loss. The likelihood of occurrence can be regular due to carelessness of the worker.

ACCIDENT DUE TO VEHICULAR MOVEMENT:

The consequences of this scenario are moderate and may result in hospitalization and day loss. The likelihood of occurrence is occasionally possible

7.3 RECOMMENDATION FOR RISK REDUCTION:

Measures to prevent Inundation/Flooding

Inundation of flooding is expected and beneficial for these mines as during this time only the mineral reserve gets replenished.

1. During monsoon months and heavy rains, the mining operations are ceased.
2. There should be mechanism/warning system of heavy rains and discharges from the upstream dams.

Measures to Prevent Accidents during Loading

□ The truck should be brought to a lower level so that the loading operation suits to the ergonomic condition of the workers.

□ The loading should be done from one side of the trucker trolley only.

□ The workers should be provided with gloves and safety shoes during loading.

□ Operations during daylight (9a.m. to 6p.m.) only.

□ Stockpiling of harvested material on the river bank will be avoided.

□ Necessary first aid kit will be always kept in the mine site.

Measures to Prevent Accidents during Transportation

□ Vehicles will be periodically checked and maintained in good condition and must not be overloaded

□ Overloading will not be permitted;

□ To avoid danger of accident, roads and ramp near embankment will be properly maintained.

□ The truck will be covered and maintained to prevent any spillage;

□ The maximum permissible speed limit will be ensured;

□ The truck drivers will have proper driving license.

7.3.1 INTRODUCTION:

Socio-Economic Impact Assessment (SEIA) refers to systematic analysis of various social and economic characteristics of human being living in a given geographical area during a given period. The study area consists of core area where the project is located and a buffer area encircling the project area with a radius of 10 kilometers from the periphery of the core area. The Socio-economicImpact Assessment focuses the effect of the project on social and economic well-being of the community. The impact may be direct or indirect. Further, the impact may be positive or negative.

7.3.2 OBJECTIVES OF SEIAA:

The prime objective of the current study is to assess the impact of the proposed Mining Project on socio-economic characteristics of people living in the neighbourhoods. Further, it is to be established whether the impending impact would be direct or indirect. Furthermore, it is to be examined whether the said impact would be positive or negative.

7.3.3 SCOPE:

The Scope of the study is as follows:

a) To collect baseline data of the study area

b) To comprehend socio-economic status of the people living in the study area.

c) To assess probable impact of the project on social and economic aspects in the study area.

d) To measure the impact of the project on Quality of life of the people living in the study area.

e) To ensure sustainability of positive impact.

f) To suggest mitigation measures and agency responsible for taking action in case of adverse impact.

7.4 SOCIO-ECONOMIC IMPACT OF THE PROJECT:

Impact on Demographic Composition

There will not be hardly make any difference in the demographic composition of the study area as the additional employment it envisages to create will be met locally to the maximum extent. Hence, the chances of in-migration of people from outside the study area are remote. Accordingly, there will be no variation in the total population of the study area including that of sex ratio, when the mine starts operating

Employment Opportunities:

The proposed Project will provide employment to the local people. The number of workers to be deployed in the mining project will depend upon the quantity of minerals to be extracted from the mine by the lease holder. Both the skilled and the unskilled workers will be recruited locally. It has estimated that around 170 people will get direct employment for this mining project. It is a positive impact of the project since it is providing employment opportunities to the local people. The project will not affect the vulnerable groups of people.

Increased Supply of minerals in the market:

Both Government departments and private developers have taken up construction of roads, bridges and buildings in a big way. Hence, the demand for sand, stone & Bajri is ever increasing with the growth of the infrastructure development in our country. The requirement for the building materials is always high, there is already an acute shortage of sand in the market, and the construction industry is the main sufferer. It is a critical component of concrete mixture. It is also used for filtering waste. With the commencement of the proposed mining project the supply of sand, stone &*Bajri* will increase at least in the local market.

Impact on Road Development

Movement of trucks and other vehicles to and fro the mining site is expected to increase, when mining will start. The existing roads connecting the quarry with the national highways are connected by metalled and unmetalled roads. Hence, there is need for road maintenance and

repairing regularly in the mining area. Further, there are risks of accidents during loading of extracted minerals into tractors-trolleys and transportation to markets for sells. However, accidents can be avoided by taking due care and precautions.

Impact on Health

There are no chances of occurring diseases, due to manual mining of sand. Sand is nontoxic However, sand-using activities such as sand blasting require precautions since it create respiratory problems among mine workers. Excessive inhalation of sand is a serious health concern. To avoid respiratory problem from sand necessary protection should be taken.

Few safety measures are outlined below:

a) It is ensured that health and safety of all the employees at work will provide. Efforts will be made to provide and maintain a safe work environment and ensure that the machinery and equipment in use is safe for employees. Further, it will be ensured that working arrangements are not hazardous to employees.

b) The first aid treatment reflects the hazards associated with the mining of sand, stone & *Bajri*. The first-aiders will be well trained in handling patients working in the above Mining Project.

c) For all mine workers regular health examination will be made compulsory. Treatment for respiratory diseases or asthma, skin diseases, lung function test (pre and post ventolin), Audiograms, Chest X- ray etc., as required will be given.

d) To meet the medical needs of the mine workers tie-up with nearest hospitals will be made. This will ensure timely medical aid to the affected persons.

CONCLUSION

The proposal involves the collection of river borne minerals from river bed of Man Khad. The implementation of proposal is necessary to prevent the widening of river bed and to prevent the flooding of adjoining area & the same is possible only by maintaining the exciting course of river. Widening of river banks leads to bank erosion, damage to flora, agricultural land and the nearby settlements. The project implementation will provide direct and indirect employment, mostly to locals which will improve their social and economic upliftment. The extracted and processed minerals enjoy tremendous market demand. The proposal is therefore recommended for implementation.

CHAPTER – 8.0
PROJECT BENEFITS

8.1 PRELUDE:

The proposed project is mining of sand stone and Bajri mining from the riverbed, which will have no major impact on surrounding environment. It shall help in channelizing the flow of river and prevent flooding in surrounding areas. The proposed activity shall provide raw material to stone crusher there by boosting production of construction material. This will bring overall improvement in infrastructure development and economic growth of the area.

8.2 EMPLOYMENT POTENTIAL:

The mining activity will provide direct and indirect employment to around 170 local people who will be engaged in mining, transportation, trading and other allied activities, which will improve socio- economic status of the area in terms of infrastructure development and improvement in economic status.

8.3 IMPROVEMENTS IN THE PHYSICAL INFRASTRUCTURE:

The proposed sand, stone and Bajri mine will have numerous induced impacts on society such as growth in schools, hospitals, hotels, resorts, transport etc. It will also attract other entrepreneur to establish their venture in the region.

8.4 IMPROVEMENTS IN THE SOCIAL INFRASTRUCTURE:

The social infrastructure like religious places (temple, mosque, church, Gurudwara); marriage homes, bus stations, railway stations, play grounds will be improved.

8.5 OTHER TANGIBLE BENEFITS:

The other tangible benefits include metrics and improvements demonstrating process and system

cost savings, compliant inspections and customer audits, faster product approvals and manufacturing throughput, less rejected material, reduced nonconformance issues, and more efficient continuous improvement and project implementation. Intangible benefits include improved staff morale, faster, more accurate transparent decision making, less employee turnover, increased staff accountability and enhanced culture of quality throughout the organization turnover, increased staff accountability.

8.6 LITIGATION AND PENDING CASES:

Unit is not engaged in any litigation and no case pending in the court of law.

8.7 CORPORATE ENVIRONMENT POLICY:

The promoters of the project are well aware of issues and concerns regarding environmental matters pertaining to the project. The proponent will have well established administrative set up to deal with the environmental issues and ensuring the compliance of statutory norms and EC conditions as per following line diagram.

8.8 CORPORATE ENVIRONMENTAL RESPONSIBILITY (CER):

For fulfilling the social responsibility, Items wise detail and time bound action plan shall be chalked out based on the public consultation issues and the representations of surrounding villages. The same shall be submitted along with Final EIA report. In addition to issues which may crop up during public hearing the following social activities have been planned.

- Awareness plan on girl's education.
- Spreading legal awareness amongst people and this advantages section of society about their rights & remedies available.
- Formation of a task force of volunteers to educate people, regarding judicious use of water resources.
- Green belt development on village common land in association with concerned village Panchayat.
- Promotion of sports activities in nearby village.
- Development of crematorium in one village of study area.
- Details of activities to be undertaken under Corporate Environmental Responsibility

- **CORPORATE ENVIRONMENTAL RESPONSIBILITY**

  Requisite amount against the CER activities will be deposited in the account of Directorate of Environment, Science & Technology (DEST), GoHP along with the Environment Clearance of the proposal. The CER activities will be decided and executed by the DEST itself.

CHAPTER – 9.0

ENVIRONMENTAL COST BENEFIT ANALYSIS

Minor Mineral means building stones, gravel, ordinary clay, ordinary sand other than sand used for prescribed purposes, boulder, shingle, chalcedony pebbles used for ball mill purposes only, lime shell, Kankar and limestone used in kilns for manufacture of lime used as building material, Murom, brick-earth, fuller's earth bentonite, road metal, rehmatti, slate and shale when used for building material, quartzite and sand stone when used for purposes of building or for making road metal and household utensils. Minor minerals are mainly consumed by infrastructure & housing industries and development. Whereas sand and Bajri is directly used for all construction works. Boulders are consumed by stone crushers and manual crushing operations for use in roads construction etc. Virtually there is no construction or infrastructure building work is possible without these minor minerals, hence the same can be assumed as back bone of the infrastructural growth of India.

9.1 ESTIMATED PROJECT COST:

Total project cost will be Rs 30,00,000/- or Thirty Lakhs.

9.2 PROMOTION OF SOCIAL & ECONOMIC STATUS:

The project will contribute to the economy and social development of the area. It will provide direct employment to about 170 people and indirect employment to many more.

The company has shown willingness to provide medical facilities to employees, their families and also to villagers as per scope of their economical means.

9.3 CONCLUSION:

The management will recruit the semi-skilled & unskilled workers from the nearby villages. The project activity and the management will definitely support the local Panchayat and provide other form of assistance for the development of public amenities in this region. The company management will contribute to the local schools, dispensaries for the welfare of the villagers. Green

belt development / Plantation will be taken up in the vicinity of river banks, along the approach roads and around Govt. buildings schools.

CHAPTER -10

ENVIRONMENT MANAGEMENT PLAN

10.0 INTRODUCTION:

Environmental management plan (EMP) describes the administrative aspects of ensuring that mitigation measures are implemented and their effectiveness monitored, after grant of EC. It consists of various policies, control measures etc. for abatement of critical environmental impacts arising out of the proposed project. Mitigation measures are proposed on the basis of identified impacts. Further a suitable environment management plan will be introduced in the project to implement and practice measures to protect and enhance the quality of environment. The EMP is only as effective as its implementation. An appropriate environmental management strategy is developed and presented in the form of an EMS. It is the responsibility of the project proponents to control the utilization of resources and discharges of waste by adopting suitable control measures in the factory to avoid adverse effects of industrial activities on the environment and in turn to enhance the quality of the environment.

	Anticipated Impacts	**Mitigation Measures**
Air Environment	• In river bed mining activities, the only source of gaseous emission is the fugitive dust generation during mining and from the engines of vehicles transporting the mined materials.	• Periodic air quality survey will be carried out to monitor the changes consequent upon mining activities as per the norms of Sate Pollution Control Board. • To control the emission of harmful gasses regular maintenance of equipment will be carried out on regular basis. • Proper mitigation

		measures like water sprinkling on haul roads will be adopted to control fugitive dust emission. • Plantation will be carried out in nearby vicinity of river bank. • To control the emissions regular preventive maintenances of vehicles will be done and all transportation vehicles will carry a valid PUC certificate. Over loading of trucks and consequent spillage on the roads will be avoided.
Noise Environment	• Noise will be produced at mining site due to movement of vehicles only. • The lease area is not inhabited by any wild life, as there is no forest cover. Hence there will not be any effect on migration or extinction of wild life from the lease area as the noise created by the mining operation is	• Periodical monitoring of noise will be done to adopt corrective actions wherever needed. • Speed of the vehicles in the mining area will be restricted. • Vehicles with good maintenance will be utilized for material transportation. • Proper maintenance of all vehicles & equipments

	insignificant so as to cause any impacts.	will be carried out which will help in reducing generation of noise during operations. • Plantation will be taken up along the approach roads which will minimize propagation of noise.
Water Environment	• There will be only domestic waste water generation from the sand mining operations. • There is no chance of surface water pollution. The mining will be done away from water course on the river bed only. • Mining in the area will be done well above the water table. Therefore, impact on water regime is not anticipated.	• River bed mining will be done up to depth of 1m from the surface as per approved mining plan. • Necessary arrangement shall be made at the stockpiles to prevent silt and sediment flowing in water. • No In-stream mining will be done. • No effluent will be generated due to mining activities. • Plantation is proposed, which will increase the water holding capacity and help in recharging of ground water and promote water conservation.
Land Environment	• Deviation from planned mining procedure can lead to bank erosion/cutting	• A well- planned restoration/reclamation of mined out area shall be in

	and thereby river channel shifting and degradation of land, causing loss of properties. • There is no environmental pollution due to the proposed mining as it is proposed to be a manual scooping of ordinary sand on the river bed. • The land of the mine lease area is Sand Mining & there will be no change in land use after operation.	place. • The extraction of sand will be restricted within the 100m distance river bank of the river. • The proposed river bed mining is unlikely to change any characteristic of the river bed as the permitted mining volume is based upon annual replenishment.
Solid/Hazardous Waste Management	• No solid waste generation is expected from the mining operation. Waste generation from human activities and vehicles usage can occur.	• All sand mining machines and trucks should be maintained regularly to prevent oil leakages. • Maintenance and washing of sand mining machines and trucks should be conducted at a suitable site/facility. • Sand mining personnel should be sensitised to dispose of waste in a responsible manner and not to litter. No waste may remain on site after the

		completion of operations.
Biological Environment	• The mining activity will have insignificant effect on the existing flora and fauna.	• There is a requirement to establish a stable ecosystem with both ecological and economic returns. Minimization of soil erosion and dust pollution enhances the beauty of the core and the buffer zone. • The purpose of the project itself is to save the flora around the project area from river widening, excessive erosion and floods. It was found that the sand mining activity will not have any significant impact on the biological environment of the region. • Minimization of soil erosion and dust pollution enhances the beauty of the core and the buffer zone. To achieve this, it planned to increase plantation activities.
Socio-economic Environment	• As such no negative impact will be anticipated there.	• For improving the socio-economic environment, proper CER activities will

		be taken up in vicinity to uplift the condition of people.
Occupational Health & Safety of Workers	• The major health hazards in a mining unit are dust & noise.	• All workers will be provided Personal Protection Equipment. • Face masks and side covered glasses will be provided to all workers. • Frequent check-up of the workers will be done which shall, include chest X-ray, ECG & vision testing. Necessary treatment shall be provided wherever required. All checkups will be documented and reviewed monthly for occupation health and safety of the workers. • Ear plugs will be provided to all workers in the area. •

10.1 BUDGET ALLOCATION OF ENVIRONMENT MANAGEMENT PLAN:

Details of expenditure on environment given below:

Table: 10.1

Expenditure on environmental measures

S. No.	Title	Capital Cost (Rs. Lacs)	Recurring Cost (Rs. Lacs/annum)	Time frame to Implement
1.	Air pollution control-Management of haulage road including water sprinkling with the help of tanker through contract supply.	--	1.5	Twice a day & as per requirement
2.	Plantation & its maintenance for five years.	4.0	0.80	With affect from the first monsoon after the grant of EC & completion within two years.
3.	Waste management.	2.0	0.4	As per mining plan
4.	Check dams/ retaining structures & its maintenance	6.0	1.2	As per mining plan
5.	Testing of air, water andnoise parameters as per norms of HP Pollution Control Board.	----	0.25	As per SPCB
6.	Occupational healthmeasures-Provision of PPE, first aid and other miscellaneous.	1.0	0.20	As per mining regulations.
Total		**13.0**	**4.35**	

10.2 CONCLUSION:

All possible environment aspects have been adequately assessed and necessary control measures have been formulated to meet statutory requirements. Thus, continuation this project will not have any appreciable negative impacts.

CHAPTER-11
SUMMARY AND CONCLUSION

11.1 INTRODUCTION:

Smt. Rama Sharma, Prop: - Sidhi Vinayak Stone Crusher, Village-Ranoh, P.O. - Kanpur and Tehsil-Jaswan, District-Kangra, State- Himachal Pradesh has been issued a "Letter of Intent "for grant of mining lease vide letter No. Udyog- Bhu (khani-4) Laghu-407/09 on dated 13-10-2022. For the grant of mining lease area for the extraction of Stone, Bajri and Sand over an area situated in Khasra no. 79/1 and 447/1 measuring 09-96-64 Ha, (Govt land, River bed) falling in Mohal Ranoh, Tehsil Jaswan, District - Kangra, Himachal Pradesh. Based on a mining plan prepared by a registered Geologist and subsequently approved by the Industries Department. The project falls in category B1; hence the Environmental Clearance is to be given by SEIAA, Shimla, H.P.

11.2 DETAILS OF MINING PROCESS & LOCATION:

Table No 11.1: Details of Mining Process & Location

1.	**Name of the project**	**Extraction of Sand Stone & Bajri by Smt. Rama Sharma, Prop. M/s Sidhi Vinayak Stone Crusher**	
2.	**Type of project**	Mining of Minor Minerals **Sand Stone and Bajri.**	
3.	**Location**	Mohal Ranoh, Khasra No. 79/1(5-72-02 Ha) and 447/1 (04-24- 62) measuring 09-96-64 Ha, Tehsil- Jaswan, District- Kangra, Himachal Pradesh.	
4.	**Latitude**	31°51'31.51"N	31°51'21.93"N
	Longitude	75°57'42.91"E	75°57'43.92"E
	Elevation (Altitude at origin)	Highest 458 meters above MSL Lowest 451 meters below MSL	
5.	**Total Area**	09-96-64 Hectares	
6.	**Products**	Sand, Stone and Bajri	
7.	**Capacity**	10,23,750 metric tons for five years or 2,04,750 metric ton	

		for 1 year.
8.	**Cost**	Rs.30 lakhs.
9.	**Source of Electricity**	Not required
10.	**Alternative source**	Nil
11.	**Power Requirement at mining area**	Not required. All operations are manual.
12.	**Water consumption**	3.5 KLD
13.	**Source of water supply**	From Tanker
14.	**Air pollution control at mining site**	Water sprinklers & tree plantations
15.	**Hazardous chemical**	Nil.
16.	**Hazardous waste**	Nil.
17.	**Land Type**	Government Land, Kisam; Mumkin Khad
18.	**Manpower requirement**	170 persons
19.	**Validity of Lease**	As per grant
20.	**Name of the stream/ River**	The mining lease area lies in the river bed of **Soan Khad**
21.	**Method of mining**	Manual

11.3 METHOD OF MINING:

Mining will be done manually along the river bed keeping both shores unaffected. Drilling and blasting are not proposed.

Trucks/tractors/trolleys/trippers will be used for the mineral transportation. Maximum depth will be restricted to 1mbgl. Bank of the river will be kept untouched.

11.4 ENVIRONMENT MANAGEMENT PLAN:

Degradation of land is not having significant adverse impact of riverbed mining due creation of access roads, mining operations, transportation of mined material. In order to prevent the environmental degradation of leased mine area and its surroundings, the following measures shall be taken.

After leaving 1/10th of the width of the river from both side of the bank as no mining zone, for the stability of the banks, mining only be done in the remaining portion of the lease area and also from the stream. In this activity, the work is proposed to be done manually which will avoid adverse effects associatedwith heavy machinery and their functioning.

- The mining is planned in non-monsoon seasons only, so that the excavated area gets replenished during the monsoon each year.
- Restoration of bank will be ensured at the end of mine closure every year. Operations during daylight only.
- No foreign material should be allowed to remain/spill in river bed and catchment area, or no pits/pockets will be allowed to be filled with such material.
- There will be minimum numbers of access roads to riverbed, as cutting river banks should be avoided and ramps are to be maintained. Access points to the river bed are to be decided based onthe following.
- Least steepness of river bank;
- Less damage to riverside vegetation and least human activity; where steepness cannot be avoided access ramps should be constructed;
- Haulage roads parallel to the river bank and roads connecting access (ramps) to the river bed shall be away from bank, preferably a minimum of l00m away.
- Access roads from the public roads and up to the river bank should be aligned in such a way thatit would cause least environmental damage;

For particular operations approaching river bed from both the banks should be avoided.

11.4.1 PLANTATION WORK:

Table: 11.2

The year wise plantation plan is given in the table below

S. No	Year	Area in Sq. Mts.	No. of Plants
1.	**1st Year**	2000	200
2.	**2nd Year**	2000	200
3.	**3rd Year**	2000	200
4.	**4th Year**	2000	200
5.	**5th Year**	2000	200
	Total	**10000**	**1000**

11.4.2 STRATEGY FOR PROTECTION OF POINT OF PUBLIC UTILITY ETC:

There is no point of public utilities present in and around the proposed area.

11.4.3 AIR ENVIRONMENT:

During mining stage generation of dust is not expected as the area is a river bed land is moist due to soil moisture. The waste material obtained after sale of sand, Bajri and boulders shall be stacked in a separate place and will be utilized for plantation and the balance filled up in the excavated pit. All vehicles for service activities at the project site shall be checked for vehicular emission. The agencies will be asked to keep them within prescribed limits. They will also be asked to maintain them properly. Speed of vehicles for transport of materials shall be kept very low and speed breakers will be provided at suitable places.

11.4.4 WATER ENVIRONMENT:

Since no water will be used in the mining operations, therefore, no waste water will be generated, thereby no impact on groundwater and surface water quality. Small amount of domestic waste water shall be treated in septic tanks at crusher site before to put use for plantation. However, the following safeguards shall be adapted.

Mine waste dumps will be stabilized during the course of their retention.

11.4.5 SOIL CONSERVATION:

There is no soil over mineralized area; however, the receding floods in the monsoon season deposit some clay /soil carried down by river water. It is hardly a few millimeters thick and of not much consequence.

Even in the areas of no mining activity the process of deposition in one season and transportation of previously deposited material in the next season takes place along with deposition of fresh material by receding floods.

Soil Quality will be monitored on yearly basis in the area surrounding the core zone used for agricultural activity to check for any negative impacts on the soil quality.

11.4.6 NOISE ENVIRONMENT:

Since, the project does not involve any blasting, there will therefore be negligible impact due to noise & vibrations. However, noise shall be generated due to movement of vehicles for which the following measures shall be implied: -

- "**No Horn**" sign at prominent places
- Vehicles to be properly maintained & tuned conforming to the prescribed norms
- Noise abatement from line source
- Replacement of old trucks or their retrofitting

11.4.7 OCCUPATIONAL HEALTH AND SAFETY OF WORKERS;

The major health hazards in a mining unit are dust & noise. Accidental rolling of stones along slopes could also be a hazard in the working area. Following mitigation measures will be provided.

DUST:

All workers will be provided Personal Protection Equipment

Face masks and side covered glasses will be provided to all workers.

Frequent check-up of the workers will be done which shall, include chest X-ray, ECG & vision testing. Necessary treatment shall be provided wherever required.

All checkups will be documented and reviewed monthly for occupation health and safety of the

workers.

NOISE:

Since mining operations are semi-mechanized. The noise in the working area is not of significant levels. However, ear plugs will be provided to all workers in the area.

Audiometric test of the workers shall be done regularly & medical health provided wherever required.

11.5 BUDGET ALLOCATION OF ENVIRONMENT MANAGEMENT PLAN:

Details of expenditure on environment given below.

Table 11.3

Expenditure on environmental measures

S. No.	Title	Capital Cost (Rs. Lacs)	Recurring Cost (Rs. Lacs/annum)	Time frame to Implement
1.	Air pollution control-Management of haulage road including water sprinkling with the help of tanker through contract supply.	--	1.5	Twice a day & as per requirement
2.	Plantation & its maintenance for five years.	4.0	0.80	With affect from the first monsoon after the grant of EC & completion within two years.
3.	Waste management.	2.0	0.4	As per mining plan
4.	Check dams/ retaining structures & its maintenance	6.0	1.2	As per mining plan
5.	Testing of air, water andnoise parameters as per norms of HP Pollution Control Board.	----	0.25	As per SPCB
6.	Occupational healthmeasures-Provision of PPE, first aid and other miscellaneous.	1.0	0.20	As per mining regulations.
Total		**13.0**	**4.35**	

11.6 RECLAMATION PLAN:

The mined area being part of the river course cannot be reclaimed for any other purpose. The mining depth will be upto meter or upto water level whichever is less, thus water regime will not be disturbed.

- The entire quarried area will be replenished and reclamation by the river during monsoon floods.
- The lease area is and shall remain river bed.
- Thus, the topography or land use of the river will not be changed.

11.6.1 WASTE DISPOSAL ARRANGEMENT IF ANY:

Year wise generation of mine waste, production of mine waste during fiver year given below.

Table-11.4 Year wise Production of mine waste

Mine Waste in MT (SILT/ CLAY)	
1st Year	30712
2nd Year	30712
3rd Year	30712
4th Year	30712
5th Year	30712
TOTAL	**153560**

11.6.2 TOPSOIL UTILIZATION:

There is no top soil available in the river bed.

11.6.3 PREVENTIVE RETAINING STRUCTURES:

The check dams will be constructed at suitable locations to protect bank erosion during rainy season.

11.7 MANPOWER DEVELOPMENT:

Around unskilled and skilled people shall be employed to carry on the mining and associated. Activities and preferences shall be given to employ 100% local people.

11.8 USE OF MINERAL:

The extracted minor minerals will be sold in open market.

11.9 BENEFITS OF MINING:

The proposed activity shall provide raw material to Stone crusher there by boosting production of construction material. This will bring overall improvement in infrastructure development and economic growth of the area. Generating useful economic resource for construction. Generating employment and improvement of socio-economic conditions of the study area.

11.10 IMPROVEMENTS IN THE PHYSICAL INFRASTRUCTURE:

The proposed Sand, stone and Bajri mine will have numerous induced impacts on society such as growth in schools, hospitals, hotels & resorts, transport etc. It will also attract other entrepreneur to establish their venture in the region.

11.11 IMPROVEMENTS IN THE SOCIAL INFRASTRUCTURE:

The social infrastructure like religious places (temple, gurudwara, etc.); marriage homes, Bus stations, railway stations, play grounds will be improved.

11.12 CONCLUSION:

This Project will provide several benefits to the near Villagers by a proper planning and management. This project will employ most of the worker from nearby villages. There will not

be any increase in population due to the project. However, few people from other area may migrate in this area for business opportunities. During the operation of this project no adverse impact on the surrounding environment is envisaged. It is therefore concluded that project will give a boost in the economic and social upliftment of surrounding area.

CHAPTER – 12.0

DISCLOSURE OF CONSULTANTS ENGAGED

12.1 ORGANIZATIONAL PROFILE:

Chandigarh Pollution Testing Laboratory (C P T L) is incorporated in 1997. The Registered office of **CPTL** is at Plot no. E-126, Industrial Area, Phase-7, Mohali, Punjab. Its laboratory division has accreditation from **NABL**, recognition from **MoEF & CC** & **PPCB** (Punjab Pollution Control Board) and EIA division (i.e., **CPTL-EIA**) is accredited by **QCI/ NABET** as Category-A EIA consultancy organization. In addition, it has certification from ISO 9001: 2015, ISO 14001: 2015 and ISO 45001: 2018. **C P T L** is a venture of professionally qualified and experienced technical personnel. The main aim of the company is to provide consultancy services and analytical services to those industries which do not have complete in-house testing facilities with them.

12.2 Scope of Services

Laboratory Facilities	Consultancy Services
Surface/ Ground Water testing	Environment Impact Assessment
Drinking Water testing	Environment Audits
Construction Water testing	Environment clearance compliances
Sewage/ Effluent testing	Remote sensing
Soil testing	Sound level modeling
Ambient Air monitoring	Air quality modeling
Stack Emission monitoring	Risk Assessment
Noise level monitoring	Ecology & Biodiversity study
Micro-biological testing	Socio-economic studies
Manufacturing of ETP, STP & APCDs	Consent from Pollution Boards
Design and installation of ETP, STP &APCDs	Climate Change

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National Accreditation Board for Education and Training

NABET

Certificate of Accreditation

Chandigarh Pollution Testing Laboratory - EIA Division (CPTL - EIA), Mohali

E - 126, Phase VII, Industrial Area, Mohali, IDSAS Nagar, Punjab, Pin – 160055

*The organization is accredited as **Category-A** under the QCI-NABET Scheme for Accreditation of EIA Consultant Organization, Version 3: for preparing EIA-EMP reports in the following Sectors –*

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals including opencast/ Underground mining	1	1 (a) (i)	A
2	River Valley projects	3	1 (c)	A
3	Metallurgical industries (ferrous only)	8	3 (a)	A
4	Cement plants	9	3 (b)	A
5	Synthetic organic chemicals industry	21	5 (f)	B
6	Distilleries	22	5 (g)	A
7	Sugar Industry	25	5 (j)	B
8	Industrial estates/ parks/ complexes/areas, export processing Zones (EPZs), Special Economic Zones (SEZs), Biotech Parks, Leather Complexes	31	7 (c)	B
9	Bio-medical waste treatment, storage and disposal facilities	32A	7 (d a)	B
10	Common Effluent Treatment Plants (CETPs)	36	7 (h)	B
11	Building and construction projects	38	8 (a)	B
12	Townships and Area development projects	39	8 (b)	B

Note: Names of approved EIA Coordinators, Functional Area Experts are mentioned in RAAC minutes dated June 17 and Supplementary Minute dated Sept 23, 2022 posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/22/2544 dated Sept 28, 2022. The accreditation needs to be renewed before the expiry date by Centre for Chandigarh Pollution Testing Laboratory - EIA Division (CPTL - EIA), Mohali following due process of assessment.

NABET

Sr. Director, NABET
Dated: Sept 28, 2022

Certificate No.
NABET/EIA/2225/RA 0250

Valid up to
Feb 12, 2025

For the updated List of Accredited EIA Consultant Organizations with approved Sectors please refer to the QCI-NABET website

ANNEXURE I

LETTER OF INTENT

No. Udyog-Bhu (Khai-4)Laghu-407/09
Government of Himachal Pradesh,
Department of Industries,
"Geological Wing"
Dated; Shimla _ 171001, the 2022

LETTER OF INTENT

Smt. Rama Sharma legal heir of late Sh. Ankit Sharma, Prop:- M/s Sidh Vinayak Stone Crusher has applied for grant of mining lease area bearing Khasra No. 79/1 (5-72-0 Hect.) & 447/1(04-24-62 Hect.) total measuring to 09-96-64 Hects. (Govt. Land.) falling in Moha Ranoh of Tehsil Jaswan, District Kangra. H. P. for collection/extraction of sand, stone & bajri to use in already established stone crusher in the name & style M/s Sidhi Vinyak Stone Crusher Village Ranoh, P. O. Kanpur, Tehsil Jaswan, District Kangra, H.P. under the provisions of Himacha Pradesh Minor Minerals (Concession) and Minerals (Prevention of illegal Mining, Transportation and Storage) Rules, 2015. The application was referred to the Joint Inspection Committee for inspection of the area & the joint inspection committee has recommended the area for grant of mining lease bearing Khasra No. 79/1 (5-72-02 Hect.) & 447/1(04-24-62 Hect.) total measuring to 09-96-64 Hects. (Govt. Land,) falling in Mohal Ranoh of Tehsil Jaswan, District Kangra. H. P. Accordingly the case was sent to the Govt. for obtaining approval and on the basis of the approval conveyed by the Government vide letter No. Ind-II-(F)6-8/2012 dated 6.10.2022 the "Letter of Intent" for an area measuring to 09-96-64 Hects.(Govt. land) in Khasra No. 79/1 (5-72-02 Hect.) & 447/1(04-24-62 Hect.) falling in Mohal Ranoh of Tehsil Jaswan, District Kangra. H. P. is hereby issued subject to the following conditions:-

1- The Party shall have to submit approved Mining Plan under Rule 35 of Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining Transportation and Storage) Rules, 2015.

2- The Party shall have to obtain Environment clearance under the provision of Environment Impact Assessment Notification, 2006 from the Competent Authority and forest clearance in case of forest land.

3- The Party shall get the area demarcated from the revenue authorities and shall erect permanent boundary pillars to the satisfaction of the Mining Officer, so as to clearly depict the provisional granted area. A copy of the demarcation report shall also be submitted to the Mining Officer.

The "Letter of Intent" is subject to any orders passed by the Hon'ble Supreme Court of India/High Court of Himachal Pradesh or other concerned departments from time to time in this regard. This letter of intent is valid only for obtaining Environment Impact Assessment Clearance from the Competent Authority and the applicant shall not resort any mining activities till final grant order in this behalf.

The grant order imposing all the conditions and stipulations relevant as per the rules shall be issued only after submission of documents as mentioned at serial Nos. 1 to 3 above and after completing codal formalities. This "Letter of Intent" shall be valid for a period of one year. Thereafter, extension of provisional period shall be granted only after reviewing of the progress made for fulfillment of the above said documents. The applicants shall not resort to any mining activity till getting the final grant order.

Smt. Rama Sharma legal heir of late Sh. Ankit Sharma,
Prop:- M/s Sidhi Vinayak Stone Crusher,
Village Ranoh, P. O. Kanpur,
Tehsil Jaswan, District Kangra, H.P.

Director of Industries
Himachal Pradesh

Endst. No. As above. 7478 Dated; 13/10/ 2022

Copy to the following for information and necessary action:-

1. The Principal Secretary (Industries) to the Government of Himachal Pradesh w.r.t. letter No. Ind-II-(F) 6-8/2012 dated 6.10.2022.
2. The Mining Officer, Kangra at Dharamshala, Distt. Kangra, H. P.
3. Guard file.

Director of Industries
Himachal Pradesh

EXTENSION OF LOI

No Udyog Bhu (Khani-4) Laghu-407/09 -13773
Government of Himachal Pradesh,
Department of Industries,
"Geological Wing"
Dated Shimla-171001, 01-03-2024

From :-

Director of Industries,
Himachal Pradesh

To,

Smt. Rama Sharma,
Legal Heir of Late Sh. Ankit Sharma,
S/o Sh. Naresh Sharma,
Partner M/s Sidhi Vinayak Stone Crusher,
Village Ranoh, P. O. Khanpur,
Tehsil Jaswan, District Kangra, H.P.

Subject:- **Request for extension of validity period of Letter of Intent issued in favour of Smt. Rama Sharma legal heir of late Sh. Ankit Sharma, Partner M/s Sidhi Vinayak Stone Crusher, Village Ranoh, P. O. Khanpur, Tehsil Jaswan, District Kangra, H.P.**

Sir,

The Govt. vide letter No. Ind-II(F) 6-8/2012 dated 23.2.2024 has conveyed the approval for extension of validity period of Letter of Intent for further term of one year w.e.f. 13.10.2023 to 12.10.2024 in favour of Smt. Rama Sharma, legal heir of late Sh. Ankit Sharma, S/o Sh. Naresh Sharma, Partner M/s Sidhi Vinyak Stone Crusher, Village Ranoh, P. O. Kanpur, Tehsil Jaswan, District Kangra, H. P. for obtaining environment clearance and completing other codal formalities.

The period of Letter of Intent for an area measuring 09-96-64 Hect.(Govt. land), comprising of Kh. Nos. 79/1 (5-72-02 Hect.) & 447/1 (04-24-62 Hect.), falling in Mohal Ranoh of Tehsil Jaswan, District Kangra, H.P. for collection/ extraction of sand, stone & bajri for use in already established stone crusher unit in the name & style of M/s Sidhi Vinyak Stone Crusher is accordingly extended for further term of one year w.e.f. 13.10.2023 to 12.10.2024 for the purpose of obtaining Environment Clearance under the provisions of Environment Protection Act, 1986 from the competent authority and completing other codal formalities. The applicant shall not restore to any mining activities till getting the final grant order in this behalf.

Yours faithfully,

Geologist (Zone-II)
Geological Wing
Deptt. of Industries
Himachal Pradesh

ANNEXURE II

APPROVAL LETTER

REGISTERED

No. Udyog-Bhu(Khani-4)Laghu-407/09 1981
Government of Himachal Pradesh
Department of Industries
"Geological Wing"
Dated; Shimla- 171001,

31-5- 2023

To

Smt. Rama Sharma,
Legal Heir of Late Sh. Ankit Sharma,
Prop:- M/s Sidhi Vinayak Stone Crusher,
Village Ranoh, P. o. Kanpur,
Tehsil Jaswan, District Kangra, H.P.

Subject:- **Approval of Mining Plan of area applied for grant of mining lease for collection/extraction of sand, stone & bajri from Khasra Nos. 79/1 (5-72-02 Hect.) & 447/1 (04-24-62 Hect.) measuring 09-96-64 Hect.(Govt.) falling in Mohal Ranoh, Tehsil Jaswan, District Kangra, H. P. for which Letter of Intent has been issued on 13.10.2022.**

Dear Sir,

In exercise of powers conferred by Rule 36 of Himachal Pradesh Minor Mineral (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules 2015, I hereby approve the above said Mining Plan for the purpose of obtaining Environment Clearance of the area applied for grant of mining lease for which the letter of intent has been issued on 13.10.2022. The mining plan is approved for a period of five years from the date of execution of mining lease deed. This approval is subject to the following conditions:--

1. That the Mining Plan is approved without prejudice to any other laws applicable to the mine/area from time to time whether made by the Central/State govt. or any other authority.
2. That this approval of the Mining Plan does not in any way imply the approval of Govt. in terms of any other provisions of the H. P. Minor Minerals (Concession) Revised Rules, 1971 now repealed as Himachal Pradesh Minor Mineral (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules 2015 or any other laws including Forest (Conservation) Act, 1980, Environment Protection Act, 1986 and the rules made there under and other relevant statutes, orders and guidelines as may be applicable to lease area from time to time.
3. That the Mining Plan is approved without prejudice to any orders or directions from any Court of competent jurisdiction.
4. That in case State Geologist, Geologist, any other inspecting officer/official of Geological Wing Department of Industries, after field inspection notices that proposals made and workings shown in the mining lease by the RQP need certain corrections/ amendments due to change in conditions either natural or man made, the inspecting officer can recommend necessary amendments in the Mining Plan at any point of time in the interest of environment and mineral conservation.
5. That the lease holder shall procure Environment clearance from the competent authority as per Environmental Impact Assessment notification, 2006 and amendements/notifications issued time to time in this regard.
6. That the approval of proposed mining operations is restricted to the mining lease area only.

7. That in case additional conditions are imposed by the Ministry of Environment & Forests Govt. of India while according clearance under EIA notification dated 14.9.2006 and any condition imposed by the State Govt. while granting mining lease the same shall have to be incorporated by making necessary amendments in the Mining Plan by the lessee through R. Q. P.
8. That in case Mining lease is not renewed or is terminated or working is suspended before the expiry of the lease period due to any reason, the approval of Mining Plan shall stand automatically cancelled.
9. That the lease holder shall carry out production of mineral in accordance to the production shown in Mining Plan and Environmental Clearance which ever is less.
10. That no person shall undertake mining operations in any mining lease area, except in accordance with a Mining Plan approved under sub rule (2) of Rule 39 of Himachal Pradesh Minor Mineral (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules 2015.
11. That the lease holder shall carry out working in the mining lease area as per Mining Plan only after obtaining permission to work in the mining lease area from the competent authority.
12. That if the mining operations are not carried out in accordance with the approved Mining Plan the State Geologist, Geologist, Assistant Geologist and the Mining Officer, may order suspension of all or any of the mining operations and permit continuation of only such operations as may be necessary to restore the conditions in the mine as envisaged under the said Mining Plan.
13. That if any thing is found to be concealed as required under various Rules and guidelines pertaining to mining in the context of the Mining Plan and the proposal for rectification has not been made, the approval shall be deemed to have been withdrawn with immediate effect.
14. That in case of any violation of terms and conditions of the approved Mining Plan, the financial assurance deposited by the said lessee shall be liable to forfeited.

Enclosed:- Copy of approved Mining Plan.

Yours faithfully,

Geologist (Zone-II)
Himachal Pradesh

Endst. No. As above. Dated; 2023

Copy for kind information to:-

1. The Mining Officer, Kangra at Dharamshala, Distt. Kangra, H. P. alongwith a copy of Mining Plan for further necessary action.
2. Sh. Rajneesh Sharma (Retd. State Geologist), Strawberry Cottage, Strawberry Hill, Chhota Shimla-2, H. P.

Geologist (Zone-II)
Himachal Pradesh

ANNEXURE III

500 METER DISTANCE CERTIFICATE

No. Udyog Bhu (Khani-4.)Laghu-407/2009 -746
Government of Himachal Pradesh,
Department of Industries,
"Geological Wing"

Dated Shimla-171001, 03-5- 2024

To

Smt. Rama Sharma,
Legal Heir of Late Sh. Ankit Sharma,
S/o Sh. Naresh Kumar Sharma,
Partner M/s Sidhivinayak Stone Crusher,
Village Ranoh, P. O. Khanpur,
Tehsil Jaswan, Distt. Kangra, H. P.

Subject:- **Regarding issuance of Distance Certificate.**

Sir,

Please find enclosed herewith countersigned distance certificate by the undersigned issued by the Mining Officer, Kangra at Dharamshala, District Kangra, H. P. on the report of Halqa Patwari in favour of Smt. Rama Sharma, Legal Heir of Late Sh. Ankit Sharma, S/o Sh. Naresh Kumar Sharma, Partner M/s Sidhivinyak Stone Crusher, Village Ranoh, P. O. Khanpur, Tehsil Jaswan, Distt. Kangra, H. P. for information.

Enclosed:- As above.

Yours Faithfully,

Geologist (Zone-II)
Geological Wing
Department of Industries,
Himachal Pradesh

Endst. No. As above. Dated; 2024

Copy to:-The Mining Officer, Kangra at Dharmshala, Distt. Kangra, H. P. w.r.t. his letter No. Udyog (Bhu) KGR-(JSP)-Distance Certificate-176 dated 2.5.2024 for information and further necessary action.

Geologist (Zone-II)
Geological Wing
Department of Industries,
Himachal Pradesh

CERTIFICATE

As per certificate issued by the concerned Halqa Patwari, one mining lease has been granted within 500 mtrs from the periphery of the area applied for grant of mining lease in favour of in favour of Smt. Rama Sharma legal heir of late Sh. Ankit Sharma S/o Sh. Naresh Sharma Prop. M/S Sidhivinayak Stone Crusher Vill. Ranoh PO Khanpur Tehsil Jaswan Distt Kangra over an area comprising of Kh. No.- 79/1, 447/1 measuring to 9-96-64 Hect. falling in Mohal Ranoh Bammi Mauja Kotla Tehsil Jaswan District Kangra H.P

The status of mining leases is as under:-

Sr. No.	Name of Lessee	Kh. No.	Area (in Hect)	Mohal and Mauja	Validity of period	Status of EC / Mining lease whether operating or not operating
1	Smt. Rama Sharma legal heir of late Sh. Ankit Sharma S/o Sh. Naresh Sharma Prop. M/S Sidhivinayak Stone Crusher Vill. Ranoh PO Khanpur Tehsil Jaswan Distt Kangra	1/1, 71/1 (71/1)	14-24-98 (3-23-75) (reduced area due to construction of the bridge over mining lease)	Ranoh / Kotla	25.09.2017 to 24.9.2032	EC Obtained

Mining Officer
Distt Kangra at Dharamshala

Geologist (Zone-II)
Shimla (H.P.)
Geologist (Zone-II)
Geological Wing
Deptt. of Industries Shimla-1

श्रीमान जी,

रिपोर्ट की जाती है कि भूमि नम्बर खसरा 79 वाक्या महाल रनोह तहसील जसवां मौजा कोटला जिला कांगड़ा हि० प्र० में स्थित है। इसके साथ लगता न० ख० 71/1 जोकि लीज के लिए प्रस्तावित है यह न० ख० इसके साथ 500 m दायरे में आता है। अतः रिपोर्ट आगामी सेवा हेतु प्रेषित है।

पटवारी - [illegible]
पटवार वृत - [illegible]
तहसील - [illegible]
जिला - कांगड़ा
दिनांक - 23/11/2023

श्रीमान जी

रिपोर्ट की जाती है कि भूमि न० खसरा [illegible] वाक्या महाल रनोह [illegible] तहसील जसवां जिला कांगड़ा हि. प्र. में स्थित है। न० खसरा [illegible] के कि लीज के लिए प्रस्तावित है [illegible] वाक्या महाल रनोह [illegible] में आता है। रिपोर्ट सेवा [illegible]

[illegible]
24/11/2023

ANNEXURE IV

JOINT INSPECTION REPORT

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PERFORMA FOR THE JOINT INSPECTION OF THE AREA APPLIED FOR GRANT OF MINING LEASE

1. General

1.1 Name of the applicant		*Smt. Rama Sharma* *Legal heir of late Sh. Ankit Sharma* *S/o Sh. Naresh Sharma* *Prop. M/S Sidhivinayak Stone Crusher*
1.2 Address of the applicant	**Father's Name**	
	Village	*Ranoh*
	P.O	*Khanpur*
	Tehsil	*Jaswan*
	District	*Kangra*
	Pin No	
1.3 Approach and location of the area	*The area is located in Swan Khad at a distance of approx. 40 Kms. from Dehra and can be approached by Dehra-Chintpurni-Kotla-Jaswan-Kuthehar-Ranoh road.*	
1.4 Purpose for which lease is applied e.g. For setting up of stone crusher, Hollow block, Screening unit, free sale etc		*For existing stone crusher unit under the name and style of M/S Sidhivinayak Stone Crusher*
1.5 Date of Joint Inspection		*15-09-2022*

1.6 Members present during joint inspection

Sr. No	Name and Designation	Particulars
1	*Sh Sankalp Gautam* *S.D.O (Civil), Dehra*	*Chairman*
2	*Sh. Narinder Singh* *RO, Dada Sibba*	*Member*
3	*Er.* *JE Env. HPSPCB, Dari*	*Member*
4	*Sh Rakesh Kumar.* *A.E., Jal Shakti Vibhag, Dada Sibba*	*Member*
5	*Sh PS Rana* *A.E., PWD, Kotla Behar*	*Member*
6	*Shri Rajeev Kalia* *Mining Officer, Distt Kangra at Dharamshala*	*Member Secretary*

Contd.----2

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2.Revenue Department

2.1 Status w.r.t. Demarcation of Applied for area -

2.2 Detail of area applied

Kh. No	Area (In Hect)	Owner Govt/ private	Kism	Mohal	Mauza	Panchayat	Any other
79/1	5-72-02	Govt. Land	Gair Mumkin Khad Suwan	Ranoh	Jandor		
447/1	4-24-62		Gair Mumkin Khad	Nagoh Karrent	Jaswan Kotla		
Total	9-96-64						

Point of public utility in the area/near by (Village footpath, road, school, residential house, hospital, cattle shed, charitable building, water channel, cemetery/creme nation ground, place of worship etc.

The area applied for grant of mining lease was shown physically by concerned field Revenue staff. The area under reference exists in the form of Khad bed. Since the area under reference forms Khad bed as such no above mentioned structure of community interest exists within or near the area applied for grant of mining lease.

2.3 Consent of Gram Panchayat

2.4 Whether marked on location plan attached with application If not then please mark

Yes

Any special recommendation with respect to above points]

No

2.5 Any other observation/condition

NA

Jandor

Kotla

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3

3. Forest Department		
3.1 Types of land i.e Reserve Forest/Protected Forest/ Demarcated Forest/ Non Forest Government Land/ Private Land etc.	*Govt. Land*	
3.2 Whether attract FCA,1980	**Yes**	**✓ No**
If yes, then specify Kh. Nos, which attract FCA	*N.A.*	

3.3 Whether there is any activity of the forest department in the area such as soil conservation works, nursery plantation, check dams, taming of nalls/stream etc ,if yes please specify and mark on location plan and what precautions are required

No activity of the forest department in the area such as soil conservation works, nursery plantation, check dams, taming of nallas/stream etc exists in the area applied for grant of mining lease.

Two Plantation areas of 4.75 ha & 5 ha about 1 km distance from Spot

3.4 Whether there is any property of Forest Department nearby which may have direct effect if mining is allowed

There is Two Plantation on uphill side of 4.75 hac and 5 hac respectively. The ~~No.~~ distance of these plantations is 100 meter approximately.

3.5 Any other observation/condition

Though as per Jamabandi the land under reference is under the ownership of Himachal Pradesh Govt., but the land has been vested in the state under the provisions of H.P. Village Common Land (Vesting and Utilization) Act 1974, therefore, in the light of letter No. Ft.-48-66/83 (FCA) dated 15-9-2010 issued by Pr. Chief Conservator of Forest; Himachal Pradesh does not attracts the provisions of applicability of FCA.

(This is not a forest land as verified by Revenue Department)

Contd.....4

Range Forest Officer
Dadasiba, Teh. Dadasiba
Distt. Kangra (H.P.)-177106

Assistant Conservator of Forests (T
Deara Forest Divn. Dehra

Divisional Forest Officer
Dehra Forest Division
Dehra 177101 (H.P.)

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4. PWD Department					
4.1 Whether any road exist near area				Yes	✓ No
If Yes then	Type of road	Distance from area	Marked on location plan as	Minimum safe distance required for mining	
	NH	800 mtrs		100 m	
	State highway	700 mtrs		25 m	
	Link road	NA		*Not specified*	
	Village road	NA		10 m	
4.2 Whether any road exist within area				Yes	✓ No
	Type of road	Distance from area	Marked on location plan as	Minimum safe distance required for mining	
	NH		N.A.		
	State highway		N.A.		
	Link road		N.A.		
	Village road		N.A.		
4.3 Whether there exist any bridge, culvert etc within area/near area				✓ No	Yes
If yes, then No. of bridges etc.				N.A.	
Whether marked on location plan			yes	If not, please mark	
	Bridge	Minimum distance required		Any special precaution required	
		U/S	D/S		
	Bridge No.1	200 mtr	300 - 500 mtrs		
	Bridge No.2				

4.4 Any other structure of PWD importance, if yes (Please mark on location plan) then specify any special precaution

No

4.5 Any other observation/condition

Since no structure of PWD i.e. bridge, road, building etc. exists within or near the area applied for grant of mining lease hence the representative of PWD has no objection w.r.t. proposed mining activities in the area applied for grant of mining lease.

4.6 Is there any objection if intake point from PWD road to the leased area is used in case lease is grant. If not, whether to allow with conditions

Intake point already exists. Therefore no objection.

Assistant Engineer
to the Executive Engineer
Kotla Behar Division
HPPWD Kotla Behar

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5. IPH Department				
5.1 Whether there exist any water supply scheme within/near the area		✓ No		Yes
Type of Scheme	Scheme	Minimum safe distance required		
		U/S		D/S
	Water supply tank	200 mtrs	200 Mtrs	200 mtrs.
	Water supply bore well			
	Lift Irrigation Scheme			
	Hand Pump			
Whether marked on location plan	N/A	If not please mark		
Any special recommendation with respect to above schemes: *NA*				
5.2 Any other important point with respect to IPH department, if yes. Please mark on location plan. Whether any special precaution is required , please specify: *NA*				
5.3 Any other observation/condition: *Since no water supply (WSS) / lift irrigation schemes (LIS) exists within or near the area applied for grant of mining lease hence the representative of Jal Shakti Department has no objection w.r.t. proposed mining activities in the area applied for grant of mining lease.*				

Assistant Engineer
Jal Shakti Sub-Division
Dadasiba

Contd.....6

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6

6. Industries Department		
6.1 Location of applied for area (nearest village/important features)		***Ranoh***
6.2 Purpose of Mining Lease.		*For existing stone crusher*
6.3 Overlapping of areas with any other lease/contract	Yes	✓ No
If yes please give detail	*NA.*	
6.4 Location of the nearest mining area/quarry	*NA*	
6.5 Average daily production anticipated in Metric Tonns		*As per approved mining plan*
If Yes, please mark on location plan and suggest precaution		*N.A.*
6.6 Suitability of mineral as per the purpose given above(Give detail)		*The minor mineral is suitable for purpose applied for*

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6.7 Feasibility of Mining

(i) Name of Mineral :	*Stone/bajri/sand*
(ii) Type of mining Hill slope/River Bed:	*Khad Bed*
(A)Hill Slope	
(i)Average angle of slope:	*N/A*
(ii) Nature of rock:	
(iii) Scientific mineability considering the orientation of revenue record:	
(iv)Availability of mineral w.r.t anticipated production:	
(v) Availability of area for disposal of waste:	
(vi) Approach to the Mine area:	
(vii) Whether areas is prone to land slide if yes then the protection measures needed thereof:	

(B) River Bed

(i) Name of river/ stream: ***Swan Khad***

(ii) Width of river bed: *Approx. 400 Mtrs.*

(iii) Approximate length & Width of the area applied for : Approx. *850 x 350 m*

(iv)Availability of mineral w.r.t anticipated Production:

As per physical observations made during the course of inspection and perusal of Survey Document of Distt Kangra sufficient quantum of minor mineral is available for full term of mining lease.

(v) Availability of area for disposal of waste:

No waste is likely to be generated during process of mining

.

(vi) Approach to Mining Area

The area can be approached mentioned in the 1.3 of the JIR

(vii) Location of

(i) Habitation along the banks *NA.*

(ii) Agriculture field along the banks: *Approx. 700 Mtrs.*

Any other structure like Transmission Lines, Telephone Lines etc:

No

(viii) Disposal of waste:

The mining activities shall involve only collection of minor mineral on the river bed as such no waste disposal shall likely to be there during process of mining.

(ix) Area proposed for Plantation: *NA*

(c) Additional information in case of grant of Mining Lease

(i) Report under Rule 18(2)of Himachal **Pradesh Minor Mineral rule:**

(i)	**Investment for developing the area**	**NA**
(ii)	**Investment on machinery & equipment**	**NA**
(iii)	**Labourer Employed**	**NA**
(ii) Production of mineral for the last tenure:		**NA**
(iii)Violation of condition mining noticed in the tenure		**NA**
(iv) Detailed note on scientific mining w.r.t working cum Environment Management Plan in the last tenure:		**NA**

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6.8 Whether mining can pose threat to existing object of Public Utility or private property? If any, Give detail and precaution required
No
If no, the reason thereof:
NA

6.9 Any other special point pertaining to Industries Department

Geology of the area

The Sohan (Swan) Khad is a left bank tributary of the Beas River originating (Entry at Kangra) from 488 Meter above Mean Sea Level near Sansarpur. The river bed is occupied with recent deposits of minor minerals comprising sand, silt, gravel and pebbles of Newer Alluvium belonging to Quaternary age. These sediments are deposited in the shape of channel bars, piedmont bars, flood plains and alluvial fan deposits. The Alluvium consists of loose sand, silt, clay, pebble, gravel, boulder and kankar. It un-conformably overlies different formations in different areas. During monsoon season the stream carries heavy sediment load and deposit it annually on the river bed. The Sohan Khad cut its course all along its length through the rocks of Siwalik formation. The Siwalik Group comprises of sandstone, siltstone and clay/claystone alternations in the lower part, whereas the upper part is represented by conglomerates, pebbly bands and sandstone lenses, ranging in age from Middle Miocene to Lower Pleistocene.

1. *The area applied for grant of mining lease found suitable by the committee and holds sufficient deposits of loose quartzite / stone boulders and bajri in the form of mixed gravel whereas the area applied for grant of mining lease is a Govt. land.*
2. *The quantum of stone / boulders of varying size easily available in the area can cater the demand of existing stone crusher of the applicant .*
3. *As on date one mining lease / stone crusher exists on the bed of Sohan (Swan) Khad within the radius of 500 mts.*
4. *As per Distt Survey Document the total potential of minor minerals in Sohan (Swan) Khad is recorded as 52,65,000 MT and the annual replenishment is envisaged as 1,57,950 MT, which shows that the sufficient quantum of minor minerals is available in the area to cater the demand of raw material of existing stone crusher unit and keeping in view the annual replenished of Khad bed it is inferred that the minor minerals removed during a particular of time shall be readily replenished during the rainy season. The manual mode of mining shall be resorted till permission is accorded by competent authority to use mining machinery as per rules.*
5. *It is further submitted that vide office letter No.- Ind-II (F)6-8/20212 dated 1/9/2022 issued by the under Secretary (Industries) to the Govt. of Himachal Pradesh, Shimla has convey approval to process the case for grant of additional mining lease area under the provisions in Rule 84 of Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015, w.r.t. relaxation in special cases and in the interest of mineral conservation.*

It is further informed that the area applied for grant of mining lease fulfills the conditions and the distance criteria mentioned under Rule 19 (8) of Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015.

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7. Environment Protection & Pollution control Board Summary of method for Environment Protection

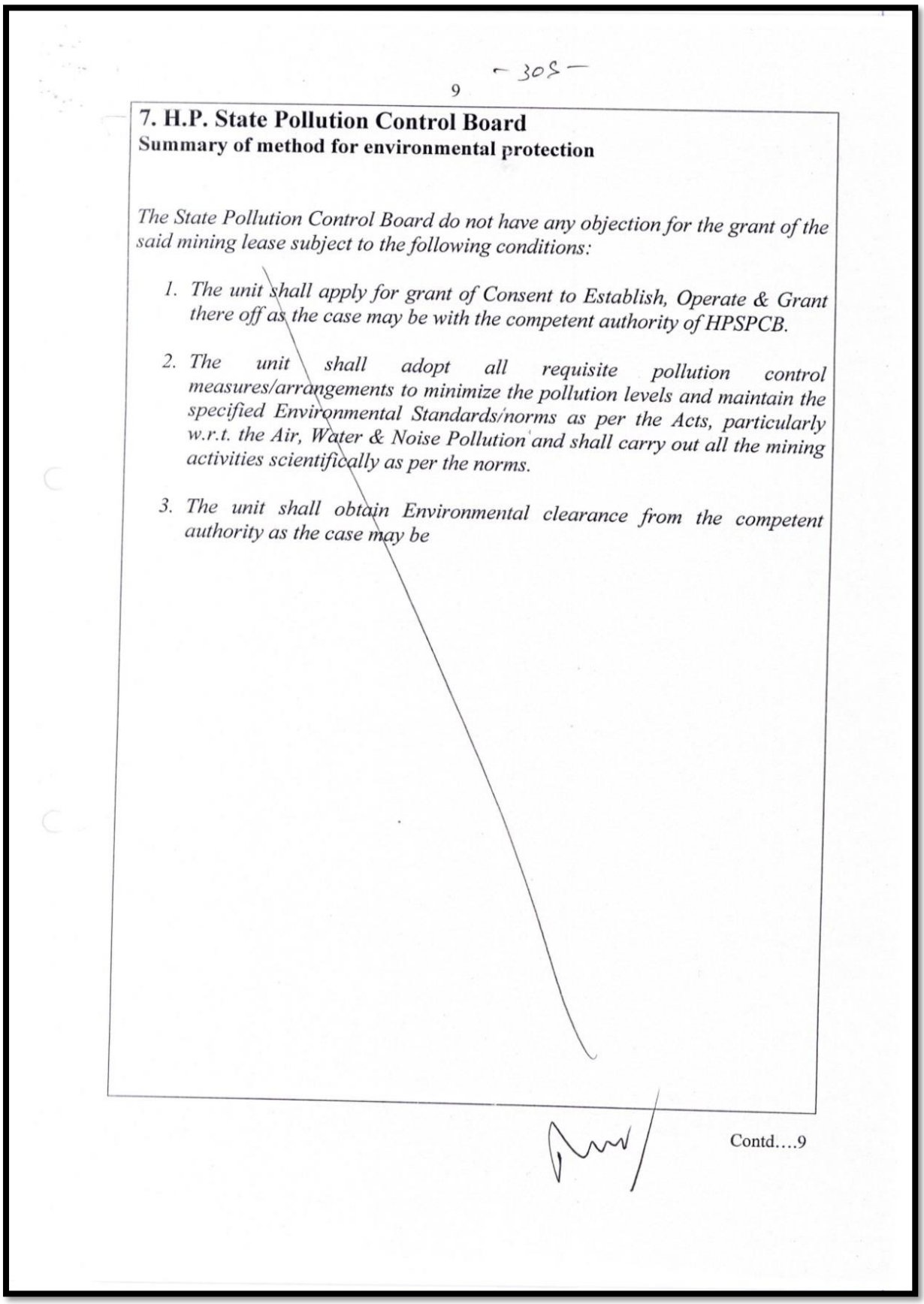
The site of applied mining lease was inspected on dated 16/09/2022.The applied for mining lease for extraction of sand stone bajri by Smt. Rama Sharma legal heir of late Shri Ankit Sharma S/o Sh. Naresh Sharma Prop. M/s Sidhivinayak Stone Crusher VILLAGE Ranoh,Post Office Khanpur, Tehsil Jaswan, Distt. Kangra, for Stone Crusher M/s Sidhivinayak Stone Crusher.The applied mining lease is situated at Mauza Jandor & Mauza Jaswan Kotla, Mohal Ranoh,Nagoh Karrent,Tehsil Jaswan Kotla, Distt.Kangra H.P and area is mention as given below.

Sr. No.	Area (Hect.)	Khasra No.	Owner Govt./Pvt Land	Panchyat
1.	05-72-02	79/1	Govt. Land	Amroh
2.	04-24-62	447/1	Govt. Land	Haler
Total Area	~~03-60-24 Hect.~~ (09-96-64 HECT.).			

The mining lease may be issued to the proponent as per the mining policy of the govt. of (H.P) along with the following term & condition please.

- The Mining shall be carried out as per the practices and policies of mining departments.
- The mining lease area is a river bed and situated mining area in Swan River, So the sand & Bajri should be picked up manually.
- No blasting shall be carried out.
- Natural course of river shall not be disturbed & especially step shall be taken to control the soil erosion.
- No mechanical work/JCB allowed in the mining lease area.
- Any guidelines issued by state Pollution Control Board Shall be binding.
- The Proponent shall obtain the EIA clearance from the competent authority as per the orders of Hon'ble supreme court dt. 27.02.2012 & Hon'ble high court dt. 15.06.2012 & 14.09.2012. & EIA-clearance obtained from the competent authority.
- Water sprinkling shall be carried out on approach road and proper covered the material during transport from mining area.

XEE, Sub Ro-Nurpur



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7. H.P. State Pollution Control Board

Summary of method for environmental protection

The State Pollution Control Board do not have any objection for the grant of the said mining lease subject to the following conditions:

1. *The unit shall apply for grant of Consent to Establish, Operate & Grant there off as the case may be with the competent authority of HPSPCB.*
2. *The unit shall adopt all requisite pollution control measures/arrangements to minimize the pollution levels and maintain the specified Environmental Standards/norms as per the Acts, particularly w.r.t. the Air, Water & Noise Pollution and shall carry out all the mining activities scientifically as per the norms.*
3. *The unit shall obtain Environmental clearance from the competent authority as the case may be*

Contd....9

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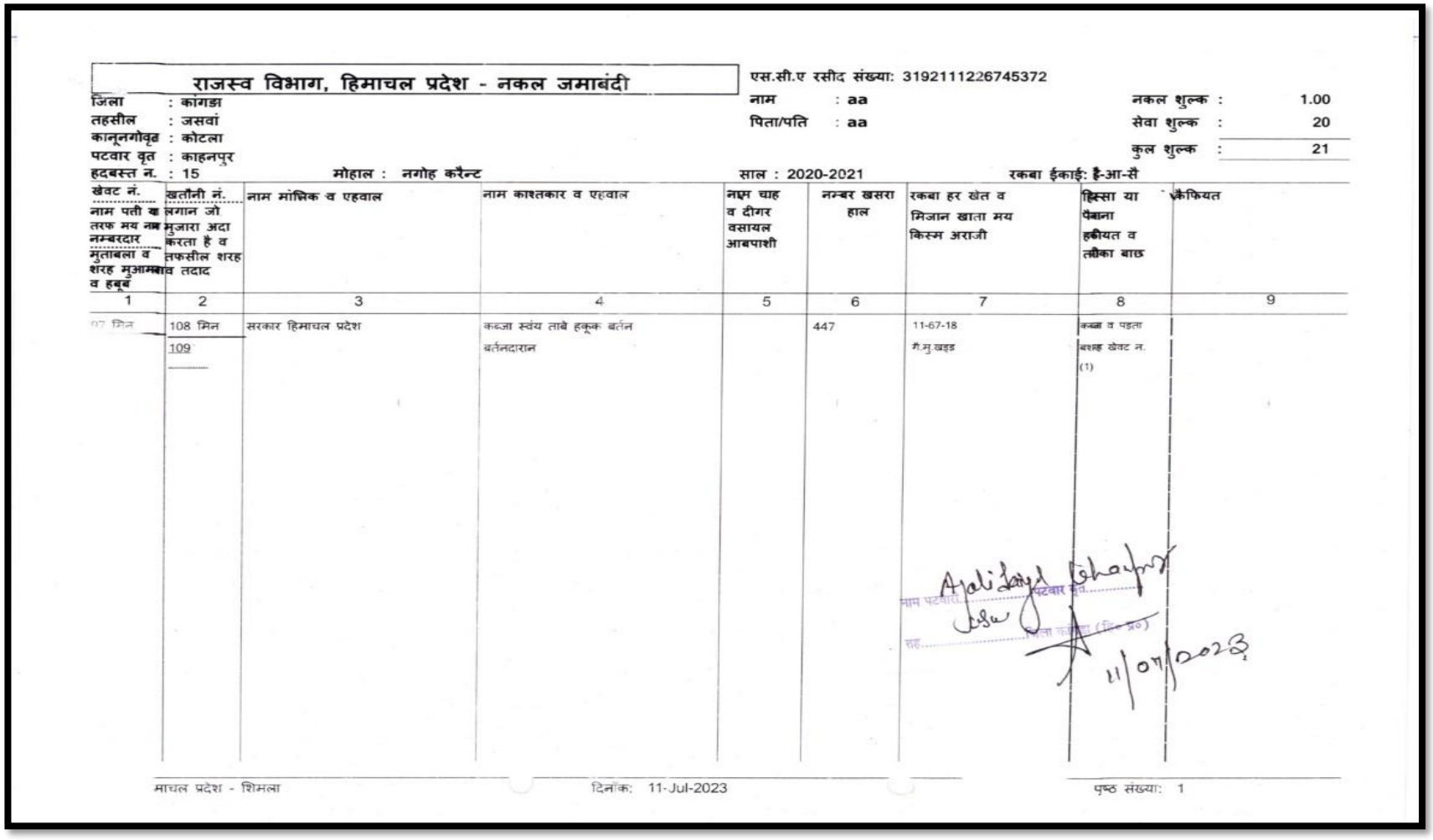
10

8.Recommendations		
8.1Whether whole of the area is being recommended for mining	No	✓ Yes
If no, please specify the Kh. Nos. being recommended *NA*		
Any other recommendation in addition to recommendations given at to *N.A.*		
Final recommendation of the Committee *Keeping the facts given above, the area applied for grant of mining lease comprising of Khasra No. 79/1, 447/1 measuring to 9-96-64 Hects. was found suitable by the Joint Inspection Committee as per the Rule 84 of Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015 and is being recommended for grant of mining lease subject to stipulations made above.*		
Signatures		
SDO(C)	**ACF/R.O.** Range Forest Officer Dadasiba, Teh. Dadasiba Distt. Kangra (H.P.)-177105	**Repersentative of P.W.D.** Assistant Engineer to the Executive Engineer Kotla Behar Division HPPWD Kotla Behar
Repersentative of Jal Shakti Assistant Engineer Jal Shakti Sub-Division Dadasiba	**Repersentative of H.P.P.C.B.** Asstt. Env. Engineer Sub-Regional Office NURPUR	**Mining Officer** MINING OFFICER KANGRA AT DHARAMSH

Divisional Forest Officer
Dehra Forest Division
Dehra-177101 (H.P.)

ANNEXURE V

JAMABANDI



राजस्व विभाग, हिमाचल प्रदेश - नकल जमाबंदी

एस.सी.ए रसीद संख्या: 3192111226745372

जिला : कांगड़ा
तहसील : जसवां
कानूनगोवृत : कोटला
पटवार वृत : काहनपुर
हदबस्त न. : 15 मोहाल : नगोह करैन्ट

नाम : aa
पिता/पति : aa

साल : 2020-2021 रकबा ईकाई: है-आ-सै

नकल शुल्क : 1.00
सेवा शुल्क : 20
कुल शुल्क : 21

खेवट नं. / नाम पती या तरफ मय नाम नम्बरदार / मुताबला व शरह मुआमलात व हबूब	खतौनी नं. / लगान जो मुजारा अदा करता है व तफसील शरह व तदाद	नाम मालिक व एहवाल	नाम काश्तकार व एहवाल	नाम चाह व दीगर वसायल आबपाशी	नम्बर खसरा हाल	रकबा हर खेत व मिजान खाता मय किस्म अराजी	हिस्सा या पैमाना हकीयत व तरीका बाछ	कैफियत
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नाम पटवारी [illegible] पटवार मंडल
तह [illegible] जिला कांगड़ा (हि. प्र.)
11/07/2023

माचल प्रदेश - शिमला दिनांक: 11-Jul-2023 पृष्ठ संख्या: 1

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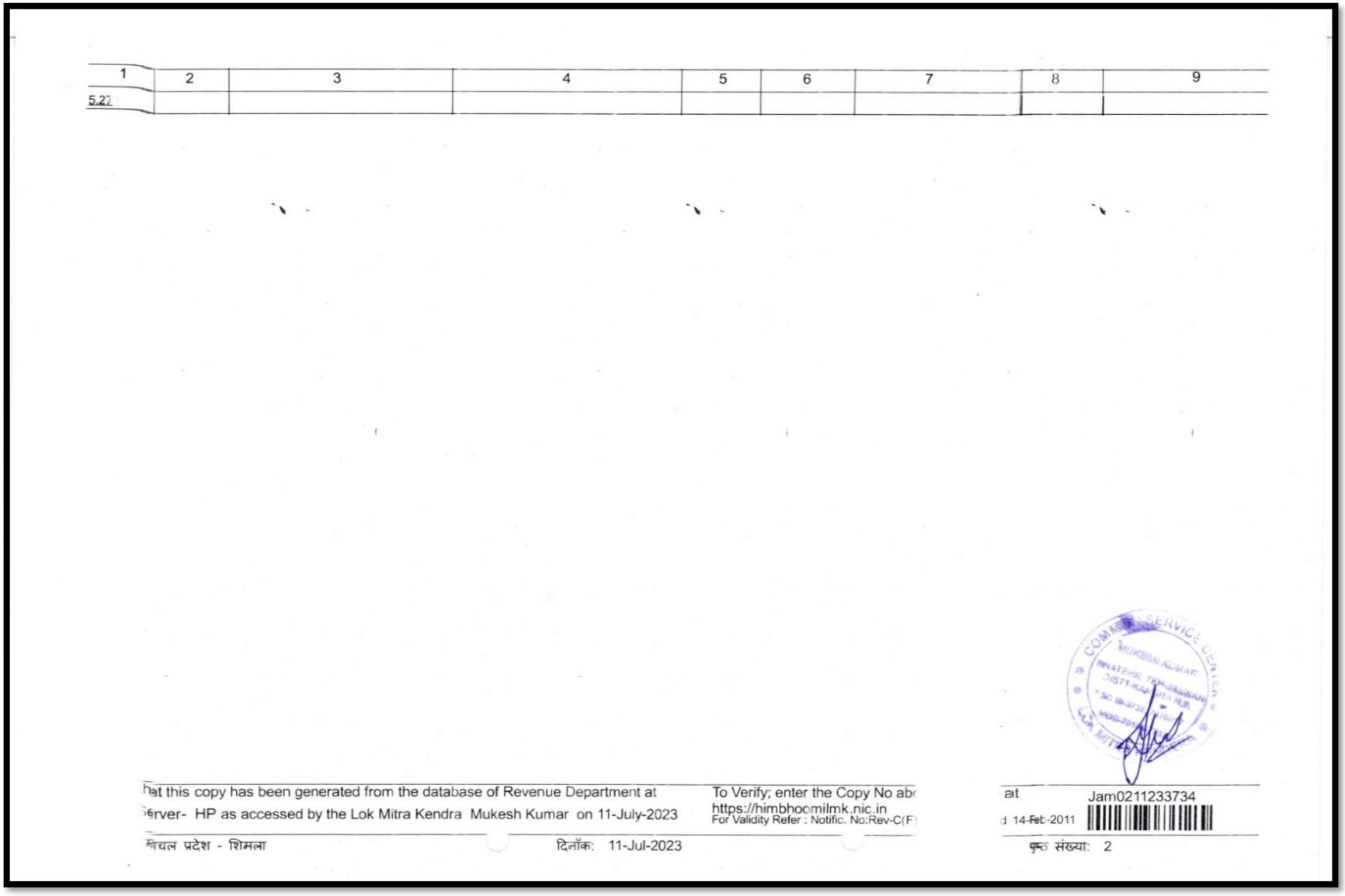

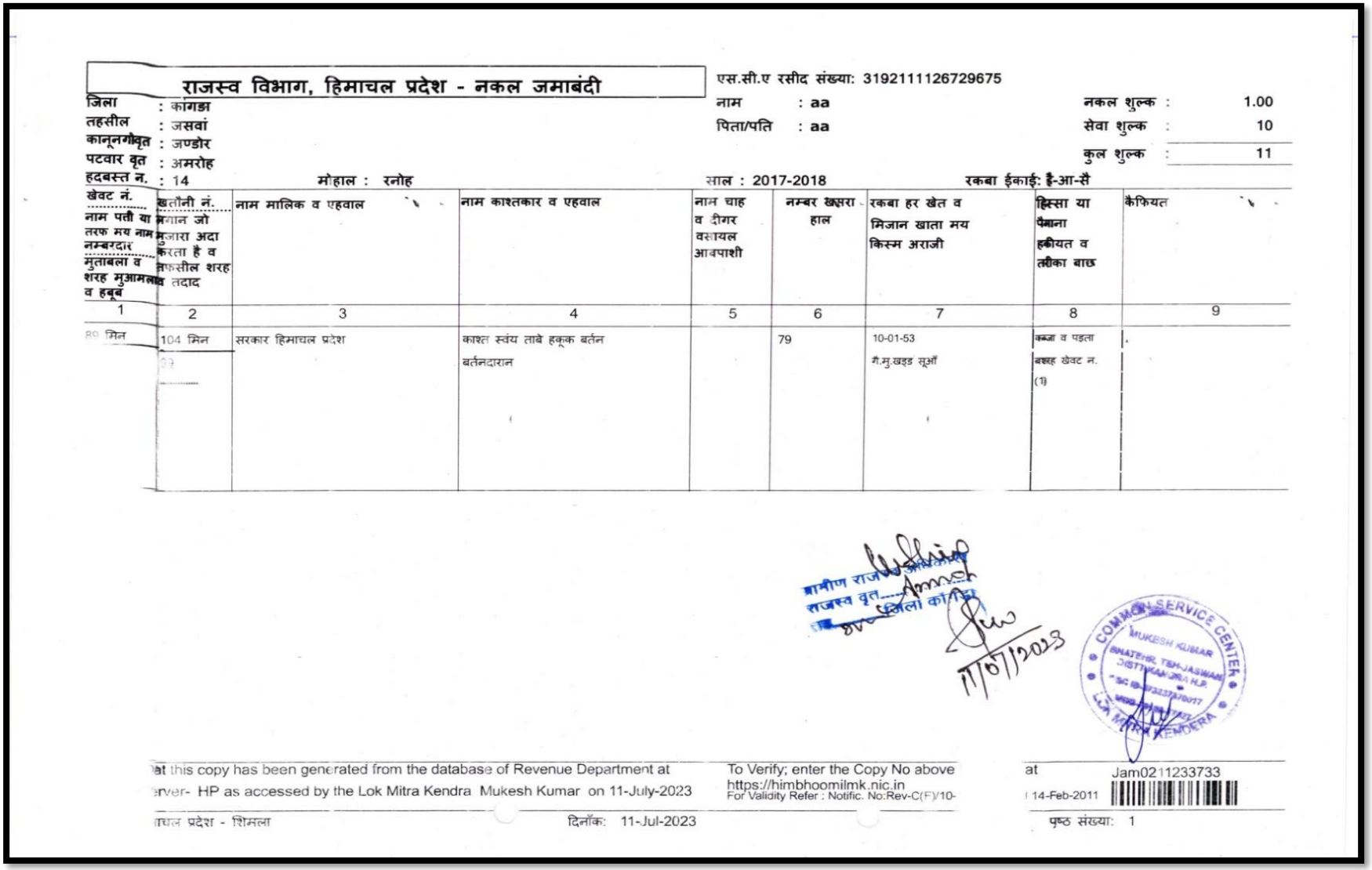

राजस्व विभाग, हिमाचल प्रदेश - नकल जमाबंदी

एस.सी.ए रसीद संख्या: 3192111126729675

जिला : कांगड़ा
तहसील : जसवां
कानूनगोवृत : जण्डोर
पटवार वृत : अमरोह
हदबस्त न. : 14
मोहाल : रनोह
साल : 2017-2018
रकबा ईकाई: है-आ-सै

नाम : aa
पिता/पति : aa

नकल शुल्क : 1.00
सेवा शुल्क : 10
कुल शुल्क : 11

खेवट नं. / नाम पती या तरफ मय नाम नम्बरदार / मुताबला व शरह मुआमलात व हबूब	खतौनी नं. / लगान जो मुजारा अदा करता है व तफसील शरह तदाद	नाम मालिक व एहवाल	नाम काश्तकार व एहवाल	नाम चाह व दीगर वसायल आबपाशी	नम्बर खसरा हाल	रकबा हर खेत व मिजान खाता मय किस्म अराजी	हिस्सा या पैमाना हकीयत व तरीका बाछ	कैफियत
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89 मिन	104 मिन	सरकार हिमाचल प्रदेश	काश्त स्वंय ताबे हकूक बर्तन बर्तनदारान		79	10-01-53 गै.मु.खड्ड सूआँ	कब्जा व पड़ता बख्ह खेवट न. (1)	

ग्रामीण राजस्व अधिकारी
राजस्व वृत.....
तहसील कार्यालय
11/07/2023

COMMON SERVICE CENTER
MUKESH KUMAR
BHATEHR, TEH-JASWAN
DISTT-KANGRA H.P.

at this copy has been generated from the database of Revenue Department at server- HP as accessed by the Lok Mitra Kendra Mukesh Kumar on 11-July-2023

To Verify; enter the Copy No above
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For Validity Refer : Notific. No:Rev-C(F)/10-

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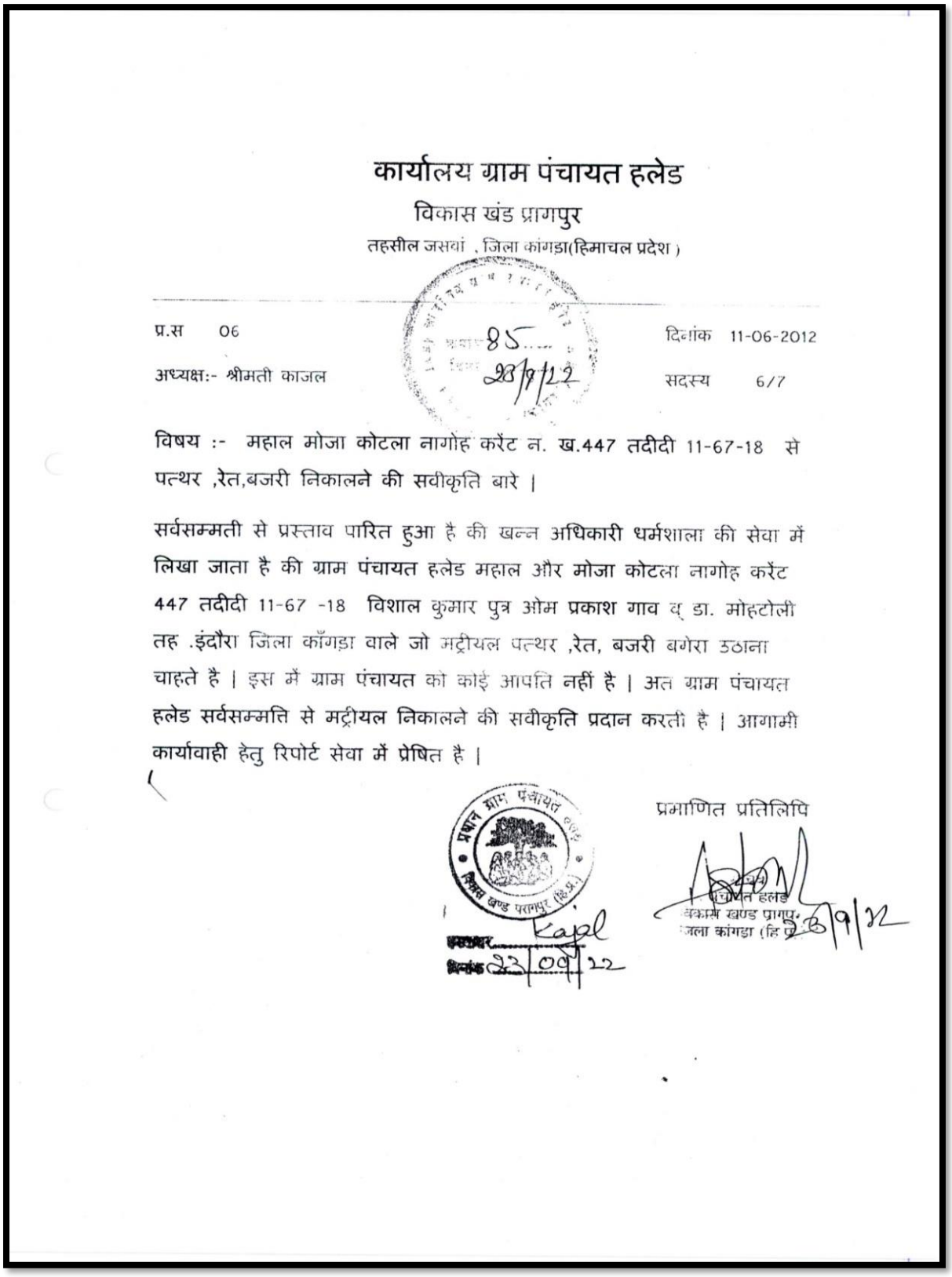
हिमाचल प्रदेश - शिमला
दिनाँक: 11-Jul-2023
पृष्ठ संख्या: 1

ANNEXURE VI

NOC FROM GRAM PANCHAYAT



कार्यालय ग्राम पंचायत हलेड

विकास खंड प्रागपुर

तहसील जसवां , जिला कांगड़ा(हिमाचल प्रदेश)

प्र.स 06 दिनांक 11-06-2012

अध्यक्षः- श्रीमती काजल सदस्य 6/7

विषय :- महाल मोजा कोटला नागोह करैट न. ख.447 तदीदी 11-67-18 से पत्थर ,रेत,बजरी निकालने की सवीकृति बारे ।

सर्वसम्मती से प्रस्ताव पारित हुआ है की खन्न अधिकारी धर्मशाला की सेवा में लिखा जाता है की ग्राम पंचायत हलेड महाल और मोजा कोटला नागोह करैट 447 तदीदी 11-67 -18 विशाल कुमार पुत्र ओम प्रकाश गाव व् डा. मोहटोली तह .इंदौरा जिला काँगड़ा वाले जो मट्रीयल पत्थर ,रेत, बजरी बगेरा उठाना चाहते है । इस में ग्राम पंचायत को कोई आपति नहीं है । अत ग्राम पंचायत हलेड सर्वसम्मति से मट्रीयल निकालने की सवीकृति प्रदान करती है । आगामी कार्यावाही हेतु रिपोर्ट सेवा में प्रेषित है ।

प्रमाणित प्रतिलिपि

पंचायत हलेड
विकास खण्ड प्रागपुर
जिला कांगड़ा (हि प्र)

ANNEXURE VII

FLORA AND FAUNA

No. 7368
HP Forest Department

Dated Una, the 12-12-2022

From: Divisional Forest Officer,
Dehra Forest Division, Dehra

To:

Smt. Rama Sharma
Legal heir of Late Ankit Sharma
Village Malot, PO Bhojpur,
Tehsil Indora, Distt. Kangra (HP)
Through GPA holder
Harish Sharma

Subject: Regarding Distance Certificate for the Environmental clearance proposal of the proposed project "Collection/extraction of Sand, Stone & Baji form Mohal Ranoh, Tehsil Jaswan, Distt. Kangra Himachal Pradesh" by Smt. Rama Sharma legal heir of Late Sh. Ankit Sharma Prop: M/S Sidhi Vinayak Ston Crusher.

Memo,

Please refer to your application dated 03.12.2022 on the subject cited above

2 The list of Fauna and Flora in and around mining lease in Khasra No. 79/1, 447/1 in Mohal Ranoh, Tehsil Jaswan, Distt. Kangra (HP) as received from Range Forest Officer Dada Siba is enclosed herewith for favour of further necessary action. Further as per field report the aerial distance of the Project Site from the Pong Dam Wildlife Sanctuary is more than 10 KM.

Encl: As above.

Divisional Forest Officer
Dehra Forest Division, Dehra

List of Flora present in 10k Radius of project site

S. No.	Family	Botanical Name	Local Name
1.	Acanthaceae	*Adhatoda zeylanica*	Basuti
2.	Acanthaceae	*Strobilanthes auriculata*	Kapur minngar
3.	Agavaceae	*Agave americana*	Ram ban
4.	Amaranthaceae	*Deeringia amaranthoides*	Bhirang
5.	Anacardiceae	*Mangifera indica*	Aam
6.	Anacardiceae	*Pistacia integerrima*	Kakrain
7.	Anonaceae	*Miliusa velutina*	Chopar chilla
8.	Apocynceae	*Ichinocarpus frutescens*	Bakkarbel
9.	Apocynceae	*Carissa opaca*	Garuna
10.	Apocynceae	*Nerium oleander*	Ghanira Gandheela
11.	Apocynceae	*Holarrhena pubescens*	Keor
12.	Apocynceae	*Wrightia arborea*	Khalawa
13.	Arecaceae	*Phoenix sylvestris*	Khajoor
14.	Asclepiadaceae	*Calotropis procera*	Aak
15.	Asclepiadaceae	*Cryptolepis buchananii*	Jaman khumb
16.	Asteraceae	*Ageratum conyzoides*	Gha buti
17.	Bignoniaceae	*Stereospermum chelonoides*	Padal
18.	Bignoniaceae	*Oroxylum indicum*	Tatplanga
19.	Bombacaceae	*Bombax cieba*	Simal
20.	Caeselpinaceae	*Cassia fistula*	Amaltas
21.	Caeselpinaceae	*Cassia occidentalis*	Chakunda
22.	Caeselpinaceae	*Bauhinia variegata*	Kachnar, Karal
23.	Caeselpinaceae	*Bauhinia malabarica*	Kacnnar, Karal
24.	Caeselpinaceae	*Cassia tora*	Panwar
25.	Caeselpinaceae	*Caesalpinia decapetala*	Ralan, Arlu
26.	Caeselpinaceae	*Bauhinia vahlii*	Taur
27.	Cannabinaceae	*Cannabis sativa*	Bhang
28.	Capparaceae	*Crataeva religiosa*	Barna
29.	Celastraceae	*Euonymus pendulus*	Bharmela
30.	Celastraceae	*Celastrus paniculatus*	Sankhiran

Divisional Forest Officer
Dehra Forest Division
Dehra-177101 (H.P.)

Range Forest Officer
Dadasiba, Teh. Dadasiba
Kangra (H.P.)-177106

31.	Combretaceae	*Terminalia arjuna*	Arjan
32.	Combretaceae	*Terminalia bellirica*	Bahera
33.	Combretaceae	*Anogeissus latifolius*	Chhal
34.	Combretaceae	*Terminalia chebula*	Harar
35.	Cuscutaceae	*Cuscuta reflexa*	Amar bel
36.	Dioscoreaceae	*Dioscorea deltoides*	-
37.	Dipterocarpaceae	*Shorea robusta*	Sal
38.	Ebenaceae	*Diospyros cordifolia*	Kala dhao
39.	Ehretiaceae	*Cordia vestita*	Kumbhi
40.	Ehretiaceae	*Cordia dichotoma*	Lasura
41.	Ehretiaceae	*Ehretia acuminata*	Sakar
42.	Euphorbiaceae	*Phyllanthus emblica*	Amla
43.	Euphorbiaceae	*Glochidion velutinum*	Chamar-saman
44.	Euphorbiaceae	*Euphorbia royleana*	Chhun
45.	Euphorbiaceae	*Bridelia squamosa*	Gaddi
46.	Euphorbiaceae	*Jatropha curcas*	Jamnota
47.	Euphorbiaceae	*Mallotus philippensis*	Kamal
48.	Euphorbiaceae	*Bischofia javanica*	Marak
49.	Fabaceae	*Butea monosperma*	Dhak, Plah
50.	Fabaceae	*Mucuna pruriens*	Gajal bel
51.	Fabaceae	*Desmodium velutinum*	Jagru
52.	Fabaceae	*Abrus precatorius*	Rattak
53.	Fabaceae	*Pueraria tuberosa*	Salod
54.	Fabaceae	*Dalbergia sissoo*	Shisham
55.	Fabaceae	*Pongamia pinnata*	Sukhcha
56.	Liliaceae	*Asparagus racemosus*	Musli
57.	Lythraceae	*Woodfordia fruticosa*	Dhawi
58.	Malpighiaceae	*Aspidopterys wallichii*	Dhur bel
59.	Malpighiaceae	*Hiptage benghalensis*	Malti wan
60.	Malvaceae	*Urena lobata*	Unga
61.	Meliaceae	*Melia azedarach*	Drek
62.	Meliaceae	*Azadirachta indica*	Neem

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Dehra Forest Division
Dehra-177101 (H.P.)

63.	Meliaceae	*Toona ciliata*	Tun Tun
64.	Menispermaceae	*Stephania elegans*	Batindu
65.	Mimosaceae	*Albizia odoratissima*	Karmaru
66.	Mimosaceae	*Acacia catechu*	Khair
67.	Mimosaceae	*Acacia nilotica spp. indica*	Kikar
68.	Mimosaceae	*Albizia chinensis*	Ohi
69.	Mimosaceae	*Acacia modesta*	Phalai
70.	Mimosaceae	*Acacia leucophloea*	Riur
71.	Moraceae	*Ficus benghalensis*	Bohar
72.	Moraceae	*Ficus hispida*	Dagur
73.	Moraceae	*Ficus palmata*	Dogla
74.	Moraceae	*Ficus nemoralis*	Dudla
75.	Moraceae	*Ficus semicordata*	Kandroi
76.	Moraceae	*Ficus subincisa*	Karanda
77.	Moraceae	*Morus serrata*	Karun
78.	Moraceae	*Ficus virens*	Padari
79.	Moraceae	*Ficus rumphii*	Palakh
80.	Moraceae	*Ficus religiosa*	Pipal
81.	Moraceae	*Ficus sarmentosa*	Rudhar
82.	Moraceae	*Ficus racemosa*	Rumbal
83.	Moraceae	*Morus macroura*	Shah-tut
84.	Moraceae	*Morus australis*	Sia-tut
85.	Moraceae	*Morus alba*	Tut
86.	Moringaceae	*Moringa oleifera*	Sanan
87.	Myrsinaceae	*Maesa indica*	Burkani
88.	Oleaceae	*Olea ferruginea*	Kao
89.	Pinaceae	*Pinus roxburghii*	Chil
90.	Poaceae	*Eulaliopsis binata*	Bagar
91.	Poaceae	*Dendrocalamus strictus*	Bans Bain
92.	Poaceae	*Chrysopogan montana*	Dholu
93.	Poaceae	*Saccharum spontaneum*	Kahi
94.	Poaceae	*Artistida adscensionis*	Lambi

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Dehra Forest Division
Dehra-177101 (H.P.)

95.	Poaceae	*Hetropogon contortus*	Lambu
96.	Poaceae	*Sorghum nitidum*	Lunji
97.	Poaceae	*Dendrocalamus hamiltonii*	Mohar
98.	Punicaceae	*Punica granatum*	Anar
99.	Rubiaceae	*Hymenodictyon orixense*	Barthua
100.	Rutaceae	*Aegle marmelos*	Bil
101.	Rutaceae	*Murraya koenigii*	Gandhla
102.	Rutaceae	*Murraya paniculata*	Nargan
103.	Sterculiaceae	*Helicteres isora*	Maror phalli
104.	Tiliaceae	*Grewia optiva*	Dhaman
105.	Tiliaceae	*Grewia eriocarpa*	Phalsa
106.	Urticaceae	*Boehmeria platyphylla*	Padara
107.	Verbenaceae	*Vitex negundo*	Bana
108.	Verbenaceae	*Premna barbata*	Ginani
109.	Verbenaceae	*Tectona grandis*	Sagwan
110.	Vitaceae	*Cayratia trifolia*	Chamar bel
111.	Vitaceae	*Ampelocissus latifolia*	Giddar Dakh
112.	Cactaceae	*Opuntia elatior*	-

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Dehra (H.P.)-177106

Divisional Forest Officer
Dehra Forest Division
Dehra-177101 (H.P.)

List of Fauna present in 10k Radius of project site

Table 1. List of Mammals recorded in study area

S.No.	*Zoological Name*	Common English Name	Status as per Wildlife Conservation Act, 1972 & amendments
1.	*Boselaphus tragocamelus*	Blue Bull	III
2.	*Sus scrofa*	Wild boar	III
3.	*Cervas unicolor*	Sambhar	-
4.	*Canis aureus*	Jackal	II
5.	*Herpestes edwardsi*	Common Mongoose	-
6.	*Macaca mulatta*	Rhesus Monkey	II
7.	*Felis chaus*	Jungle cat	II
8.	*Lepus nigricollis ruficaudatus*	Rufous tailed hare	-
9.	*Presbytis entellus*	Langur	II
10.	*Funambulus pennant*	Five striped Palm Squirrel	IV
11.	*Mus booduga*	Indian Field Mouse	-
12.	*Rattus rattus*	Common House Rat	-
13.	*Mus musculus*	House Mouse	-
14.	*Pteropus giganteus*	Flying Fox	-
15.	*Rousettus leschenaultia*	Fruit bat	-

Table 2. List of Reptiles Studied in Study Area

S. No.	*Zoological Name*	Common English name	Status as per Wildlife Conservation Act, 1972 & amendments
1.	*Lacerta vivipara*	Common lizard	-
2.	*Calotes versicolor*	Garden lizard	-
3.	*Bangarus caeruleus*	Common Indian crait	-
4.	*Ancistrodon himalayanus*	Himalayan pit viper	-
5.	*Naja naja*	Indian Cobra	II

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Dehra Forest Division

31.	*Pycnonotus cafer*	Red vented Bulbul
32.	*Acridotheres ginginianus*	Bank myna
33.	*Dicrurus macrocercus*	Black drango
34.	*Dendrocitta vagabunda*	Indian Treepie
35.	*Corvus splendens*	House crow
36.	*Corvus macrorhynchos*	Jungle Crow
37.	*Copsychus saularis*	Oriental Magpie Robin
38.	*Saxicoloides fulicata*	Indian Robin
39.	*Lonchura punctulata*	Spotted munia
40.	*Passer domesticus*	House Sparrow

Table 4. List of Amphibians in the Study Area

S. No.	Scientific Name	Local Name	Status as per Wildlife Conservation Act, 1972 & amendments
1.	*Amolops sp*	Cascade frogs	-
2.	*Rana sp.*	Pond frogs	II
3.	*Bufo melanastictus*	Common Asian Toad	-

Table 5. List of Fishes in the Study Area

S. No.	Zoological Name	Local Name
1.	*Labeo rohita*	Rohu
2.	*Catla catla*	Catla
3.	*Barbus (tor) putitora*	Mahasheer
4.	*Clarias batrachus*	Mangur

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Dehra Forest Division
Dehra-177101 (H.P.)

Table 3. List of Birds in the Study Area

S. No.	*English Name*	Scientific Name
1.	*Phalacrocorax niger*	Little Cormorant
2.	*Ardea cinerea*	Grey Heron
3.	*Ardea purpurea*	Purple heron
4.	*Casmerodius albus*	Large Egret
5.	*Mesophoyx intermedia*	Medin Erget
6.	*Bubulcus ibis*	Cattle Erget
7.	*Ardeola grayii*	Indian Pond Heron
8.	*Ciconia episcopus*	White Necked Strock
9.	*Threkiornis melanocephalus*	Oriental White Ibis
10.	*Anas platyrhynchos*	Mallard
11.	*Cotuornix coromandelica*	Rain Quail
12.	*Vanellus duvaucelii*	River lapwing
13.	*Vanellus indicus*	Red wattled lapwing
14.	*Columba livia*	Blue rock pigeon
15.	*Streptopelia chinensis*	Spotted dove
16.	*Streptopelia decaocto*	Eurasian collared dove
17.	*Psittacula eupatria*	Alexandrine Parakeet
18.	*Psittacula krameri*	Rose Ringed parakeet
19.	*Eudynamys scolopacea*	Asian Koel
20.	*Tyto alba*	Barn owl
21.	*Athene brama*	Spotted Owlet
22.	*Alcedo atthis*	Small blue kingfisher
23.	*Halcyon smyrensis*	white breasted kingfisher
24.	*Merops orientalis*	Small Bee eater
25.	*Caracias banghalensis*	Indian Roller
26.	*Upupa epops*	Common hoopoe
27.	*Megalaima zeylanica*	Brown headed barbet
28.	*Megalaima asiatica*	Blue throated barbet
29.	*Dndrocopos macei*	Fulvous breasted Pied Woodpecker
30.	*Picus xanthopygaeus*	Little scaly bellied green Woodpecker

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Dadasiba, Teh. Dadasiba
Distt. Kangra (H.P.)-177106

Divisional Forest Officer
Dehra Forest Division
Dehra-177101 (H.P.)

ANNEXURE VIII

WATER AFFIDAVIT

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Certificate No.	:	IN-HP12338378294153W
Certificate Issued Date	:	22-Mar-2024 02:35 PM
Account Reference	:	NEWIMPACC (SV)/ hp19030904/ INDORA/ HP-KG
Unique Doc. Reference	:	SUBIN-HPHP1903090421017189543047W
Purchased by	:	Harish Sharma son of S G Sharma
Description of Document	:	Article 4 Affidavit
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	Harish Sharma
Second Party	:	Not Applicable
Stamp Duty Paid By	:	Harish Sharma
Stamp Duty Amount(Rs.)	:	20 (Twenty only)

NOTARIAL NOTARIAL NOTARIAL NOTARIAL

It is certified that this document has been entered at Serial No. 1882 of Register No. 10 on 22/3/24.

NOTARY Pankaj Sharma Teh. Indora Distt. Kangra (H.P.) 22/3/24.

BAVITA KUMARI Stamp Vendor, Indora

The Document has been presented before me this 22 day of the month March 24 by the executant Harish Sharma S/o ... was duly identified ... personally known ... R/o ... The contents of the document have been read and explained to the executant who has admitted contents to be true & as such the document is admitted attested.

Notary Pankaj Sharma Teh. Indora Distt. Kangra (H.P.) 22/3/24.

Please write or type below this line

AFFIDAVIT

I, Harish Sharma, aged 58 years, son of Shri Shatru Ghan Sharma resident of Friends Colony Pathankot and General Power of Attorney holder in the name and on behalf Smt. Rama Sharma, (Legal heir of Late Shri Ankit Sharma son of Naresh sharma, Partner of M/s Sidhi Vinayak Stone Crusher, Village Ranoh, Tehsil Jaswan, District Kangra HP, do hereby solemnly affirm and declare on oath as under: -

1. That I am duly made and appointed General Power of Attorney holder in the name and on behalf of Smt. Rama Sharma, above named, vide deed of attorney

ATTESTED

Notary Pankaj Sharma Teh. Indora Distt. Kangra (H.P.) 22/3/24.

Statutory Alert:

1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

1. executed on 09/08/2021 and registered vide document No. 147/2021 date 17/08/2021 in the office of Sub Registrar Indora District Kangra HP which is not annihilated in any manner and is in its full force and effect as on this day.
2. That letter of intent for extraction of sand, stone and bajri for area 09-96-64 Hect (Govt. Land) bearing Khasra No. 79/1 and 447/1 situated at Mohal - Mauza Ranoh Tehsil Jaswan District Kangra HP is issued in our favour
3. That the unit shall construct a water storage tank of adequate capacity and obtain supplies of water required for our unit from water suppl- contractor.

Harish Sharma

Place: Indora
Dated: March 22, 2024

Deponent

I, the above named deponent, do hereby verify that the contents of my above affidavit are true and correct to the best of my knowledge and belief and nothing has been concealed from disclosure therein.

Harish Sharma

Place: Indora
Dated: March 22, 2024

Deponent

Identified by
U. I. Card No. **7434 6035 7378**

ATTESTED

सत्यमेव जयते

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NOTARIAL NOTARIAL NOTARIAL NOTARIAL

Certificate No.	:	IN-HP12338523011430W
Certificate Issued Date	:	22-Mar-2024 02 37 PM
Account Reference	:	NEWIMPACC (SV)/ hp19030904/ INDORA/ HP-KG
Unique Doc Reference	:	SUBIN-HPHP1903090421017647438932W
Purchased by	:	Harish Sharma son of S G Sharma
Description of Document	:	Article 4 Affidavit
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	Harish Sharma
Second Party	:	Not Applicable
Stamp Duty Paid By	:	Harish Sharma
Stamp Duty Amount(Rs.)	:	20 (Twenty only)

It is certified that this document has been entered at Serial No. 1883 ... of Register No. 10 ... 22/3/24.

NOTARY Pankaj Sharma Teh. Indora Distt. Kangra (H.P.) 22/3/24

BAVITA KUMARI Stamp Vendor Sr No-1409

The Document has been ... this 22 day of the ... March-2024 executant ... who was duly ... personally known ... has been read ... and explained ... who has admitted contents to be true & as such the document is admitted ... attested.

Notary Pankaj Sharma 22/3/24. Teh. Indora Distt. Kangra (H.P.)

Please write or type below this line

AFFIDAVIT

I, Harish Sharma, aged 58 years, son of Shri Shatru Ghan Sharma resident of Friends Colony Pathankot and General Power of Attorney holder in the name and on behalf Smt. Rama Sharma, (Legal heir of Late Shri Ankit Sharma son of Naresh sharma,) Partner of M/s Sidhi Vinayak Stone Crusher, Village Ranoh, Tehsil Jaswan, District Kangra HP, do hereby solemnly affirm and declare on oath as under: -

1. That I am duly made and appointed General Power of Attorney holder in the name and on behalf of Smt. Rama Sharma, above named, vide deed of attorney

ATTESTED 22/3/24 Notary Pankaj Sharma Teh. Indora Distt. Kangra (H.P.)

Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

1. executed on 09/08/2021 and registered vide document No. 147/2021 dated 17/08/2021 in the office of Sub Registrar Indora District Kangra HP which is not annihilated in any manner and is in its full force and effect as on this day.
2. That letter of intent for extraction of sand, stone and bajri for area 09-96-6 Hect (Govt. Land) bearing Khasra No. 79/1 and 447/1 situated at Mohal & Mauza Ranoh Tehsil Jaswan District Kangra HP is issued in our favour
3. That the requirement of water shall be met from own Tube well / Bore well.

Harish Sharma

Place: Indora
Dated: March 22, 2024

Deponent

I, the above named deponent, do hereby verify that the contents of my above affidavit are true and correct to the best of my knowledge and belief and nothing has been concealed from disclosure therein.

Harish Sharma

Place: Indora
Dated: March 22, 2024

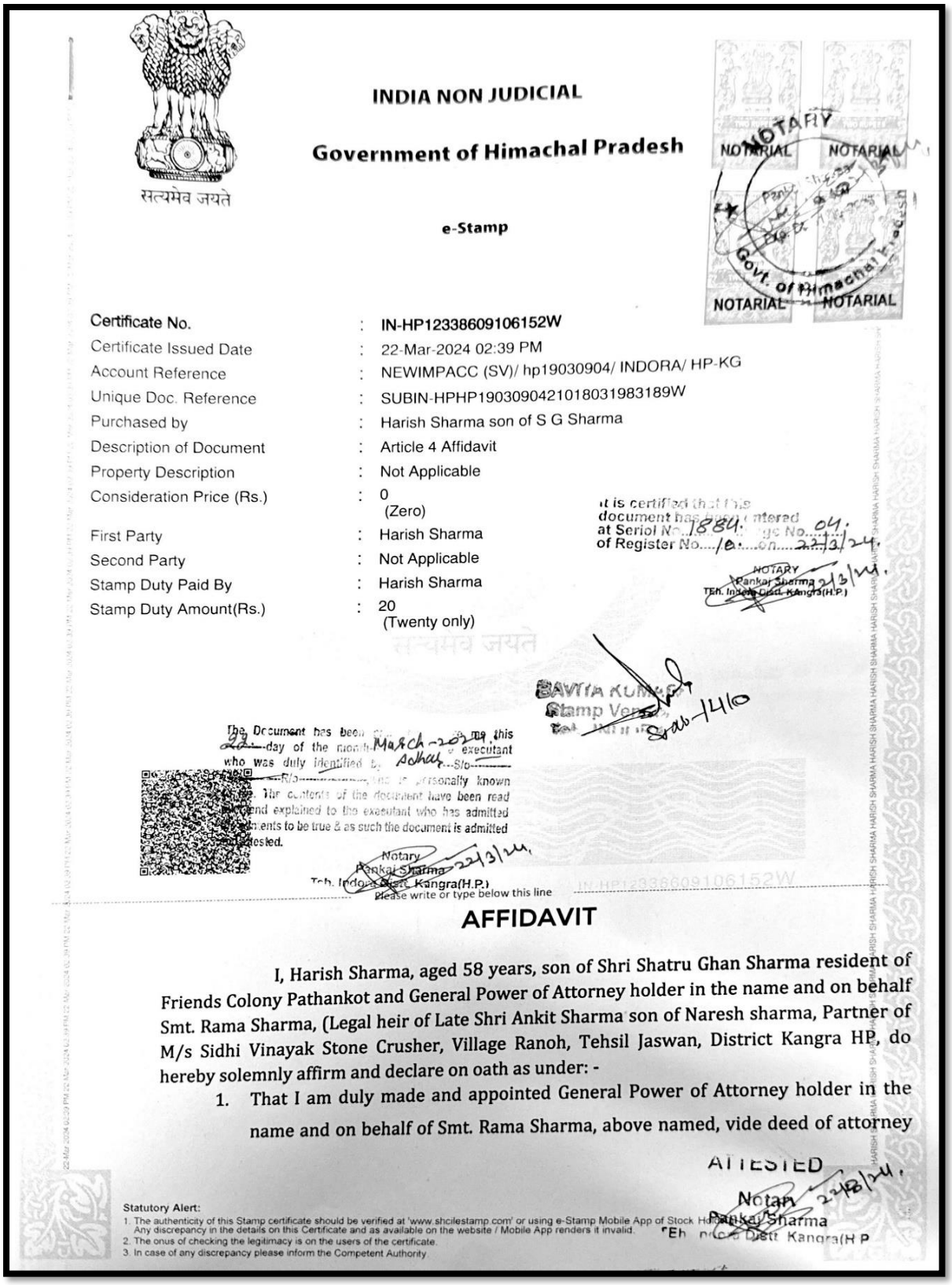
Deponent

Identified by
U. I. Card No. **7434 6035 7378**

ATTESTED
Notary

ANNEXURE – IX

PLANTATION AFFIDAVIT



सत्यमेव जयते

INDIA NON JUDICIAL

Government of Himachal Pradesh

e-Stamp

NOTARIAL NOTARIAL NOTARIAL NOTARIAL

Certificate No.	:	IN-HP12338609106152W
Certificate Issued Date	:	22-Mar-2024 02:39 PM
Account Reference	:	NEWIMPACC (SV)/ hp19030904/ INDORA/ HP-KG
Unique Doc. Reference	:	SUBIN-HPHP19030904210180319831 89W
Purchased by	:	Harish Sharma son of S G Sharma
Description of Document	:	Article 4 Affidavit
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	Harish Sharma
Second Party	:	Not Applicable
Stamp Duty Paid By	:	Harish Sharma
Stamp Duty Amount(Rs.)	:	20 (Twenty only)

It is certified that this document has been registered at Serial No. 1884 Page No. 04 of Register No. 1 on 22/3/24

NOTARY Pankaj Sharma 22/3/24 Teh. Indora Distt. Kangra(H.P.)

The Document has been signed before me this 22 day of the month March-2024 by the executant who was duly identified by Ashok S/o R/o personally known to me. The contents of the document have been read and explained to the executant who has admitted the contents to be true & as such the document is admitted to be executed.

Notary Pankaj Sharma 22/3/24 Teh. Indora Distt. Kangra(H.P.)

Please write or type below this line

IN-HP12338609106152W

AFFIDAVIT

I, Harish Sharma, aged 58 years, son of Shri Shatru Ghan Sharma resident of Friends Colony Pathankot and General Power of Attorney holder in the name and on behalf Smt. Rama Sharma, (Legal heir of Late Shri Ankit Sharma son of Naresh sharma, Partner of M/s Sidhi Vinayak Stone Crusher, Village Ranoh, Tehsil Jaswan, District Kangra HP, do hereby solemnly affirm and declare on oath as under: -

1. That I am duly made and appointed General Power of Attorney holder in the name and on behalf of Smt. Rama Sharma, above named, vide deed of attorney

ATTESTED 22/3/24 Notary Pankaj Sharma Teh. Indora Distt. Kangra(H.P.)

Statutory Alert:
1. The authenticity of this Stamp certificate should be verified at 'www.shcilestamp.com' or using e-Stamp Mobile App of Stock Holding. Any discrepancy in the details on this Certificate and as available on the website / Mobile App renders it invalid.
2. The onus of checking the legitimacy is on the users of the certificate.
3. In case of any discrepancy please inform the Competent Authority.

NOTARY

Contd..... 2

executed on 09/08/2021 and registered vide document No. 147/2021 dated 17/08/2021 in the office of Sub Registrar Indora District Kangra HP which is not annihilated in any manner and is in its full force and effect as on this day.

2. That the proposed project of the deponent pertains to mining activities of stone, bajri and sand from Muhal & Mauza Ranoh Tehsil Jaswan District Kangra HP. The deponent has applied for mining lease on land comprised in Khasra No. 79/1 (measuring 05-72-02 Hect.) and Khasra No. 447/1 (measuring 04-24-62 Hect.) situated at Mohal & Mauza Ranoh, Tehsil Jaswan District Kangra HP, total area being 09-96-64 Hect (Govt. Land).
3. That I undertake that I shall plant NEEM, JAMUN, SHEESHAM, EUCALYPTUS trees on the adjoining land as per availability / requirement.

Harish Sharma

Place: Indora
Dated: March 22, 2024

Deponent

I, the above named deponent, do hereby verify that the contents of my above affidavit are true and correct to the best of my knowledge and belief and nothing has been concealed from disclosure therein.

Harish Sharma

Place: Indora
Dated: March 22, 2024

Deponent

Identified by
U. I. Card No. **7434 6035 7378**

ATTESTED

Notary
Pankaj Sharma
Indora Distt. Kangra(H.P.)

22/3/24.

ANNEXURE – X

REHABILITATION LETTER

No. Udyog-Bhu(Khani-4) Laghu-407/09 3967
Government of Himachal Pradesh,
Department of Industries,
"Geological Wing"

Dated Shimla-171001, 2/9/ 2022

To

Sh. Hrish Sharma,
GPA Holder of Smt. Rama Sharma legal Heir of
Late Sh. Ankit Sharma, S/o Sh. Naresh Sharma,
Village Malot, P. O. Bhojpur,
Tehsil Indora, District Kangra, H. P.

Subject:- **Rehabilitation for the survival of stone crushing unit on account of reduction of mining lease area.**

Sir,

With reference to your representation No. Nil dated 7.7.2022 which is addressed to the Hon'ble Industries Minister, Himachal Pradesh and same has been received from the Special Private Secretary to Hon'ble Industries Minister, H. P. vide his U. O. No. SPS/Ind./Min/2022-2354 dated 15.7.2022 and also received through the Addl. Chief Secretary (Industries) to the Govt. of Himachal Pradesh vide letter No. Ind-II (F)6-8/2012 dated 21.7.2022 on the subject cited above.

In this regard, it is to informed that the above mentioned case was sent to Govt. vide this office letter of even No.-4787 dated 12.8.2022 w.r.t. Govt. letters dated 15.7.2022 and 21.7.2022 and the Government vide their letter No. Ind-II (F)6-8/2012 dated 1.9.2022 has conveyed the approval to process the case for grant of additional mining lease area bearing Khasra No. 79/1 (5-72-02 Hect.) & 447/1(04-24-62 Hect.) total measuring to 09-96-64 Hects. (Govt. Land,) falling in Mohal Ranoh of Tehsil Jaswan, District Kangra, H. P. for collection/extraction of sand, stone & bajri for use in already established stone crusher in the name & style M/s Sidhi Vinyak Stone Crusher, Village Ranoh, P. O. Kanpur, Tehsil Jaswan, District Kangra, H.P. under the provision in Rule 84 of

Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of illegal Mining, Transportation and Storage) Rules, 2015.

You are therefore requested to apply the additional area for grant of mining lease after competition of all the codal formalities as per the provisions of Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015 at the earliest, so that the case could be sent to the Joint Inspection Committee for conduct the joint inspection of the applied area for grant of mining lease.

Yours faithfully,

Geologist (Zone-II)
Himachal Pradesh

Endst. No. AS above. Dated; 2022

Copy to:- The Mining Officer, Kangra at Dharamshala, District Kangra, H. P. for information and further necessary action.

Geologist (Zone-II)
Himachal Pradesh