DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

of

MINING OF MINOR MINERALS

For

Project name	Extraction of Sand, Stone & Bajri by Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher
Location	Khasra Nos. 722/1 (Pvt. Land - River bed), located at Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh.
Land Status/ Type	Pvt. Land- River bed of Chakki Khad
Mining Area	02-49-20 Ha
Category (as per EIA Notification, 2006)	Category B1 (***Due to cluster situation***)
Production	1,05,300 MT/Annum
Baseline study period	March- May 2025; **Monitoring done by M/s Chandigarh Pollution Testing Laboratory, Mohali (NABL accreditation TC-6728 Valid till: 08/11/2028)**
TOR Letter No.	HPSEIAA/2025/1288 dated 26.04.2025

APPLICANT

Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher,
V.P.O Kandwal, Tehsil Nurpur, District Kangra.

PREPARED BY

JMS ENVIRO CARE & INNOVATIVE CENTRE
(QCI/ NABET Certificate No: NABET/EIA/24-27/IA 0142)
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QCI Quality Council of India Membership

JMS Enviro Care & Innovative Centre

NABET

DISCLOSURE BY CONSULTANT

JMS Enviro Care & Innovative Centre

JMS Enviro Care and Innovative Centre
NABET Accredited EIA Consultant
AN ISO 14001:2015 & ISO 9001:2015 CERTIFIED
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E-mail : jmsenvirocare@gmail.com ; eia.jmsenvirocare@gmail.com

Date: 12.06.2025

TO WHOMSOEVER IT MAY CONCERN

This is to confirm that the EIA/EMP report for the proposed mining project namely Extraction of Sand, Stone & Bajri by Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher, over an area measuring 02-49-20 Ha (Pvt. Land- River bed of Chakki Khad) bearing Khasra Nos. 722/1, falling in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh, has been prepared by M/s JMS Enviro Care & Innovative Centre located at SCO 6, Motia Plaza, Block B, Baddi, District Solan (H.P.)- 173212. The Standard TOR issued by SEIAA, H.P. vide ToR Identification No. TO25B0107HP5361441N dated 26th April 2025, has been fully complied for preparing the EIA/EMP report.

We also confirm that the report prepared is based on project-related factual data as submitted by the client to us & the baseline studies conducted by M/s Chandigarh Pollution Testing Laboratory, a NABL accredited and MoEF&CC recognized Laboratory.

Mr. Jagir Singh

(Managing Partner, JMS Enviro Care & Innovative Centre)

NABET Certificate: NABET/EIA/24-27/IA 0142, Dated: 1st October, 2024 valid upto 20th June, 2027.

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PROJECT AT A GLANCE

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<tr><td>Name of the project</td><td>Extraction of Sand, Stone and Bajri by Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher</td></tr>
<tr><td>Type of project</td><td>Mining of Minor Minerals i.e. Sand, Stone and Bajri.</td></tr>
<tr><td>Location</td><td>Khasra Nos. 722/1 (Pvt. Land - River bed), located at Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh.</td></tr>
<tr><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>32°20'23.11"N</td><td>75°48'40.62"E</td></tr>
<tr><td>P2</td><td>32°20'23.61"N</td><td>75°48'46.34"E</td></tr>
<tr><td>P3</td><td>32°20'15.19"N</td><td>75°48'46.63"E</td></tr>
<tr><td>P4</td><td>32°20'13.51"N</td><td>75°48'45.40"E</td></tr>
</table>
</td></tr>
<tr><td>Elevation (Altitude at origin)</td><td>Highest 464 meters above MSL.
Lowest 463 meters above MSL.</td></tr>
<tr><td>Land Status/ Type</td><td>Private Land/ River Bed of Chakki Khad</td></tr>
<tr><td>Total Lease Area</td><td>02-49-20 Ha</td></tr>
<tr><td>Mining Area</td><td>02-34-00 Ha</td></tr>
<tr><td>Products</td><td>Sand, Stone and Bajri</td></tr>
<tr><td>Production Capacity</td><td>Approx. 1,05,300 MT/year or 5,26,500 MT over a period of five years (including silt/clay)</td></tr>
<tr><td>Cost Details</td><td>Total Project cost = Rs. 25.0 Lakhs
EMP cost:
Rs. 21.5 lacs. (Capital)
Rs. 3.8 lacs (Recurring)/Annum</td></tr>
<tr><td>Source of Electricity</td><td>Not required</td></tr>
<tr><td>Alternative source</td><td>Nil</td></tr>
<tr><td>Power Requirement at mining area</td><td>Not required</td></tr>
<tr><td>Water consumption</td><td>10.00 KLD</td></tr>
<tr><td>Source of water supply</td><td>Through tankers (Permission for the same has been taken from Gram Panchayat)</td></tr>
</table>

Air pollution control at mining site	Water sprinklers & tree plantations
Hazardous chemical	Nil.
Hazardous waste	Nil.
Manpower requirement	160 persons
Validity of Lease	As per grant order
Method of mining	Manual
Working Days	270
Waste (silt/clay)	Approx. 8640 MT/year (43200 metric ton over a period of five years)

TOR LETTER

सत्यमेव जयते

File No: HPSEIAA/2025/1288
Government of India
Ministry of Environment, Forest and Climate Change
(Issued by the State Environment Impact Assessment Authority(SEIAA), HIMACHAL PRADESH)
***

Dated **26/04/2025**

To,

Dharambir Singh
M/s New Shiva Stone Crusher, V.P.O. kandwal, Tehsil- Nurpur, District- kangra, H.P. , KANGRA, HIMACHAL PRADESH, , 176201
shivastf20@gmail.com

Subject: Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding.

Sir/Madam,

This is in reference to your application for Grant of Terms of Reference under the provision of the EIA Notification 2006-regarding in respect of project Extraction of Sand, Stone and Bajri from Khasra no. 722/1 over an area measuring 02-49-20 Ha (Pvt. Land- River bed) falling in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh by Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher submitted to Ministry vide proposal number SIA/HP/MIN/521869/2025 dated 01/02/2025.

2. The particulars of the proposal are as below :

(i) TOR Identification No.	TO25B0107HP5361441N
(ii) File No.	HPSEIAA/2025/1288
(iii) Clearance Type	TOR
(iv) Category	B1
(v) Project/Activity Included Schedule No.	1(a) Mining of minerals
(vii) Name of Project	Extraction of Sand, Stone and Bajri from Khasra no. 722/1 over an area measuring 02-49-20 Ha (Pvt. Land- River bed) falling in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh by Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher
(viii) Name of Company/Organization	DHARMVIR SINGH
(ix) Location of Project (District, State)	KANGRA, HIMACHAL PRADESH
(x) Issuing Authority	SEIAA
(xii) Applicability of General Conditions	no
(xiii) Applicability of Specific Conditions	no

SIA/HP/MIN/521869/2025 Page 1 of 8

3. In view of the particulars given in the Para 1 above, the project proposal interalia including Form-1(Part A and B) were submitted to the Ministry for an appraisal by the State Environment Impact Assessment Authority(SEIAA) Appraisal Committee (SEIAA) in the Ministry under the provision of EIA notification 2006 and its subsequent amendments.

4. The above-mentioned proposal has been considered by State Environment Impact Assessment Authority(SEIAA) Appraisal Committee of SEIAA in the meeting held on 16/04/2025. The minutes of the meeting and all the Application and documents submitted [(viz. Form-1 Part A, Part B, Part C EIA, EMP)] are available on PARIVESH portal which can be accessed by scanning the QR Code above.

5. The brief about configuration of plant/equipment, products and byproducts and salient features of the project along with environment settings, as submitted by the Project proponent in Form-1 (Part A, B and C)/EIA & EMP Reports/presented during SEIAA are annexed to this EC as Annexure (1).

6. a)	Proposal No.	**SIA/HP/MIN/521869/2025 (Fresh ToR)** **File No HPSEIAA/2025/1288**
b)	Processing fee	Rs. 20,000/- deposited having UTR no. IHS8884544 dated 01/02/2025
c)	Project type	Mining of Minor Minerals (Sand, Stone and Bajri)
d)	Project Location	Khasra No 22/1 falling in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, HP
e)	Jamabandi	Jamabandi year 2020-21
f)	Land Status	Pvt. Land- River bed of Chakki Khad
g)	Capacity	105300 MT/Year
h)	Mining Area	02-49-20 Ha
i)	Leases with in 500 meter from the periphery of the area applied.	Leases within 500 Mtrs: 1. M/s New Shiva Stone Crusher, Kangra (4-97-93 Ha.) 2. M/s New Shiva Stone Crusher, Kangra (3-87-70 Ha.) 3. M/s Mahadev Stone Crusher, Kangra (5-40-7 Ha.)
j)	Letter of Intent	LoI Issued on dated 6/2/2024 for the period of 1 year.
k)	EMP Cost	Capital cost: Rs. 8.0 Lakhs and Recurring cost: Rs 2.15 Lakhs annually.
l)	CER cost	-

7. The SEIAA, in its meeting held on 16/04/2025, based on information & clarifications provided by the project proponent and after detailed deliberations recommended the proposal for grant of Terms of Reference under the provision of EIA Notification, 2006 and as amended thereof subject to stipulation of specific and general conditions as detailed in Annexure (2).

8. The SEIAA has examined the proposal in accordance with the Environment Impact Assessment (EIA) Notification, 2006 & further amendments thereto and after accepting the recommendations of the State Environment Impact AssessmentAuthority(SEIAA) Appraisal Committee hereby decided to grant Terms of Reference for instant proposal of M/s. Dharambir Singh under the provisions of EIA Notification, 2006 and as amended thereof.

9. The Ministry reserves the right to stipulate additional conditions, if found necessary.

10. The Terms of Reference to the aforementioned project is under provisions of EIA Notification, 2006. It does not tantamount to approvals/consent/permissions etc. required to be obtained under any other Act/Rule/regulation. The Project Proponent is under obligation to obtain approvals /clearances under any other Acts/ Regulations or Statutes, as applicable, to the project.

11. This issues with the approval of the Competent Authority.

Copy To

1. The Secretary (Environment), Ministry of Environment, Forests & Climate Change (MoEF&CC), GoI, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110003 .
2. The Chairman, Central Pollution Control Board, Him Parivesh Bhawan, CBD-cum-office Complex, East Arjun Nagar, New Delhi-110032.
3. The Chairman, Himachal Pradesh State Pollution Control Board, Shimla-171009.

4. The Director (Environment, Science & Technology) to the GoHP, Shimla-171001.
5. The Adviser (IA), MoEF&CC, GoI, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110003.
6. The Integrated Regional Office, MoEF&CC, CGO Complex, Shivalik Khand, Longwood, Shimla, HP-171001.
7. The Monitoring Cell, MoEF&CC,GoI, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi - 110003
8. Record File.

Annexure 1

Standard Terms of Reference for (Mining of minerals)

1.

S. No	Terms of Reference
1.1	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
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given
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
1.4	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 the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone)
1.5	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
1.6	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
1.7	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
1.8	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

S. No	Terms of Reference
1.9	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
1.10	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
1.11	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
1.12	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
1.13	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
1.14	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
1.15	The vegetation in the RF / PF areas in the study area, with necessary details, should be given
1.16	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
1.17	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
1.18	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

S. No	Terms of Reference
1.19	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
1.20	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)
1.21	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
1.22	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
1.23	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
1.24	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
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided
1.26	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
1.27	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
1.28	Based on actual monitored data, it may clearly be shown whether working will intersect

S. No	Terms of Reference
	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
1.29	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
1.30	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
1.31	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
1.32	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
1.33	Details of the onsite shelter and facilities to be provided to the mine workers should be included in the EIA Report
1.34	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
1.35	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
1.36	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
1.37	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
1.38	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

S. No	Terms of Reference
	any, occupational health impacts besides other impacts specific to the proposed Project
1.39	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
1.40	Details of litigation pending against the project, if any, with direction /order passed by any Court of Law against the Project should be given
1.41	The cost of the Project (capital cost and recurring cost) as well as the cost towards implementation of EMP should be clearly spelt out
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report
1.43	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
1.44	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
1.45	1. The project proponent shall undertake and include the detailed analysis of GLC-2.5 with air modeling and shall prepare the wind-rose diagram of the site to plan the installation of PCDs. 2. The project proponent shall submit the wider view photographs and video of the mining site using drone camera from all angles depicting the entire picture of the mining site. 3. The project proponent shall propose bio-engineering for hill slope protection integrating vegetation with engineering techniques to stabilize soil, prevent erosion, and enhance ecological resilience by introducing deep-rooted grass and shrub plantations (bamboo grass) contour wattling, coir geotextiles, and live check dams using local plant species to reinforce slopes naturally. 4. The project proponent shall submit revised EMP with budgetary provisions. 5. The project proponent shall make provision to provide one electric vehicle for EC monitoring

S. No	Terms of Reference
	purpose under CER. 6. The project proponent shall ensure that lease holders/ project proponents falling with in 500 meter from the periphery of the area applied shall participate in the public hearing.

Additional Terms of Reference
N/A

Annexure 2

Details of Products & By-products

Name of the product /By-product	Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Sand	Sand	21060	Tons per Annum (TPA)	Road	
Stone	Stone	42120	Tons per Annum (TPA)	Road	
Silt/Clay	Silt/Clay	15795	Tons per Annum (TPA)	Road	
Bajri	Bajri	26325	Tons per Annum (TPA)	Road	

Signature Not Verified
Digitally Signed by : Sh D C Rana
Member Secretary, SEIAA
Date: 26/04/2025

TOR

COMPLIANCE

S.No.	Terms of Reference (TOR)	TOR Compliance	Reference in EIA
1. Standard Terms of Reference for (Mining of Minerals)			
1.1	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.	Not applicable. This is the new case hence no prior production was done.	
1.2	A copy of the document in support of the fact that the Proponent is the rightful lessee of the mine should be given.	M/s New Shiva Stone Crusher has been designated as the rightful lessee for the proposed mine, with the relevant documentation attached to this report for reference.	Annexure-II, Page no. 147
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.	The mine's details, including lease area, production capacity, waste management, and mining technology, are consistent with the approved mine plan and draft EIA report, as prepared for the Public Hearing.	Chapter 2, page no 20-34
1.4	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	All the necessary maps such as 10 km toposheet map, 500 buffer map, pillar co-ordinates, LULC map of study area are included in EIA report.	Chapter 3, (Fig.3.1 Page no 38, Fig.3.2 Page no 39, Fig.3.5 Page no 56.

	and other ecological features of the study area (core and buffer zone).		
1.5	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.	The toposheet map of 10 km buffer area indicating the geology, geomorphology of land forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics is given in EIA report.	Chapter 3, (Fig.3.1 Page no 38)
1.6	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 mining will be undertaken in land area measuring 02-49-20 Ha and the same conforms to land use policy of Govt. of Himachal Pradesh.	Annexure-II, Page no.147
1.7	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	The proposed project is a partnership firm and has its own project level environmental policy. The environmental policy which is available in EIA report has a prescribed operating procedure to look after any violation or deviation from the applicable environmental laws and compliance of EC conditions.	--

	noncompliance / 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.		
1.8	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 proposal pertains to open-cast mining, which will be carried out manually for which all safety provisions detailed in EIA report are available.	--
1.9	The study area 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.	The study area will encompass a 10 km zone around the mine lease boundary. The draft EIA includes data on aspects like waste generation, covering the entire lease period or life of the mine.	Chapter-2 (para 2.9 Page no 27)
1.10	Land use of the study area delineating forest area, agricultural land, grazing land, wildlife sanctuary, national park, migratory routes of fauna, water bodies, human 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.	LULC map of 10 km buffer map of study area giving all the listed features has been enclosed in the EIA Report.	Chapter -3 Para 3.8 Page no 54-59 Fig no 3.5
1.11	Details of the land for any Over Burden Dumps outside the mine lease, such as extent of land area, distance from mine lease, its	An approx. 15795 MT/Annum of low- grade mineral like silt/clay are likely to be generated as mine waste. Since the	Chapter -2 Para 2.9, 2.10 Page no

	land use, R&R issues, if any, should be given.	mining lease area is forming part of river bed, so there is no possibility of presence of any top soil. The extracted minerals will be utilized in the existing stone crusher unit to manufacture grit and mineral sand, and will also be partly used for road maintenance and plantation purposes. There are no plans for external overburden dumps outside the mine lease area.	27,28
1.12	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 as authenticated by the local Forest Department and Joint Inspection Committee as per the documents attached as Annexures.	Annexure – V Page no 153-164
1.13	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	Not Applicable, in view of 12 above.	--

	furnished.		
1.14	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.	--
1.15	The vegetation in the RF/ PF areas in the study area, with necessary details, should be given.	There are no Reserved Forests (RF) or Protected Forests (PF) present within the study area.	--
1.16	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.	No forest land, no tree cutting and no wildlife is available in the lease area. However, adequate preventive measures have been detailed in the EIA report for the protection of wildlife in the buffer zone due to project activities.	Chapter -3 Para 3.12 Page no 82-87
1.17	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	No National Parks, Sanctuaries, Biosphere reserve, Wildlife Corridors, Tiger & Elephant Reserves falls within 10 km of the mine lease. The copy of DFO certificate is attached as Annexures.	Annexure -VI Page no 165-167

	Wildlife and copy furnished.		
1.18	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 along with 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.	Detailed ecological & biodiversity study as part of baseline study of the area has been carried out and given in the EIA report. List of flora & fauna including endangered, endemic and RET species authenticated by concerned department has been given in the EIA report. Since, no Schedule-I species are present in the study area, there is therefore, no requirement of conservation plan.	Chapter-3 Table no 3.20, 3.21 Page no 84-87
1.19	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.	The proposed mining project does not fall under critically polluted area.	–
1.20	Similarly, for coastal Projects, A CRZ map duly authenticated by	Not Applicable as the mine lease area does not fall in CRZ.	–

	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).		
1.21	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.	Not applicable, as no displacement and subsequent rehabilitation is involved.	–
1.22	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	Primary Baseline data on Ambient Air Quality, Water quality, Noise level, Soil, Flora and Fauna was collected during March to May 2025 & the details are provided in	Chapter -3 Page no 35-100 Test reports

	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.	Chapter 3. Site-specific meteorological data has been collected and presented in the report, with monitoring stations strategically positioned, including one within 500m of the mine lease in the predominant downwind direction.	Annexure-IX Page no 172-192.
1.23	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 is a non-coal mining project, there are no specific points of emission. Air quality modeling has been conducted based on fugitive emissions and vehicular movements within the mining area. The 24- hourly average ground-level concentration (GLC) values for the project have been calculated for concentration of PM2.5, considering the topographical features surrounding the project and applicable stability classes. Results indicate that the maximum contribution in GLC's, with unit's operation will be 43.08 µg/m^3 for PM2.5 at a distance of 200 m from	Chapter-4 Para 4.2 Table:4.1 Fig 4.1 Page no 102-105-106.

		SSE direction. Since the mining is manual and no blasting is involved, therefore impact of the fugitive emission from the unit will be negligible. SPM level due to movement of vehicles will also be checked. The present max PM10 is 77.2 µg/m^3 and PM2.5 is 42.24 µg/m^3. There will be marginal increase in existing level of ambient air quality (PM2.5, which will be well within the permissible, limits i.e. 60ug/m^3.	
1.24	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 10.0 KLD (4.0 KLD for domestic purpose, 3.0 KLD for dust suppression and 3.0 KLD for plantation will be required. The water will be sourced through tankers.	Chapter -2 Para 2.15 Table 2.13 Page no 30.
1.25	Necessary clearance from the Competent Authority for drawl of requisite quantity of water for the Project should be provided.	The water will be sourced through tankers from Permission has been obtained from the Gram Panchayat for the supply of water, attached as Annexure- VIII (a).	Chapter- 2 Para 2.15 Page no 30, Annexure VIII (a)
1.26	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.	Water usage is limited to drinking, dust suppression, and plantation. The proposed plantation aims to enhance water holding capacity and promote groundwater recharge. Notably, no artificial rainwater harvesting system is planned within the lease area.	Chapter -2 Para 2.15 Table 2.13 Page no 30. Annexure VIII (a) Water Affidavit

1.27	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.	To protect water quality, mining activities will be conducted on the dry riverbed, minimizing environmental impact. The mining depth will be limited to 2.0 meters below ground level or above the groundwater table, whichever is shallower, ensuring no interference with groundwater. Since no water will be used in mining operations, no wastewater will be generated. Regular water quality monitoring will be implemented to maintain environmental protection and safeguards.	Chapter – 10, Page no. 125 to 128 & Annexure-IX (Test reports) Page no 172-192.
1.28	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.	It is ensured that mining will be carried out above the ground water table to prevent the intersection with ground water table. Therefore, the mining operation will not intersect groundwater. All the rules and precautionary measures shall be followed accordingly as mentioned in statutory notifications and the Approved Mining Plan.	--
1.29	Details of any stream, seasonal or otherwise, passing through the lease area and modification / diversion proposed, if any, and the	There is no stream modification/ diversion proposed in the existing area. Drainage plan of 10 km study area is	Chapter -3 Para 3.15 Page 97-100

	impact of the same on the hydrology should be brought out.	provided related in Chapter 3.	Fig 3.12.
1.30	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.	The site is elevated lowest at 429 meters from the mean sea level and highest at 427 meters from the mean sea level. The mining operations would be carried out upto a depth of 2.0 meters from the surface level.	–
1.31	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.	An estimated 1200 trees such as Poplar, Vetiver grass & Bamboo will be planted on the suitable land measuring 0.5 Ha, near the mining site. Some plantation has already been undertaken on this land. The total cost of plantation including its maintenance for five years shall be approx. 12,00,000 Lakhs. The cost includes cost of plants, mineable and other labor activities. The estimated survival rate proposed to be achieved shall be 80%.	Chapter -2 Para 2.12 Table- 2.10, 2.11 Page no. – 28,29

1.32	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.	An estimated 25-30 trucks/tippers will be daily employed for transportation of minerals from mining site to the crusher site. The project is expected to generate a substantial amount of truck traffic, transporting extracted minerals such as sand, stone, and bajri from the river bed to the crusher site and other destinations. The projected increase in truck traffic will be assessed, and the existing road network's capacity to handle the incremental load will be evaluated.	Chapter-3, Para 3.14 Page no. 97
1.33	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, eliminating the need for on-site residential facilities. However, amenities such as change rooms, rest rooms, and clean drinking water will be provided. Existing facilities, including temporary rest shelters and sanitation, are available at the nearby crusher site.	--
1.34	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.	The mined area being part of the river course cannot be reclaimed for any other purpose. The entire quarried area will be replenished and reclaimed by the river during each successive monsoon. Thus, the topography or land use of the river bed will not change.	

1.35	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	Occupational health impact is mainly expected from air pollution due to fugitive dust emissions and insignificant increase in noise levels which may induce respiratory ailments and hearing impairment. Adequate PPE's will be provided to the workers as safeguards against these impacts. Pre-placement and periodic medical examination of workers will be instituted to ascertain the occupational health impacts on workers.	–
1.36	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	Though, mining would be done manually, and far away from habitation, therefore there may not be any major impact envisaged related to project activity. However, specific provisions have been provided for the against fugitive dust and noise for the people residing near the transport route.	–
1.37	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.	Socio-economic aspects of the project have been clearly detailed in the baseline study w.r.t. socio-economic environment. Social and environmental activities will be executed as part of EMP for the social-welfare of local community.	Chapter -3, Para 3.13, Page no. 87

1.38	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.	Detailed Environmental Management Plan in respect of all components of the environment has been provided in the EIA report.	Chapter -10, Table no. 10.1, Page no. 124
1.39	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.	This draft EIA report has been prepared for the purpose of public hearing and the issues which will be raised during the same will be duly addressed in the EIA/EMP report.	Chapter - 7
1.40	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 is pending.	--
1.41	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 25 lakhs and the cost of EMP is Rs. 21.5 Lakhs as Capital cost and Rs. 3.8 Lakhs as Recurring cost/Annum.	Chapter -10, Table no. 10.1, Page no. 129
1.42	A Disaster management Plan shall be prepared and included in the EIA/EMP Report.	Complied in EIA report.	Chapter -7, Para 7.3, Page no 117
1.43	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.	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.	
1.44. Besides the above, the below mentioned general points are also to be followed:			
1.44(a)	All documents to be properly referenced with index and continuous page numbering.	Complied.	
1.44(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 for compliance.	
1.44(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.	Complied.	Annexure – IX (Test Reports)
1.44(d)	Where the documents provided are in a language other than English, an English translation should be provided	Relevant details have been provided in EIA report.	
1.44(e)	The Questionnaire for environmental appraisal of mining projects as devised earlier by the Ministry shall also be filled and submitted.	Complied.	

1.44(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.	Noted for compliance.	
1.44(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.	Noted for compliance.	
1.44(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.	Noted for compliance	

1.44(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.	Agreed & complied.	-Refer fig. 2.2 to 2.5 of Chapter 2
1.45 (1)	The project proponent shall undertake and include the detailed analysis of GLC-2.5 with air modeling and shall prepare the wind-rose diagram of the site to plan the installation of PCDs.	Complied in EIA report. In view of TOR point no. 1.23 above.	Chapter – 4, Fig 4.1, Page no. 106.
(2)	The project proponent shall submit the wider view photographs and video of the mining site using drone camera from all angles depicting the entire picture of the mining site.	Noted and will be complied at the time of appraisal.	
(3)	The project proponent in consultation with UHF Nauni, shall propose bio-engineering for hillslope protection integrating vegetation with engineering techniques to stabilize soil, prevent erosion, and enhance ecological resilience by introducing deep-rooted grass and shrub plantations (bamboo grass & vetiver grass (Chrysopogon zizanioides)/ Elephant Grass (Pennisetum purpureum), contour wattling, coir geotextiles, and live check dams using local plant species to reinforce slopes naturally.	The suggestion to implement bio-engineering techniques for hillslope protection is acknowledged. Considering the nature of the riverbed mining project, the focus will be on conducting plantation activities in nearby private land adjacent to the lease area. The proposed species for plantation include bamboo, poplar & vetiver grass etc. which are expected to stabilize the soil and enhance ecological resilience.	Chapter- 2, table 2.10 & 2.11, Page no. 28.

(4)	The project proponent shall submit revised EMP with budgetary provisions.	The revised EMP with budgetary provisions have been provided in the Draft EIA report.	Chapter- 10, table 10.1, Page no. 129.
(5)	The project proponent shall make provision to provide one electric vehicle for EC monitoring purpose under CER.	Agreed & will be complied.	
(6)	The project proponent shall ensure that lease holders/ project proponents falling within 500meter from the periphery of the area applied shall participate in the public hearing.	Noted & Agreed.	

Details of Products & By-products

Product / By-product	Quantity	Unit	Mode of Transport / Transmission	Remarks (eg. CAS number)
Sand	**21060**	Metric tonnes	Road	NA
Stone	**42120**	Metric tonnes	Road	NA
Silt/Clay	**15795**	Metric tonnes	Road	NA
Bajri	**26365**	Metric tonnes	Road	NA

EXECUTIVE SUMMARY

1.0 PROJECT NAME AND LOCATION:

Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher, Village & P.O. Kandwal, Tehsil Nurpur, District Kangra, H.P. has been issued "Letter of Intent" for grant of mining lease vide letter No. Udyog-Bhu (Khani-4) Laghu-230/2023 dated 06.02.2024 for the extraction/ collection of sand, stone & bajri over an area measuring 02-49-20 Ha bearing Khasra no. 722/1 (Private Land- River bed of Chakki Khad) falling in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh. The project itself falls in category B2, however due to cluster situation (Three other mining sites are located within the 500- meter radius of the project site), the project is categorized as Category B1 as per EIA Notification and its subsequent amendments.

2.0 PROJECT PROPOSAL:

The applicant is seeking prior Environmental Clearance for the proposed project as per EIA Notification 2006 and subsequent amendments. The project involves collection of 1,05,300 MT of sand, stone, and bajri annually (approximately 5,26,500 MT over five years). It's expected to generate around 15795 MT of silt/clay per annum (78,975 MT over five years) as mine waste. The project proponent has engaged ***QCI NABET- Accredited Environmental Consultant, M/s JMS Enviro Care & Innovative Centre***, to conduct the EIA study and prepare the EIA/EMP report.

DETAILS OF THE PROJECT

<table>
<tr><td>Name of the project</td><td colspan="3">Extraction of Sand, Stone & Bajri by Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher</td></tr>
<tr><td>Type of project</td><td colspan="3">Mining of Minor Minerals i.e. Sand, Stone and Bajri.</td></tr>
<tr><td>Location</td><td colspan="3">Khasra Nos. 722/1, Mohal Maira Batrah, Mauza Maira Domal, Tehsil Nurpur, District Kangra, Himachal Pradesh.</td></tr>
<tr><td>Lease Area Co-ordinates</td><td colspan="3"><table><tr><th>Pillar No.</th><th>Latitude</th><th>Longitude</th></tr><tr><td>P1</td><td>32°20'23.11"N</td><td>75°48'40.62"E</td></tr><tr><td>P2</td><td>32°20'23.61"N</td><td>75°48'46.34"E</td></tr><tr><td>P3</td><td>32°20'15.19"N</td><td>75°48'46.63"E</td></tr><tr><td>P4</td><td>32°20'13.51"N</td><td>75°48'45.40"E</td></tr></table></td></tr>
<tr><td>Elevation (Altitude at origin)</td><td colspan="3">Highest 464 meters above MSL.
Lowest 463 meters above MSL.</td></tr>
<tr><td>River/Khad</td><td colspan="3">Chakki River</td></tr>
</table>

Width of river at the mining site	400- 480 m.
Total Lease Area	02-49-20 Ha
Mining Area	02-34-00 Ha
Products	Sand, Stone and Bajri
Production Capacity	Approx. 1,05,300 MT/year or 5,26,500 MT over a period of five years (including silt/clay)
Waste (Silt/Clay)	Approx. 15795 MT/year or 78975 MT over a period of five years
Manpower	95 persons
Water Requirement	10.00 KLD
Source of Water	Through tankers (Permission for the same has been taken from Gram Panchayat)
Cost Details	
Cost of project	Rs. 25 lacs.
Cost of EMP	Rs. 21.5 lacs. (Capital) Rs. 3.8 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 10 km radius	None
Nearest highway	NH-154 (10.0 Km)/ Link Road (500m.)
Nearest railhead/Railway station	Pathankot Railway station (17.00 Km)
Nearest airport	Pathankot Airport (20.0 km)
Nearest Major City	Nurpur (15.0 Km)
Nearest Major Settlement	Nurpur (15.0 Km)

3.0 PROJECT DESCRIPTION:

The project involves open-cast mining of sand, stone, and bajri from a 02-49-20 hectare riverbed area, with an estimated annual production of 1,05,300 metric tons. The mining method will be semi-mechanized, and the project will generate employment opportunities for local people. Environmental management measures will be implemented to minimize the impact on the surrounding ecosystem. Details of the production during the five-year period are given below: Details of the production during the five-year period are given below:

Showing year-wise production programme of mining in mineable area

Year	Quantity of Boulders in MT	Quantity of Bajri in MT	Quantity of Sand in MT	Quantity of Silt/Clay in MT	Total Quantity of Mineral Deposit
	40%	25%	20%	15%	
1st year	42120	26325	21060	15795	105300
2nd year	42120	26325	21060	15795	105300
3rd year	42120	26325	21060	15795	105300
4th year	42120	26325	21060	15795	105300
5th year	42120	26325	21060	15795	105300
Total	**210600**	**131625**	**105300**	**78975**	**5,26,500**

The mining will be restricted to 2.0 m depth with natural replenishment of the riverbed expected 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 10.00 KLD and the manpower requirement is 95 persons. Necessary site facilities, including shelter, water supply, electricity, and sanitation, will be provided. Additionally, there are no pending litigations against the project.

4.0 DESCRIPTION OF ENVIRONMENT:

The baseline data in respect of environmental components: Air, Soil, Noise, Water, Ecology & Biodiversity has been collected for pre -monsoon season from March – May 2025. 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 78.9 ug/m^3 for PM10 was observed at Project site and the minimum value of 62.0 ug/m^3 is observed at locations i.e. Khanni Uparli, Dumal Kaila and Chaugan. • The maximum value of 42.9 ug/m^3 for PM 2.5 was observed at Project Site & minimum of 363 ug/m^3 at Maira Batrah. • In respect of SO_2, the maximum concentration of 6.6 ug/m^3 was observed at Project Site & minimum of 6.0 ug/m^3 at Khanni Uparli, Maira Batrah and Chaugan. • The maximum concentration of NO_2, measuring 15.4 µg/m^3, was recorded at the Project Site, whereas a uniform minimum concentration of 10.0 µg/m^3 was observed across all six other monitoring locations. • The maximum concentration of CO_2, measuring 0.58 µg/m^3, was recorded at the Project Site, whereas a minimum concentration of 0.50 µg/m^3 was observed at Khanni Uparli. • The maximum concentration of ozone (O_3), measured at 26.6 µg/m^3, was observed at Maira Batrah, whereas a uniform minimum concentration of 20.1 µg/m^3 was recorded at Project Site.
Noise Levels	• Of the eight-noise monitoring locations, maximum day time noise of 66.4 dB (A) was observed at project site and minimum 52.3 dB (A) at Narainpur. • For night time noise levels, the maximum of 36.5 dB (A) was observed at Chaugan & the minimum of 33.3 dB (A) at Narainpur and Galor Khas.
Water Quality	***Ground water*** The monitoring was done at 8 locations. • The pH varied from 7.28 – 7.58. • Total hardness ranged from 335to 385 mg/L. • TDS ranged from 350 to 395 mg/L. • Fluoride and Nitrate was not detected.

	Surface water (Chakki River) Surface water was analyzed at one location for upstream & downstream quality. • pH varies from 7.27 to 7.25. • Total hardness ranged from 110 to 120 mg/L. • TDS varied from 138 to 132 mg/L. • Fecal Coliform was observed in the range 22.0 to 52.0 MPN/100 ml. • Total Coliform ranged from 42 to 92 MPN/100 ml. • COD varied from 10.0 to 12.0 mg/L. • BOD was less than 2 mg/L.
Soil Quality	***Soil was analyzed for 8 locations.*** • pH varied from 7.58 to 7.29. • EC was observed maximum at 290 µmhos/cm and minimum 242 µmhos/cm. • Organic matter ranged from 0.65 to 0.50 %. • Measured conc. in respect of N, P was moderate while K was low at all the locations.

4.1 BIOLOGICAL ENVIRONMENT:

The biological environment in the study area has been assessed through site observations and secondary data. The plant species observed are common and widely distributed, indicating a relatively typical ecosystem in the region. The area features healthy vegetation, primarily comprising forests and agricultural land. Notably, there are no Reserved or Protected Forests, National Parks, or Wildlife Sanctuaries nearby (the closest being over 40 km away). Additionally, the study found no Rare, Endangered, or Threatened (RET) species among the local flora.

4.2 SOCIO ECONOMIC ENVIRONMENT:

The socio-economic study encompasses the analysis of socio-economic conditions of habitation and communities living in the study area in addition to the potential issues & concerns of study area. In this regard, the view of stakeholders was invested through focused group discussions and questionnaire. The study involves the collection of baseline data including demographic details such as households, population literacy, employment pattern, health, transportation, communication & welfare facilities such as educational, recreational, hospitals and project awareness amongst the stakeholder. In addition, the economic resources, infrastructure facilities, communication, and aesthetic attributes are also considered in

the study as per the requirements under the Ministry MoEF&CC.

5.0 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 near the mining lease area.
  - Masks as PPE will be provided to workers.
  - Water sprinkling on mining site and on the haul roads will be done as and 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 2.0 m or the water table whichever comes first.
  - Mining activities will be conducted on the dry riverbed, and sedimentation ponds will be constructed to prevent surface water contamination.
  - Runoff from the mining area will be managed through diversion channels and sedimentation ponds to minimize the risk of surface water contamination.
  - Regular monitoring of surface water quality will be conducted to detect any potential

contamination and implement corrective measures.

- **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:

- The mining approach involves extracting the entire block annually, without creating pits. This method allows the area to replenish naturally through successive monsoon seasons, minimizing long-term impacts on the land environment and riverbed topography.
- 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.

- **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 will be involved in mining.

Anticipated impacts: The main source of noise will be vehicular movement & negligible noise is generated by manual mining using hand tools. The mining activity itself is not expected to significantly impact the noise environment. However, noise generation from transportation of materials by trucks may cause some impact.

Mitigation measures:

- Regular vehicle maintenance and adherence to noise regulations.
- Blowing of horns will be prohibited.
- Implement speed limits for trucks to reduce noise generation.
- Plan transportation routes to minimize noise exposure to nearby communities.
- Workers will be educated regarding health hazards of noise, permissible noise levels and PPE's.

- **Ecological & biodiversity:** No effluent will be generated from the process and the air emissions are negligible. These effects are short-lived. Hence, no significant impacts will be there.

Mitigation measures:

- No tree cutting will be done during mining.

- Ensuring mining activities don't disrupt wildlife movement.
- Regular monitoring of local species populations.
- Conducting surveys to identify and protect sensitive species.
- Plantation will be done around/near the mining lease area.

Socio-economic:

Anticipated impacts:

- The project will generate employment opportunities for around 90-95 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: During mining operation, low- grade mineral like silt/clay as mine waste are likely to be generated. Since the mining lease area is forming part of river bed, so there is no possibility of presence of any top soil.

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.

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.

6.0 WASTE MANAGEMENT:

During mining operation, an approx. 15795 MT/Annum of low- grade mineral like silt/clay are likely to be generated as mine waste. Since the mining lease area is forming part of river bed, so there is no possibility of presence of any top soil. The extracted minor minerals will be utilized in the existing stone

crusher unit to manufacture grit and mineral sand and will be partly utilized for maintenance of road works & plantation.

7.0 ACCESSIBILITY OF TRANSPORT UPTO MINING SITE:

The proposed mining site is located at a distance of approx. 17 km from Nurpur and can be approached by Nurpur- Pathankot Road i.e. NH-20 up to Nagabari and thereafter by Nagabari- Maira Batrah Hadal link road up to Maira and the last spell of approx. 1 km can be approached through an unmetalled road developed on the Nallah and bed of Chakki bed.

8.0 PLANTATION:

As the maximum part of the area lies within the HFL of the river and is flooded during the rainy season, therefore, it is not suitable land for the growth of any plantation or grassing etc. Therefore, plantation of species such as Vetiver grass, Bamboo & Poplar will be done on their own suitable land (Khasra No. 47, measuring 3.5311 Ha) near the mining site. Specifically, 0.5 Ha of this land will be utilized for plantation, in addition to existing plantations already undertaken there. The total cost of plantation including its maintenance will be approx. Rs.12,00,000/-. The cost includes cost of plants, minerable and other labour activities. The estimated survival rate proposed ***to be achieved shall be 80%.***

9.0 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.

10.0 ENVIRONMENTAL MANAGEMENT PLAN:

No major environmental impacts are anticipated 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 Rs. 21.5 Lakhs as capital cost and Rs. 3.8 Lakhs 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.

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.

DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT

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 namely ***Extraction of Sand, Stone and Bajri by Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher.***

1.2 CATEGORY OF THE PROJECT:

As per amended MoEF&CC notification 2006 and its subsequent amendments, the lease area have been categorized as 'B1' and its 'EC' lies with State Level Environmental Impact Assessment Authority, Shimla (H.P).

1.3 IDENTIFICATION OF THE PROJECT & PROJECT PROPONENT:

1.3.1 IDENTIFICATION OF THE PROJECT:

The mining lease area is a private land situated in the Chakki Khad, a tributary of the Beas River near Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh. The land is classified as Gair Mumkin Khad as per Revenue records.

1.4 PROJECT PROPONENT:

M/s New Shiva Stone Crusher, under the partnership of Sh. Dharambir Singh, is dedicated to sustainable and eco-friendly operations, prioritizing environmental protection and minimizing harm to the surrounding ecosystem.

1.5 LEGAL PROVISION:

The proponent has all the legal documents and competent to follow all the rules and regulations and stipulated conditions for those numerous documents which has been granted from the requisite departments such as letter of intent has been issued by the requisite authority.

1.6 BRIEF DESCRIPTION:

1.6.1 NATURE OF THE PROJECT:

The mining lease area is situated in the Chakki Khad, a tributary of the Beas River which contains boulders, sand, bajri and silt/clay. The rocks along the bank belong to quaternary formation consisting of boulders. 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 lease 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:

The proposed project involves riverbed mining for sand, stone, and bajri over an area of approximately 02-49-20 hectares. The project is planned for a duration of five years, with an estimated total production of 5,26,500 metric tons (including waste). The mining activities are expected to generate mine waste, which will be managed accordingly.

1.6.3 LOCATION OF THE PROJECT:

The mining site is located in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, H.P. The site can be approached by a link road originating from a place known as Naga bari on the Pathankot-Mandi NH 154.The site is located at the distance of 10 KM from the Naga Bari village. The highest point of the applied mining lease area is 464 meters above MSL and the lowest point is 463 meters above MSL. The details for the same given in table 1.1.

- ***Figure 1.1 & 1.2 shows the location map of the site. Figure 1.3 shows the approach road to the mining area.***

Table 1.1

Revenue Details of the Applied Mining Lease Area

Khasra Number	722/1
Area in Hectares	02-49-20
Mauza & Mohal	Maira Dhoomal/ Maira Batrah
Owner	Private Land
Kism	Gair Mumkin Khad
Name of the Panchayat	Haddal

1.6.4 DETAIL OF ROAD TRANSPORT:

The mining site is located in the river bed of Chakki Khad near the village Maira Bartrah and there is very low to no traffic from the mining lease area to the stone crusher site. 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 extracted mineral material will be transported to the stone crusher site located at a distance of 1.0 kms from the mining site. The main connectivity of this site is from a link road originating from a place known as Naga bari on the Pathankot-Mandi NH 154. The average rate of production of mineral proposed per annum of various constituents of river bed like sand, stone and bajri and silt/clay is around 105300 metric tonnes/year. Taking into consideration, 270 working days in a year, roughly 390 MT mineral will be produced per day for which about 25 trucks of 15 metric tons' capacity would be used to carry the finished product.

Figure – 1.1

Location Map (From India Map to Local Map)

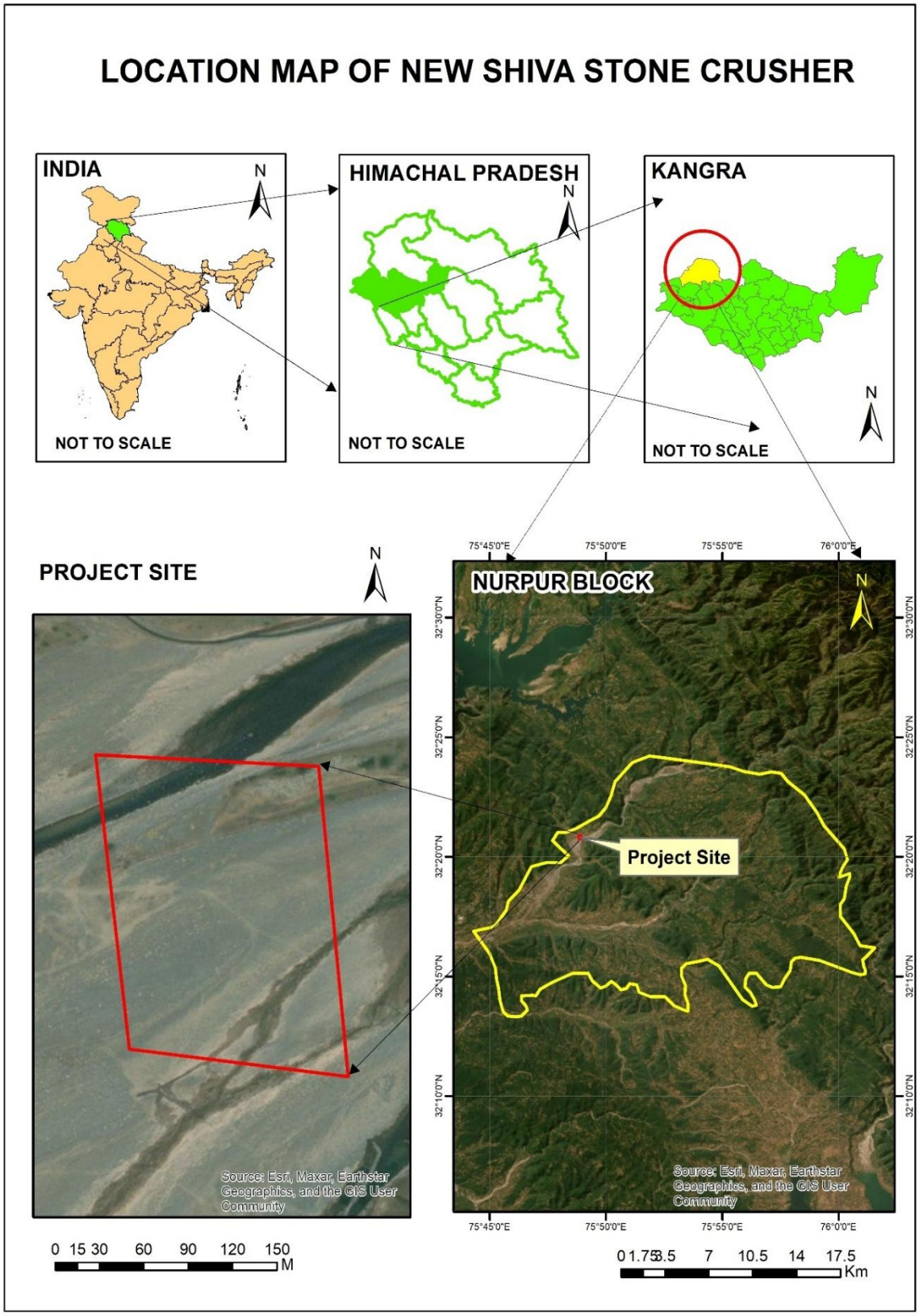
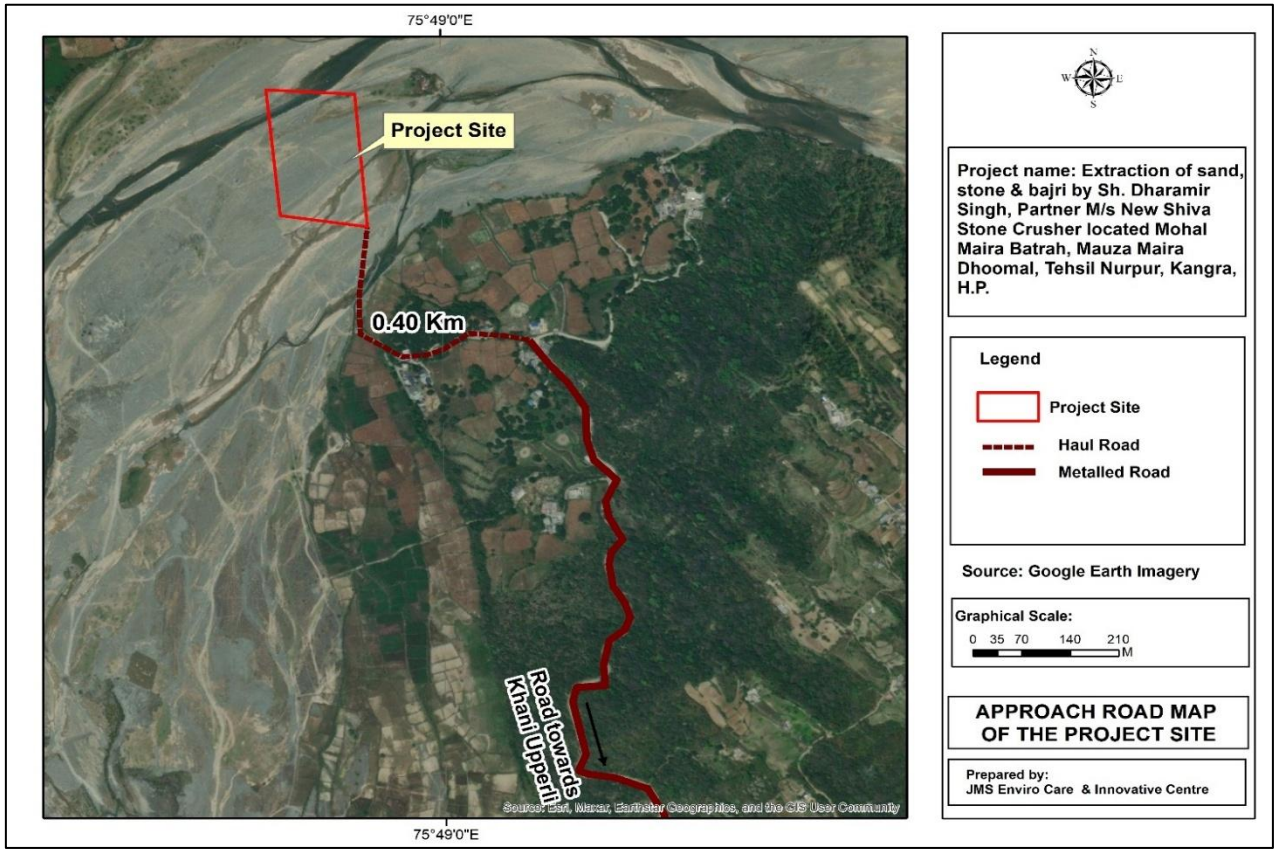


Figure 1.2

Google Earth Map of Mining Area

Figure 1.3

Map showing the Approach Road to the Mining Area



The mining site is located at a distance of approx 17 km from Nurpur and can be approached by Nurpur- Pathankot Road i.e. NH-20 up to Nagabari and therafter by Nagabari- Maira Batrah Hadal link road up to Maira and the last spell of approx. 1 km can be approached through an unmetalled road developed on the Nallah and bed of Chakki bed.

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 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.
- 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 mine lease area is the part of River-bed. Due to rapid infrastructure development in India, the demand of construction material has increased. The operation of project will provide demand & increased employment to the surrounding people, thereby improving the socio-economic status of the area.

- ***Demand and Supply:*** The demand of this basic material is fast growing due to boost in the infrastructure of country. The minerals are used mainly in the construction activities like

buildings, bridges etc. The requirement for the mineral is always high in the nearby cities and towns. There is therefore, a good demand of mineral in the domestic market.

- ***Domestic/ Export market:*** The demand of Stone is limited to local domestic market and it has no potential for export.
- ***Export possibility***: There is no proposal for the export of mined minerals as the same will cater to the indigenous demand which is increasing each passing day.

CHAPTER-2.0

PROJECT DESCRIPTION

2.1 GENERAL:

Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher has proposed a new project of non-coal mining for obtaining E.C. from the concerned authority having production capacity of 1,05,300 MT/Annum. According to EIA notification and subsequent amendments, it is a 'B2 Category' project of serial no. 1(a) 'Mining of Minerals' of EIA notification. However, due to cluster formation (Around 3 mining lease area existing within the 500m radius of the project site) the project is categorized as 'Cat. B1'; certificate for the same has been attached as Annexure IV. The project proposal is for mining of minor minerals in the river bed measuring 02-49-20 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.

2.2 YEAR WISE PRODUCTION PROGRAMME:

The reserve of all the constituents of river borne material have been calculated for the mineable area of 02-49-20 Ha. 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 sand, stone & bajri from first to fifth year are given in table 2.1 below:

Table: - 2.1

Showing year-wise production programme of mining in mineable area

Year	Quantity of Boulders in MT	Quantity of Bajri in MT	Quantity of Sand in MT	Quantity of Silt/Clay in MT	Total Quantity of Mineral Deposit
	40%	25%	20%	15%	
1st year	42120	26325	21060	15795	105300
2nd year	42120	26325	21060	15795	105300
3rd year	42120	26325	21060	15795	105300
4th year	42120	26325	21060	15795	105300
5th year	42120	26325	21060	15795	105300
Total	**210600**	**131625**	**105300**	**78975**	**5,26,500**

Thus, during five-year total production of minerals shall be ***5,26,500 metric tons***

2.3 DEVELOPMENT AND PRODUCTION:

The mining lease area lies in the riverbed of Chakki River which gets adequately replenished during monsoon as well as during winter rains when the river gets heavy load for a short period. The river level is raised upto 1.5 to 2.0 meters sometimes even during the non-rainy season. The mining has been planned in the full block up to a depth of 2.00 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 area and the worked-out area shall be fully replenished. Geological plan for the same given as figure 2.1.

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

- Mining is proposed in river bed of Chakki River.
- 42120 metric tons of boulders, 26325 metric tons of bajri and 21060 metric tons of sand will be produced.
- 15795 metric tons of silt & clay will be generated as waste.
- Hence, no topsoil is generated.

The production of mineral constituent is as under and mine waste during first year shown in table 2.2: -

Table: 2.2

Production of minerals and mine waste during first year in metric tonnes

Duration	Boulder	Bajri	Sand	Clay/Slit	Total
First year	42120	26325	21060	15795	**105300**

2.3.2 DEVELOPMENT AND PRODUCTION AT THE END OF 2nd YEAR:

- 42120 metric tons of boulders, 26352 metric tons of bajri and 21060 metric tons of sand will be produced.
- 15795 metric tons of silt & clay will be generated as waste.
- No top soil will be generated.

The production of mineral and mine waste during second year is shown in table 2.3: -

Table: 2.3

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

Duration	Boulder	Bajri	Sand	Clay/Slit	Total
Second year	42120	26325	21060	15795	**105300**

2.3.3 DEVELOPMENT AND PRODUCTION AT END OF 3rd YEAR:

- 42120 metric tons of boulders, 26325 metric tons of bajri and 21060 metric tons of sand will be produced.
- 15795 metric tons of silt & clay will be generated as waste.
- No top soil will be generated.

The production of mineral and mine waste during third year in metric is shown in table 2.4: -

Table: 2.4

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

Duration	Boulder	Bajri	Sand	Clay/Slit	Total
Third year	42120	26325	21060	15795	**105300**

2.3.4 DEVELOPMENT AND PRODUCTION AT END OF 4th YEAR.

- 42120 metric tons of boulders, 26325 metric tons of bajri and 21060 metric tons of sand will be produced.
- 15795 metric tons of silt & clay will be generated as waste.
- No top soil will be generated.

The production of mineral and mine waste during fourth year is shown in table 2.5: -

Table: 2.5

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

Duration	Boulder	Bajri	Sand	Clay/Slit	Total
Fourth year	42120	26325	21060	15795	**105300**

2.3.5 DEVELOPMENT AND PRODUCTION AT END OF 5th YEAR:

- 42120 metric tons of boulders, 26325 metric tons of bajri and 21060 metric tons of sand will be produced.
- 15795 metric tons of silt & clay will be generated as waste.
- No top soil will be generated.

The production of mineral and mine waste during fifth year is shown in table 2.6: -

Table: 2.6

Production of mineral and mine waste during fifth year in metric tonnes

Duration	Boulder	Bajri	Sand	Clay/Slit	Total
Fifth year	42120	26325	21060	15795	**105300**

2.4 END USE OF MINERAL:

The stone and bajri will be used in the already established stone crusher unit after screening/ washing, the stone and bajri will be used for the manufacturing of grit and M-sand and the sand will be sold in the open market.

2.5 GEOLOGY:

The geology of the catchment Area:

The rock of the Chakki Khad catchment comprises the Siwalik Group. The Siwalik Group mainly represents the rocks of the district and also of catchment area. In addition to this at few places the newer alluvium of Quaternary age is also present. In the advent of Neocene, a depression was formed in front of the rising mountains (Prto-Himalaya). This depression becomes a repository of a thick sequence of the molasses sediments of the Siwalik Group comprising conglomerates in general are poorly cemented but at places they are very hard. These consist mainly of pebbles and cobbles of quartzite, the stray pebbles of granite, limestone, sandstone, breccias and lumps of clay stone are also observed at places. Often the size of pebbles is large enough to be called as boulders. The conglomerates not only occur as regular band but also as lenticular bands alternate with micaceous sandstone and clay beds. The sediments were bough down 2 to 25 million years ago by the numerous fast flowing rivers issuing forth from rapidly rising mountain mass of the Himalaya in the north. The Siwalik Group is divisible into three sub-groups respectively the lower, Middle and upper on the basis of the litho-Stratigraphy.

Siwalik Group

The Siwalik Group in the Himachal Himalaya forms a parallel foot-hill belt in the Sub- Himalayan zone, extending along the southern margin of the Paleogene Sirmur Group belt from the Ravi to the Yamuna and forms part of the larger Sub- Himalayan mega belt extending from Potwar basin in NW to the Arunachal foot-hill in SE. In the Himachal Himalaya it has maximum width between Hoshiarpur and Joginder Nagar. The Siwalik sediments through occurring as an independent structural belt, are also seen to overlie the Muree in the Jammu Sector of the Kashmir Himalayan and the Kasauli in the Himachal Himalayan Pilgrim (1910) recorded a gradual transition from Muree beds to Lower Siwalik in the Rawalpindi and Jhelum districts of Pakistan and from Kasauli to Lower siwalik (Nahan) in the Himachal Himalaya. This fact

assumes importance because there is a tendency to ignore this normal relationship between the Siwalik and Sirmour Groups at Dharamshala, Sarkaghat and Nalagarh.

At Hari Talyangar near Bilaspur, the Lower Siwalik is seen resting on the Dagshai with an unconformity, which is described as the most striking discordance in the whole sequences of freshwater deposits and evidently representing a period of considerable earth movements (Pascoe, 1964).

The Siwalik Group is divisible into three subgroups respectively the Lower, Middle and Upper on the basis of lithostratigraphy.

Lower Siwalik Subgroup

The lower Siwalik consists essentially of a sandstone-clay alternation. In district Kangra the lower sequence of the lower Siwalik consists of medium grained subgraywacke interbedded with thick red clay, but higher up in sequence, sandstones are coarser and clasts become more frequent while the clays are less developed. The uppermost horizon consists of conglomerate with well-rounded clasts of grey quartzite possible derived from the Shale. The total thickness is about1600 Meters.

Middle Siwalik Subgroup

The Middle Siwalik Sub group comprises of large thickness of coarse micaceous sandstone along with some inter-beds of earthy clay and conglomerate. It normally succeeds the Lower Siwahik along a gradational contact. The sandstone is less sorted than those in Lower Siwalik. Clay bends are dull coloured and silty. The general thickness is 1400 to 2000 Meters.

Upper Siwalik Subgroup

The upper Siwalik subgroup can be easily separated from the underlying Middle Siwalik on the basis of a distinct lithological change.In the Kangra district, where the Middle Siwalik is overlain by massive conglomerats of Upper Siwalik, the conglomerates contain clasts of basic volcanic rocks of the Mandi-Darla volcanic with a very transitional zone between them which may even suggest a local break between Middle and upper Siwalik.The Siwalik sediments were primarily derived from the rising Himalayan front. The stages of elevation in the Himalayan provenance are reflected in the composition of the sediments and the size of the grains. Among the rock fragments in the Siwalik basin, sedimentary rock makes up the bulk.

Lithostratigraphy of Siwalik System in Kangra District.

Group			Lithology	Age
Newer Alluvium			Sand, silt, gravel and Pebbles	Quatenary
Siwalik Group	Upper Siwalik	B	Predominantly massive conglomerate with red and orange clay as matrix and minor sandstone and earthy buff and brown calystone	Neogene
		A	Sandstone, clay and conglomerate alternation	
	Middle Siwalik	B	Massive Sandstone with minor conglomerate and local variegated claystone	
		A	Predominantly medium to coarse-grained sandstone and red clay alternation, soft pebbly with subordinate claystone, locally thick prism of conglomerate	
	Lower Siwalik	B	Alternation of fine to medium-grained sporadically pebbly sandstone, calcareous cement and prominent chocolate and medium maroon claystone in the middle part	
		A	Red and mauve claystone with thin intercalations of medium to fine grained sandstone	

Source- District Survey Report, Kangra

2.6 GEOLOGY OF THE PROJECT SITE:

As the mining site is a part of riverbed of Chakki River near the village Maira Batrah 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 sediments 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 manufacturing of angular grit.

2.6.1. 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. The area is fully replenished by sediments transport during periods of higher flows i.e. during the monsoon/rainy seasons. Hence, it has been observed that the replenishment factor is 100% of the material excavated during the year. Therefore, the material excavated up to one-meter depth shall be replenished during the rainy/monsoon season.

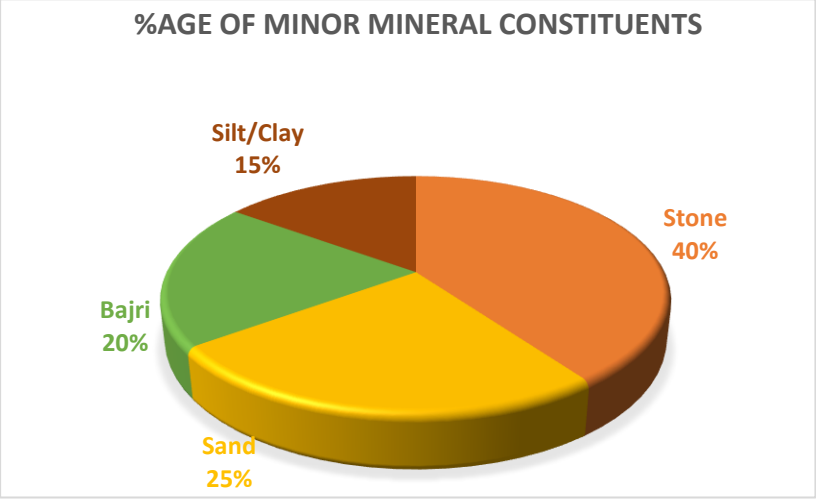
2.7 RESERVES ESTIMATE:

2.7.1 Percentage wise Distribution of stone, gravel & sand etc.

The different constituents of river borne deposits such as boulder, bajri, band 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 estimated percentage wise distributions of each constituent is given in the Figure2.1.

Figure 2.1

Showing %age of minor mineral constituents



2.7.2 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 I&PH department respectively, the average depth of sediments in and around the Mining Area is less than 2.0 meters. However, for calculation

of Geological reserves, the depth has been taken upto 2.0 meters. The geological reserves are shown in table 2.7 below:

Table: 2.7

Showing Geological Reserves in metric tonnes

Area (in Ha)	Specific gravity	Depth (in meters)	Availability of Mineral (in MT)
02-49-20	2.25	2.0	263250 MT

2.7.3 ESTIMATE OF MINEABLE RESERVES OF EACH MINERAL:

Mineable reserves were computed in the lease area up to a depth of 2.0 meter in accordance with the provisions made under Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Fifth Amendment Rules, 2024. As a safety measure for the nearby area, a buffer zone of 5.0 meters is maintained from the mining lease boundary's edge. Hence, the available mining area is about 23400 sqm. The mineable reserves are shown in table 2.8:

Table: 2.8

Showing Mineable Reserves in metric tonnes

Area applied for mining lease (in Ha)	Boulder (in MT)	Bajri (in MT)	Sand (in MT)	Clay/Silt (in MT)	Total Mineral Resource (in MT)
02-49-20	42120	26325	21060	15795	105300

2.8 RECLAMATION PLAN:

The mined area being part of the river course cannot be reclaimed for any other purpose. The mining depth will be up to 2.0 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.

2.9 WASTE GENERATION:

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 silt will be utilized constructively for various purposes, including approach road construction, road filling, and as granular sub-base material for road works. Additionally,

some of the material will be used to support plantation activities. The year wise generation of silt/clay is shown in the following table 2.9

Table: - 2.9

Showing Year wise generation of silt and clay

Year	Mine waste (MT)
1st year	15795
2nd year	15795
3rd year	15795
4th year	15795
5th year	15795
Total	**78975**

2.10 TOP SOIL 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.

2.11 PREVENTIVE RETAINING STRUCTURES:

As the whole of the mining lease area lies within the HFL of Chakki Khad, no retaining structures can be constructed.

2.12 PLANTATION WORK:

As the maximum part of the area lies within the HFL of the river and is flooded during the rainy season, therefore, it is not suitable land for the growth of any plantation or grassing etc. Therefore, plantation will be done on their own suitable land (Khasra No. 47, measuring 3.5311 Ha) near the mining site. Specifically, 0.5 Ha of this land will be utilized for plantation, in addition to existing plantations already undertaken there. The estimated year-wise area proposed for plantation along with number of trees to be planted is shown in table 2.10 & species to be planted is shown in table 2.11.

Table: 2.10

Details of Year wise Plantation

Year	Area to be covered (in Sq. meter)	Number of trees to be planted
First	1000	240
Second	1000	240
Third	1000	240
Fourth	1000	240
Fifth	1000	240
Total	**5000**	**1200**

Table: 2.11

Species to be planted

Common name	Botanical name	Family	Habitat
Vetiver grass	*Chrysopogon zizanioides*	Poaceace	Shrubs
Bamboo	*Bambusoideae sp.*	Poaceace	Tree
Poplar	*Populus ciliata*	Salicaceae	Tree

The total cost of plantation including its maintenance will be approx. Rs.12,00,000/-. The cost includes cost of plants, minerable and other labour activities. The estimated survival rate proposed ***to be achieved shall be 80%.***

2.13 MANPOWER REQUIREMENT:

The project is expected to generate employment opportunities for approximately 95 individuals, primarily locals, who will be engaged in the day-to-day operations of the project. The details of the employment opportunities are outlined in Table 2.12.

Table: 2.12

Manpower Details

CATEGORY	NUMBERS
Mining Engineer	01
Geologist	01
Foreman	01
Operators/ Drivers	20
Labors	72
Total	**95**

2.14 CONSIDERATIONS DURING MINING: Following are the considerations to be considered while carrying out mining operations:

- The mining operation will be carried out using open-cast manual mining method, with a maximum depth of 2.0 meters.
- To facilitate natural replenishment, mining will be done on a rotational basis, where previously mined pits will act as deposition sites during the post-monsoon season.
- No blasting will be involved.

- The method of mining will be manual. No mechanical work/ JCB allowed in the mining lease area.
- Natural course of river shall not be disturbed & especially step shall be taken to control the soil erosion.
- Water sprinkling shall be carried out on approach road and proper covered material during the transport from mining area.
- The mining operations in the lease area are confined to day light hours, from 10:00 A.M. to 6:00 P.M.
- The material will sorted manually at mining site and sand is separated from stone and bajri.
- The sorted stone and bajri will be then loaded into tipper trucks / tractor trolleys by shovels and pans and mechanically and transported to already established crusher.

2.15 WATER REQUIREMENT:

Total amount of water required for the project is 10.0 KLD. Affidavit of water is attached as Annexure in checklist. The water requirement for different purposes is shown in table 2.13 below:

Table- 2.13

Water requirement

Sr. no.	Purpose	Requirement (in KLD)	Source
1.	**Dust suppression**	3.0	Will be sourced through tankers) Permission has been obtained from the Gram Panchayat for the supply of water, attached as Annexure- VIII (a).
2.	**Domestic**	4.0	
3.	**Greenbelt development**	3.0	
Total water requirement		**10.0**	

2.16 POWER REQUIREMENT:

No electrical power shall be required for operations as the mining will be worked out during day time only.

Figure-2.2

Geological Plan

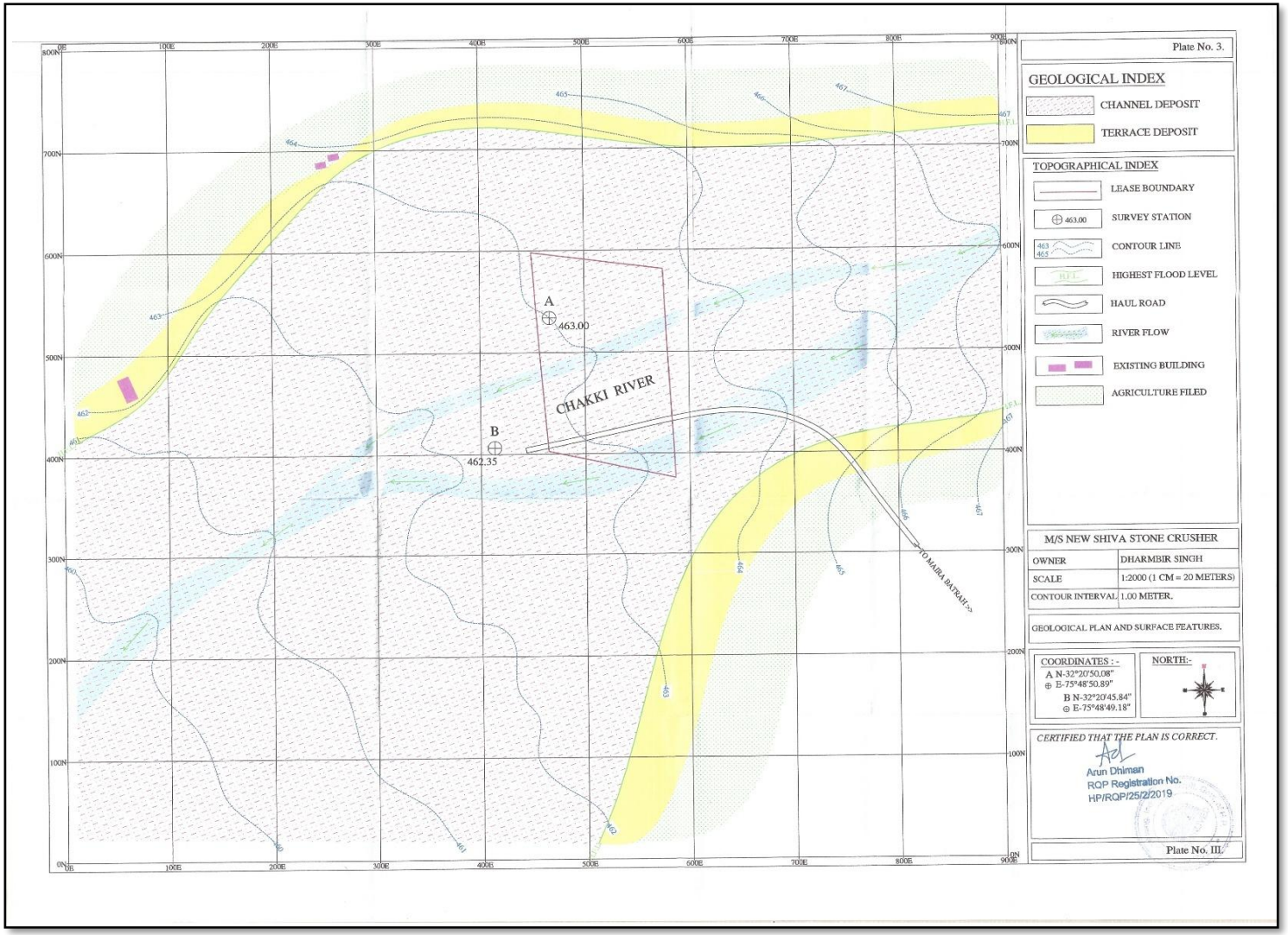


Figure- 2.3

Pit Plan For 1st To 5th Year

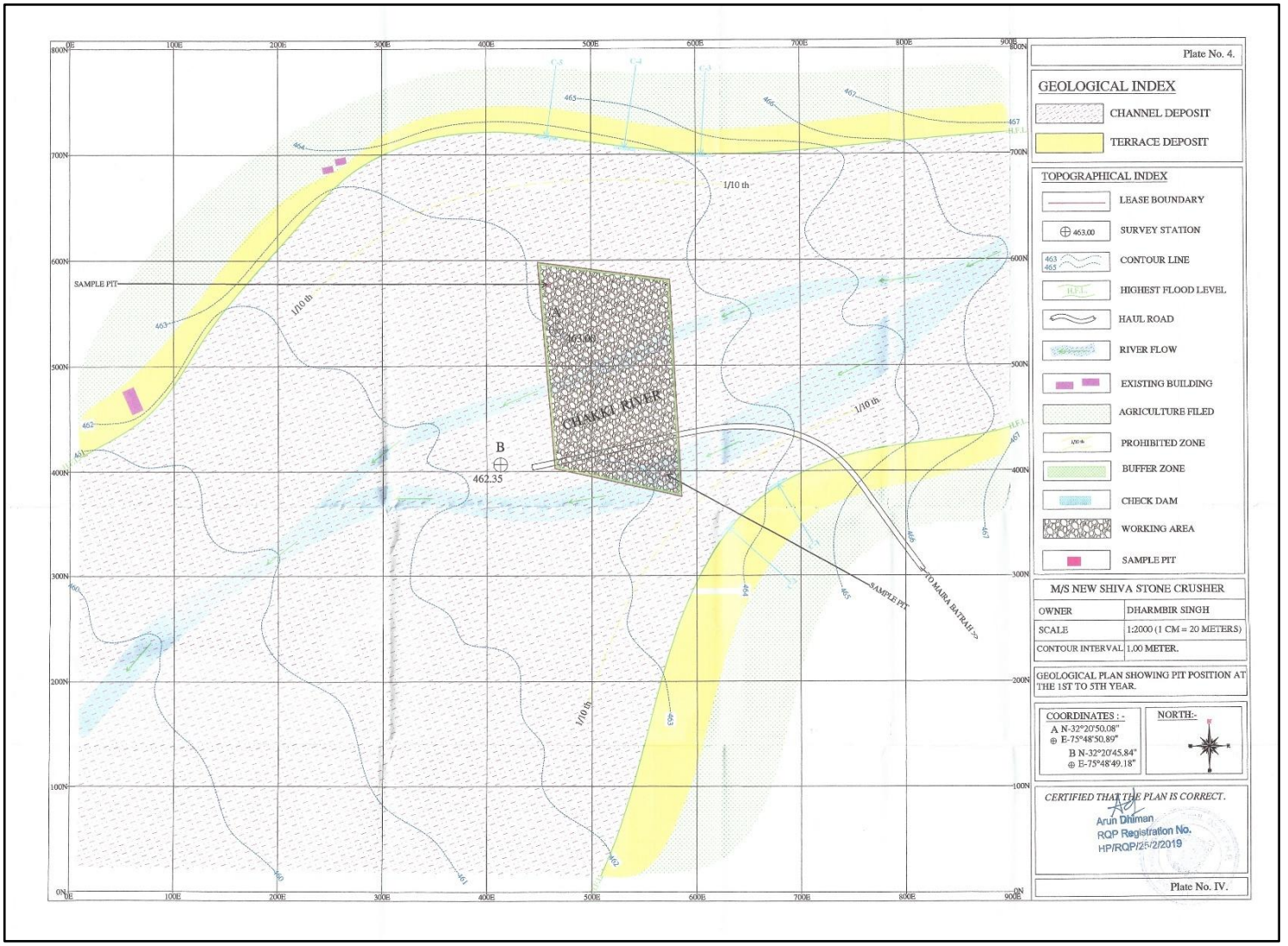


Figure 2.4

Cross section map- Across the mining area

Figure 2.5

Cross Section Map- Along the Mining Area

CHAPTER-3.0
BASELINE SETTINGS

3.1 THE STATE:

Himachal Pradesh having world's mightiest mountain ranges is one of the hilly States situated in the Northernpart 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 beautifulscenic sites which are real treat to the eyes. Kullu and Kangra valleys offer natural beauty which is no less than Kashmir Valley.

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 big reserve 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.

3.2 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.

3.3 PROJECT SITE:

The mining site is located in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, H.P. The site can be approached by a link road originating from a place known as Naga bari on the Pathankot-Mandi NH 154.The site is located at the distance of 10 KM from the Naga Bari village. Thereafter by Nagabari- Maira- Batrah- Haddal link road upto Maira and the last spell of about approximately 1.0 km can be approached through an unmetalled road developed on the nallah and Chakki River bed. The local town Nurpur/Jassur and Pathankot is about 20 and 30 kms from the site respectively. The highest point of the applied mining lease area is 464 meters above MSL and the lowest point is 463 meters above MSL.

- ***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>Mohal/Mauza</td><td>Maira Batrah/ Maira Doomal</td></tr>
<tr><td>b)</td><td>Tehsil</td><td>Nurpur</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>2.</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>32°20'23.11"N</td><td>75°48'40.62"E</td></tr>
<tr><td>P2</td><td>32°20'23.61"N</td><td>75°48'46.34"E</td></tr>
<tr><td>P3</td><td>32°20'15.19"N</td><td>75°48'46.63"E</td></tr>
<tr><td>P4</td><td>32°20'13.51"N</td><td>75°48'45.40"E</td></tr>
</table>
</td></tr>
<tr><td>3.</td><td>Elevation</td><td>The highest point of the project site is 464 meters above MSL and the lowest point is 463 meters above MSL.</td></tr>
<tr><td>4.</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>205 cm approx.</td></tr>
<tr><td>iii.</td><td>Relative Humidity, % (average annually)</td><td>Summer 55%, Monsoon 99%. Winter 84%</td></tr>
<tr><td>iv.</td><td>Wind speed, Kms/hour</td><td>05-10 Km (approx.)</td></tr>
<tr><td>5.</td><td>Nearest Highway/ Road</td><td>NH-154 (10.0 Km)/ Link Road (1000m.)</td></tr>
<tr><td>6.</td><td>Nearest railhead/ Railway station</td><td>Pathankot Railway station (17.0 Km)</td></tr>
<tr><td>7.</td><td>Nearest airport</td><td>Pathankot Airport (20.0 km)</td></tr>
<tr><td>8.</td><td>Nearest Major City</td><td>Nurpur (7.0 Km)</td></tr>
<tr><td colspan="3">Features within 10 kms</td></tr>
<tr><td>i.</td><td>Archaeological important places.</td><td>Nil</td></tr>
<tr><td>ii.</td><td>Wild life/ Elephant & Tiger pl sanctuaries</td><td>Nil</td></tr>
<tr><td>iii.</td><td>Industries</td><td>Nil</td></tr>
<tr><td>iv.</td><td>State boundary</td><td>Punjab</td></tr>
<tr><td>v.</td><td>Mining type</td><td>River bed of Chakki Khad.</td></tr>
</table>

Figure- 3.1

Google Map showing 10 km buffer area

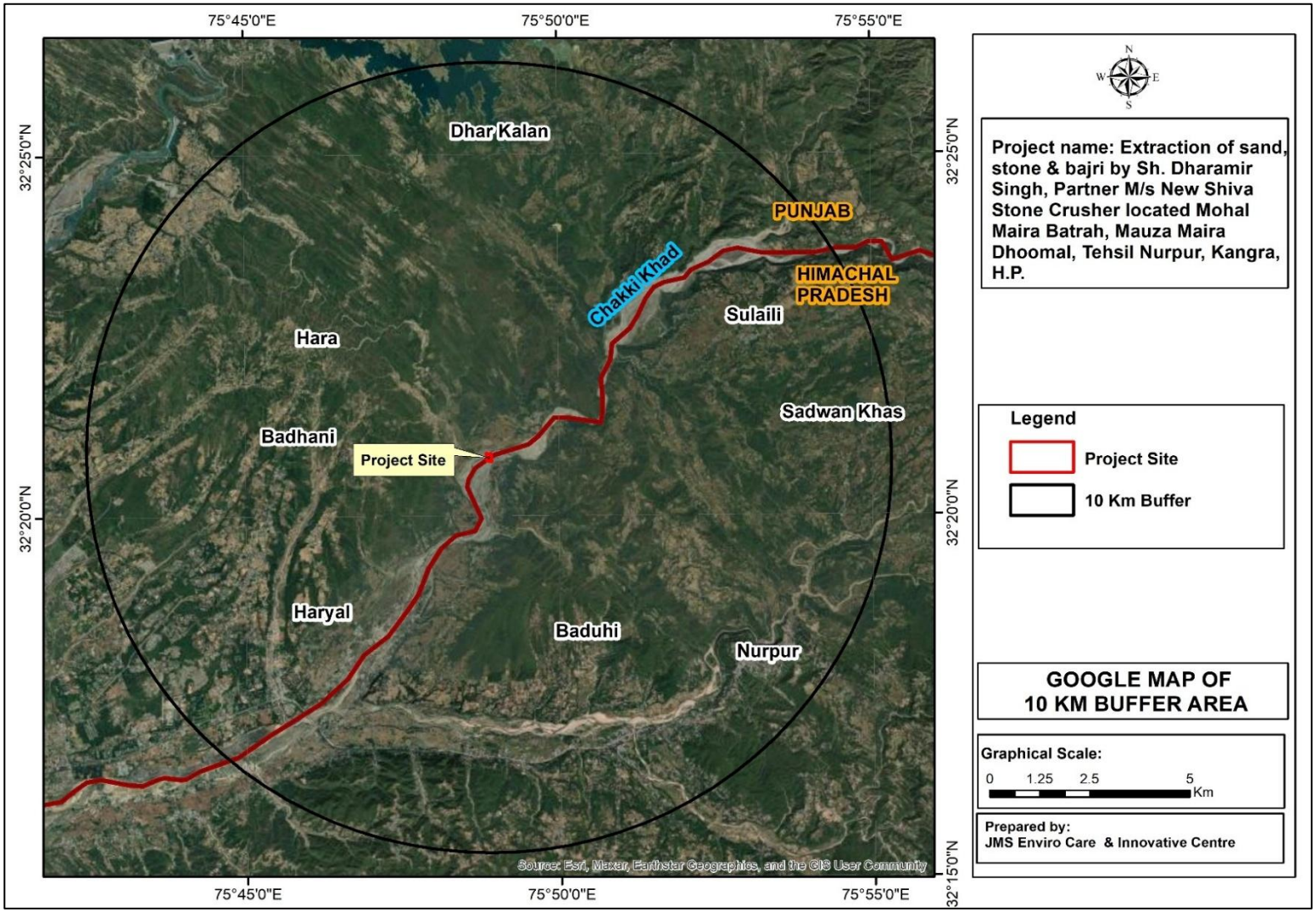
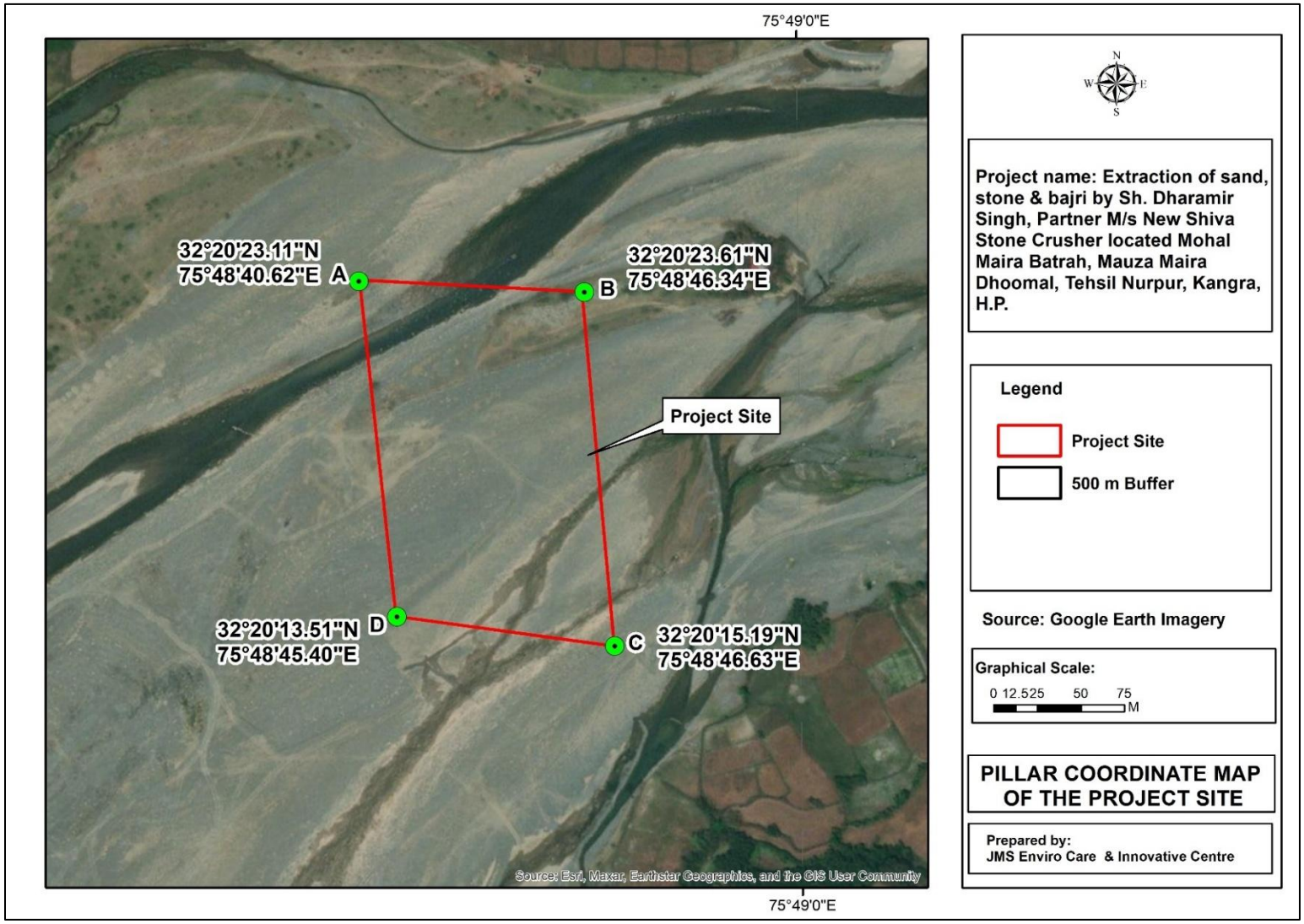


Figure- 3.2

Pillar Co-ordinates Map



3.4 STUDY PERIOD:

The environmental monitoring for the EIA study, for the project has been conducted for the pre-monsoon season. Initially, a reconnaissance survey of the study area was carried out and then fieldmonitoring for measuring meteorological parameters, ambient air quality, water quality, soil quality and noise levels was carried out following JMS/QMS/SOP/06/02 – JMS/QMS/SOP/08/02 as per the QMS of the organization from ***March to May 2025.*** 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.

3.4.1 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***

3.4.2 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 **March to May 2025.** 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 frvarious environmental facets are as follow:

I. Ambient Air Quality

The ambient air quality monitoring was done to assess the ambient air quality in one season. The guidelines for selections ofambient air monitoring stations given in IS – 5182 part 14, 2000 and 'Guidelines for Ambient Air 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.

3.4.3 ENVIRONMENTAL BASELINE DATA COLLECTION:

Baseline data for the proposed plant was collected immediately after the monsoon season**.** Primarydata has been collected by monitoring & surveying various environmental components/ parametersin 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 a season. 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.

3.5 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.

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.

Climate		Winter	Summer	Rainy
Period		Oct-Mid-March	Mid-March-June	July- September
Weather		Cool	Hot	Humid
Humidity		84%	55%	99%
Temperature	**Max**	15.9º C	30.6º C	28.2º C
	Min	5.7º C	20.7º C	19.2º C

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 4.6º C minimum to about 33.2º Cmaximum during the year.

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.

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 is observed in the month of August.

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.

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 as shown in Fig. 3.3.

Wind Rose Pattern:

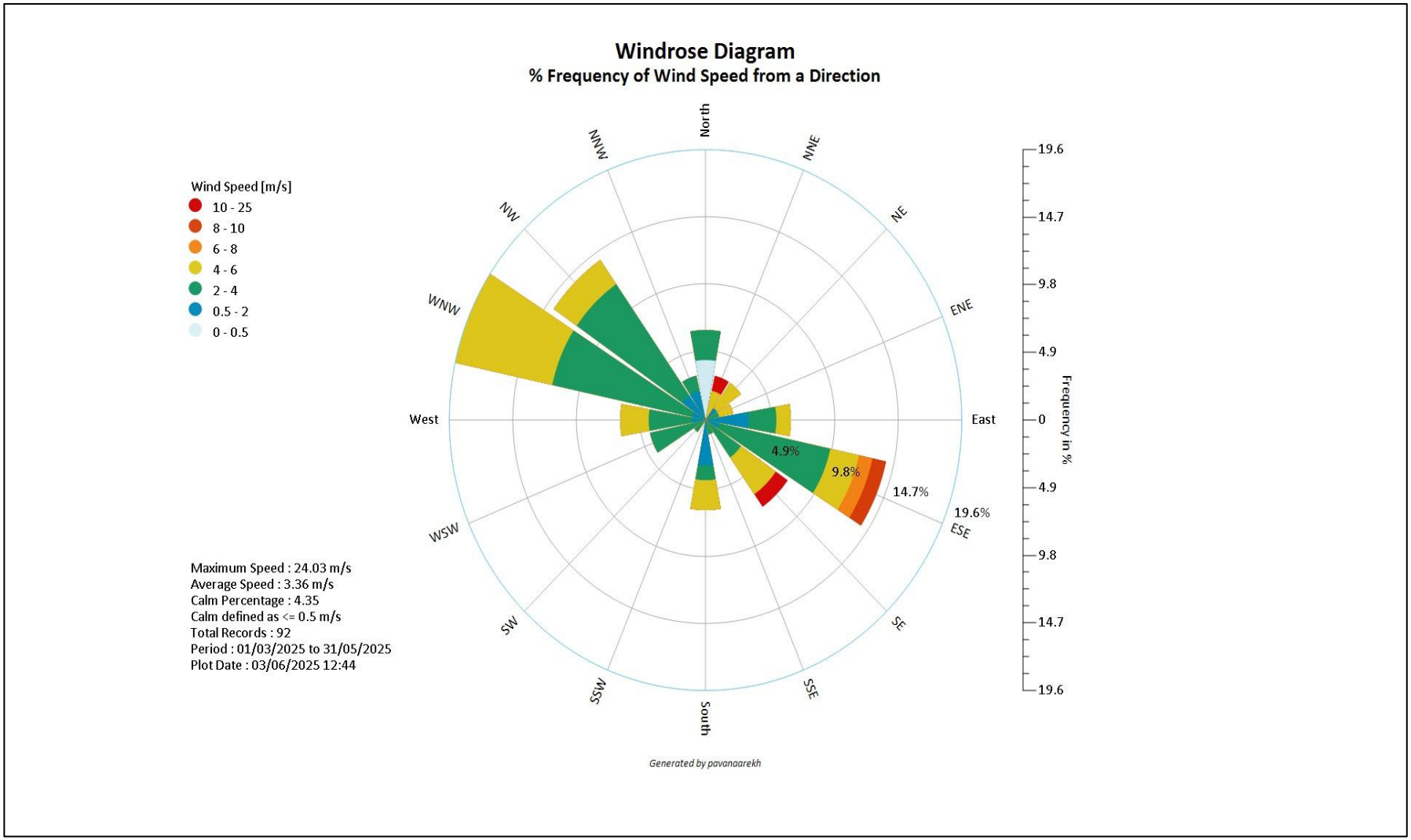
- A wind rose diagram is a graphical tool used to visualize the distribution and frequency of wind directions at a specific location over a given period of time. This diagram consists of a circular plot divided into segments that represent different wind directions (e.g., north, south, east, west) around the compass.
- The length of each segment corresponds to the proportion of time the wind blows from that direction, while color shading or concentric circles may indicate wind speed ranges.
- Wind speed and Wind direction data recorded during the study period is useful in identifying the influence of meteorology on the air quality of the study area. Based on the collected meteorological data, relative percentage frequencies of different wind directions are calculated and plotted as wind rose for twenty-four hourly durations.

Table: 3.2 Summary of site-specific wind pattern

Season	Pre-monsoon period
First Predominant Wind Direction	WNW & NW to ESE
Avg. Wind Speed (m/s)	3.36 m/s
Maximum Speed	24.03 m/s
Calm Percentage	4.35 m/s
Period	01.03.2025 to 31.05.2025

Figure- 3.3

Windrose Diagram for Study Period



3.6 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 table 3.3 below.

Table: 3.3 Showing Meteorology at Site

Month	Temperature(°C)		Relative Humidity (%)		Pressure(mbar)	
	Max.	Min.	Max.	Min.	Max	Min
March, 2025	33	7	100	17	1019	1004
April, 2025	41	12	83	7	1015	998
May, 2025	43	20	94	15	1015	996

(Source: Weather by Custom Weather, © 2024, Kangra)

3.7 AMBIENT AIR QUALITY:

The ambient air quality monitoring was done to assess the ambient air quality. The guidelines for selections of ambient air monitoring stations given in IS – 5182 part 14, 2000 and CPCB guidelineswere 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 upwindand the downwind direction of such sources".

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

1. *Representativeness of the area;*
2. *Physical requirement at the site.*
3. *Security concerns 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(PM10), Particulate

Matter-2.5 (PM2.5), Sulphur-dioxide (SO2), Oxides of Nitrogen (NO2), 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 3.4 and Location Air Sampling Stations are given in Figure 3.4 and Ambient air results are given in table 3.5.

Table 3.4

Ambient Air Monitoring Stations

S. No.	Sample Code	Name of Village/ Location	Distance & Direction (KM)	Upwind/ Downwind	Co-ordinates
1.	AAQ-1	**Project site**	**0**	--	32°20'50.79"N 75°48'54.46"E
2.	AAQ-2	Hara	3.69 (towards NW)	Crosswind	32°21'46.23"N 75°46'40.30"E
3.	AAQ-3	Khanni Uparli	2.33 (towards S)	Downwind	32°19'27.15"N 75°48'38.36"E
4.	AAQ-4	Maira Batrah	1.14 (ESE)	Crosswind	32°19'49.06"N 75°49'4.25"E
5.	AAQ-5	Dumal Kaila	1.88 (ENE)	Crosswind	32°20'38.89"N 75°49'54.85"E
6.	AAQ-6	Narainpur	1.38 (towards N)	Upwind	32°34'94.74"N 75°80'28.39"E
7.	AAQ-7	Chaugan	2.59 (towards S)	Downwind	32°18'54.97"N 75°48'40.80"E
8.	AAQ-8	Galor Khas	4.56 (towards SE)	Crosswind	32°19'11.97"N 75°51'5.82"E

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.	PM10 µg/m^3	IS:5182, (Part-23) 2006, By Gravimetric Method: 2006
2.	PM2.5 µg/m^3	SP-57, Issue Date-01- 05-2019, CPCB Guideline Vol-I: 2011
3.	SO2 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-3.5 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- 3.4

Locations of Air Monitoring Stations

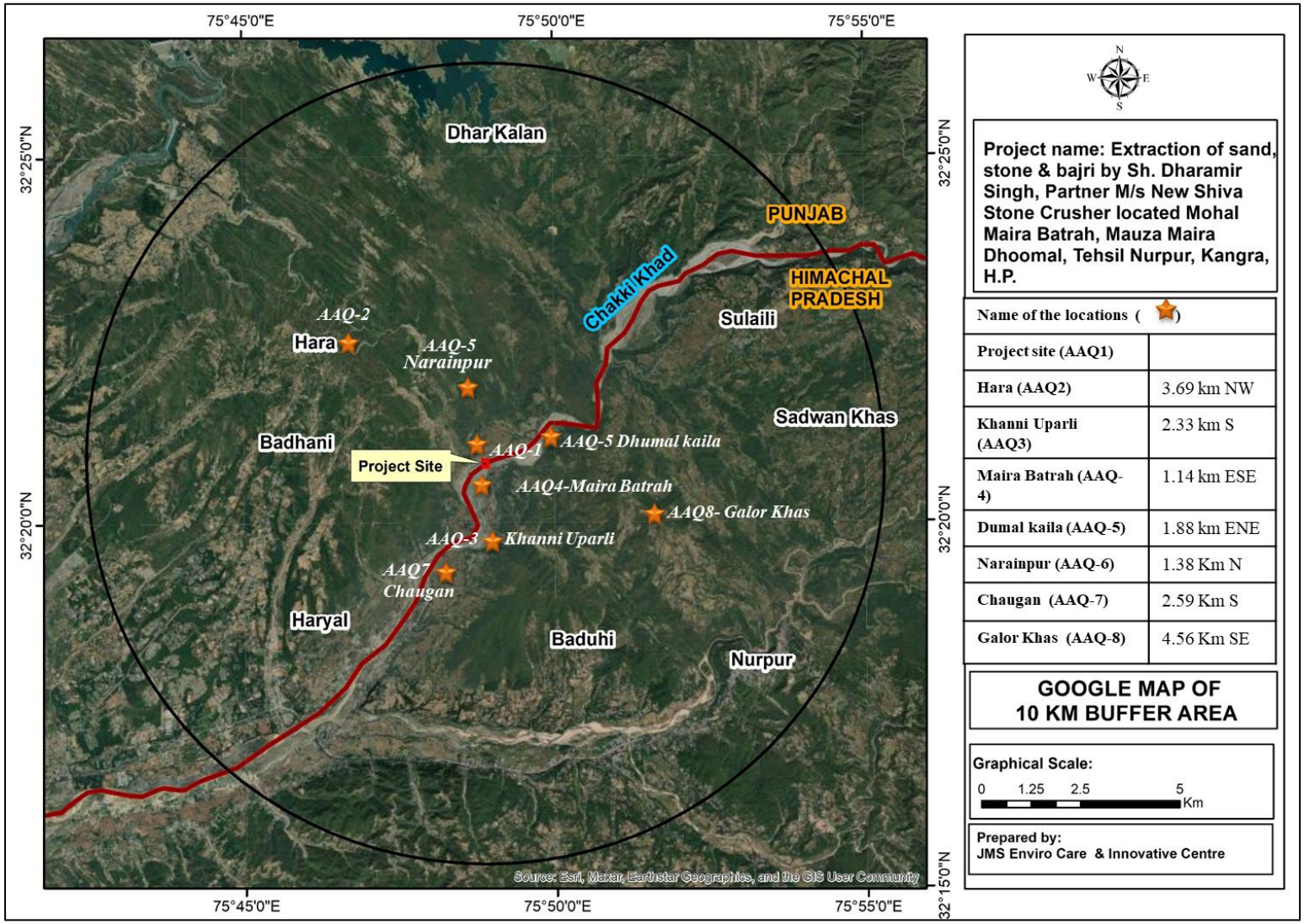


Table- 3.5

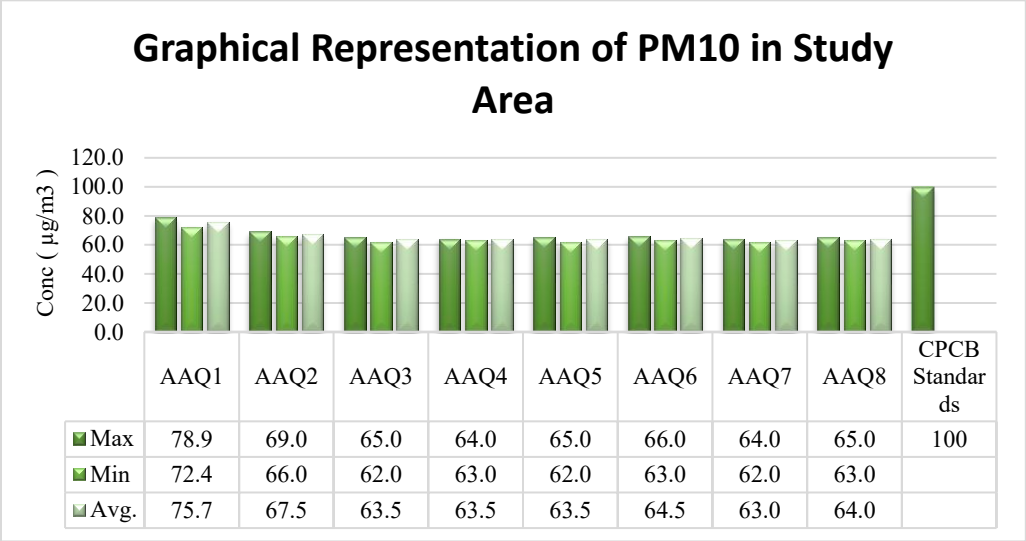
Ambient Air Quality Abstract (March 2025 to May 2025)

Locations	PM10 (µg/m3)			PM2.5 (µg/m3)			SO2 (µg/m3)			NOx (µg/m3)			CO (mg/m3)			O3(µg/m3)		
	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.	Max	Min	Avg.
Project site	78.9	72.4	75.7	42.9	37.9	40.4	6.6	6.2	6.4	15.4	12.2	13.8	20.6	20.1	20.4	0.58	0.51	0.55
Hara	69.0	66.0	67.5	40.0	37.9	39.0	6.4	6.1	6.3	12.0	10.2	11.1	20.4	20.2	20.3	0.55	0.52	0.54
Khanni Uparli	65.0	62.0	63.5	39.0	38.0	38.5	6.2	6.0	6.1	11.0	10.0	10.5	20.4	20.2	20.3	0.53	0.50	0.52
Maira Batrah	64.0	63.0	63.5	37.9	36.3	37.1	6.4	6.0	6.2	12.0	10.0	11.0	26.6	20.2	23.4	0.54	0.51	0.53
Dumal Kaila	65.0	62.0	63.5	40.8	38.3	39.6	6.2	6.1	6.2	11.0	10.0	10.5	20.4	20.2	20.3	0.54	0.51	0.53
Narainpur	66.0	63.0	64.5	41.7	39.2	40.5	6.4	6.2	6.3	12.0	10.0	11.0	20.4	20.2	20.3	0.55	0.53	0.54
Chaugan	64.0	62.0	63.0	40.8	40.0	40.4	6.2	6.0	6.1	11.0	10.0	10.5	20.4	20.2	20.3	0.53	0.51	0.52
Galor Khas	65.0	63.0	64.0	40.0	38.3	39.1	6.4	6.2	6.30	12.0	10.0	11.0	20.4	20.2	20.3	0.56	0.53	0.55
P98	**77.2**			**42.24**			**6.54**			**14.86**			**26.0**			**0.57**		
CPCB Stds.	**100**			**60**			**80**			**80**			**4.0**			**100**		

INTERPRETATION:

Respirable Suspended Particulate Matter (PM10)

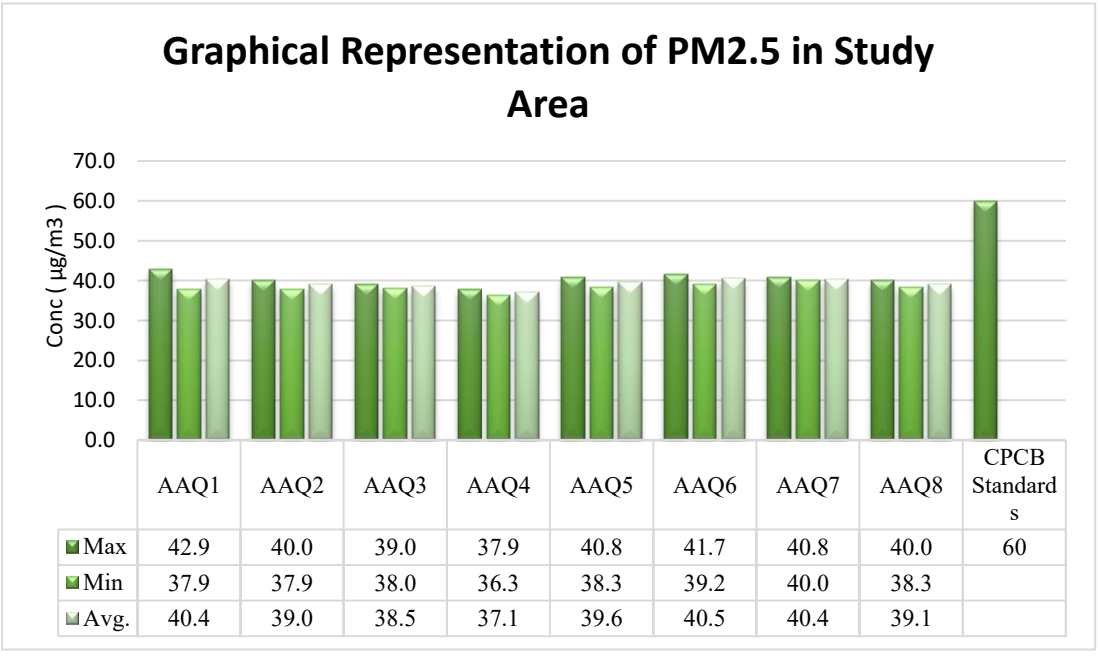
As is evident from the data, PM10 concentration observed in the study area during the study period is minimum at Khanni Uparli, Dumal Kaila and Chaugan i.e. 62.0 µg/m^3 and maximum at Project site 78.9 µg/m^3. P98 remained as 77.2 µg/m^3 during this period.



	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7	AAQ8	CPCB Standards
Max	78.9	69.0	65.0	64.0	65.0	66.0	64.0	65.0	100
Min	72.4	66.0	62.0	63.0	62.0	63.0	62.0	63.0	
Avg.	75.7	67.5	63.5	63.5	63.5	64.5	63.0	64.0	

Respirable Suspended Particulate Matter (PM2.5)

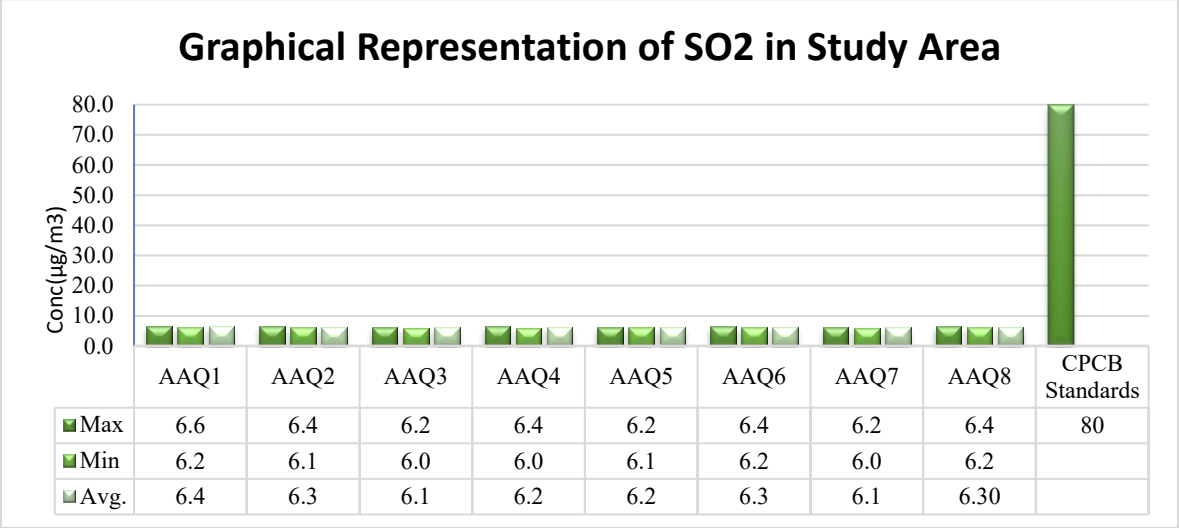
It is minimum of 36.3 µg/m^3 at Maira Batrah and maximum of 42.9 µg/m^3 at Project site. P98 remained as 42.24 µg/m^3 during this period.



	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7	AAQ8	CPCB Standards
Max	42.9	40.0	39.0	37.9	40.8	41.7	40.8	40.0	60
Min	37.9	37.9	38.0	36.3	38.3	39.2	40.0	38.3	
Avg.	40.4	39.0	38.5	37.1	39.6	40.5	40.4	39.1	

Sulphur Dioxide (SO2)

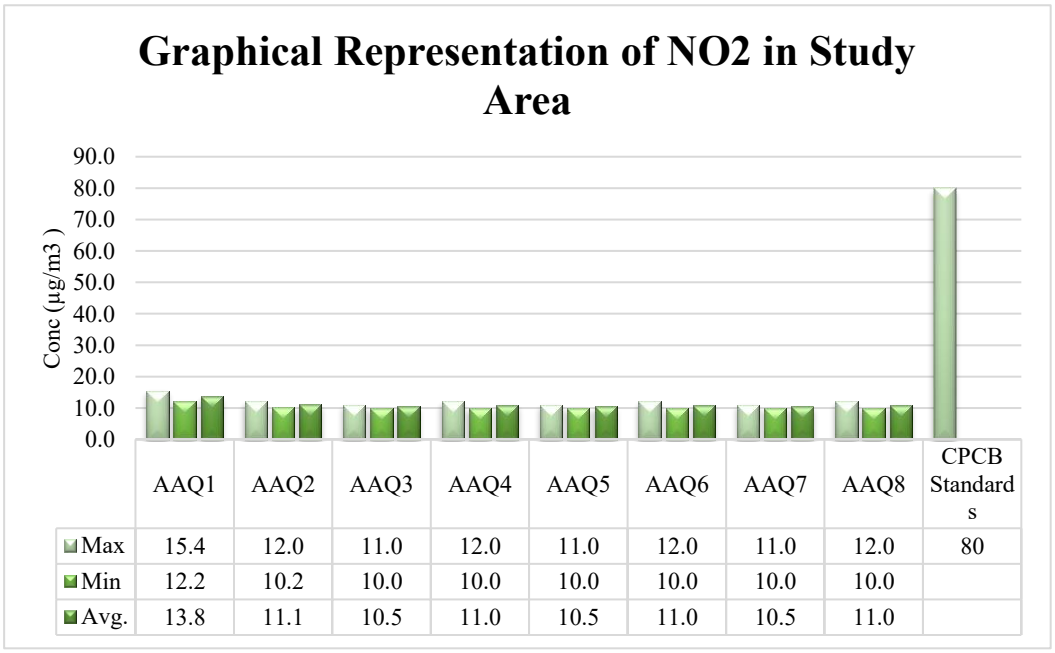
The SO2 level observed during the baseline period were minimum of 6.0 µg/m^3 at Khanni Uparli and Chaugan and maximum of 6.6 µg/m3 at Project Site. The situation in the study area as far as SO2 concentration is concerned is satisfactory. P98 remained as 6.54 µg/m^3 during this period.



	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7	AAQ8	CPCB Standards
Max	6.6	6.4	6.2	6.4	6.2	6.4	6.2	6.4	80
Min	6.2	6.1	6.0	6.0	6.1	6.2	6.0	6.2	
Avg.	6.4	6.3	6.1	6.2	6.2	6.3	6.1	6.30	

Oxides of Nitrogen (NOx)

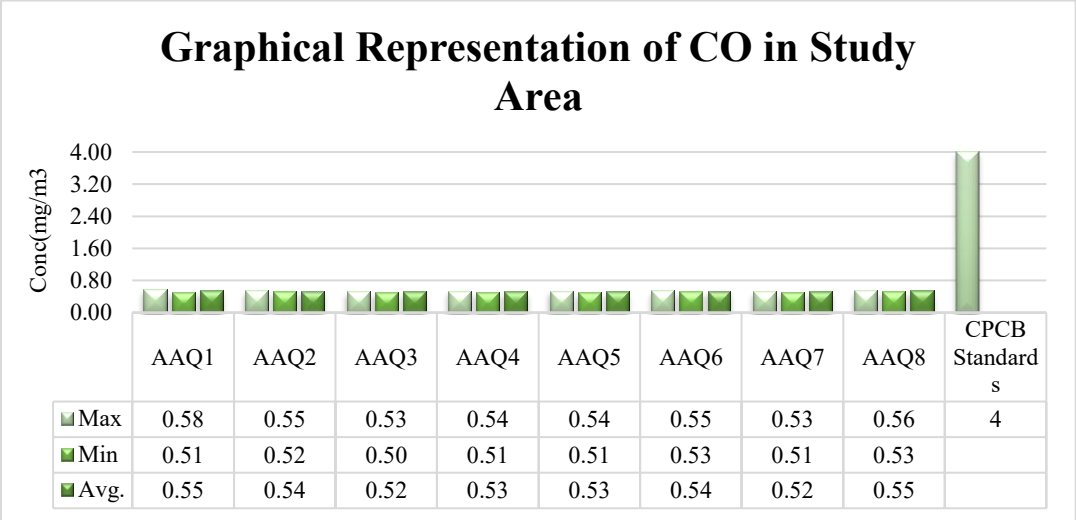
The maximum concentration of NO_2, measuring 15.4 µg/m³, was recorded at the Project Site, whereas a uniform minimum concentration of 10.0 µg/m³ was observed across all seven other monitoring locations.



	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7	AAQ8	CPCB Standards
Max	15.4	12.0	11.0	12.0	11.0	12.0	11.0	12.0	80
Min	12.2	10.2	10.0	10.0	10.0	10.0	10.0	10.0	
Avg.	13.8	11.1	10.5	11.0	10.5	11.0	10.5	11.0	

Carbon Monoxide (CO)

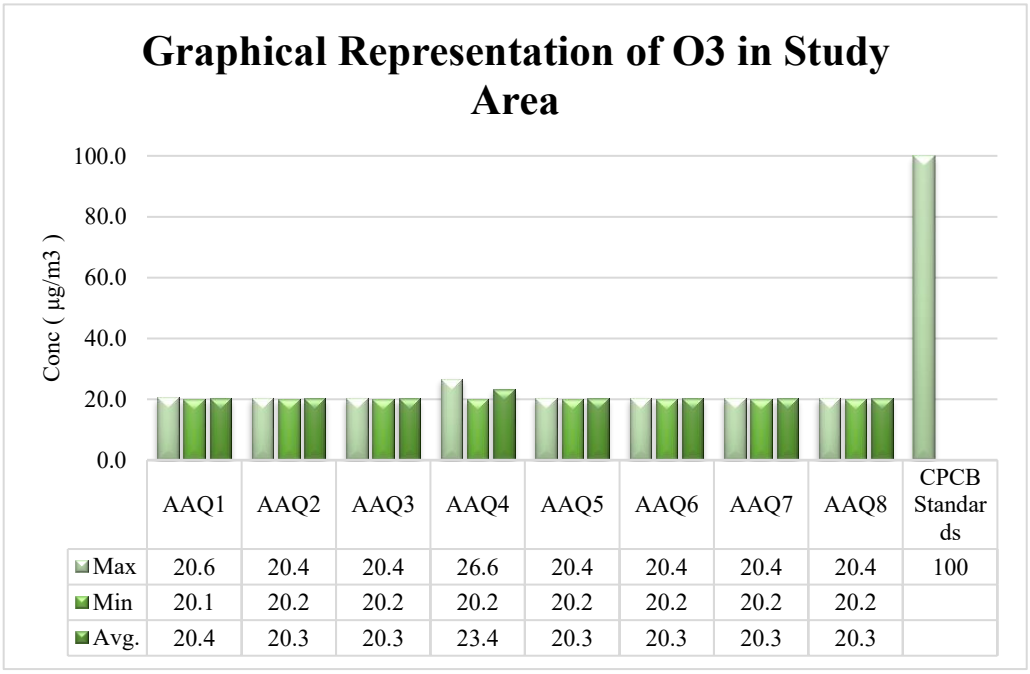
The maximum concentration of CO_2, measuring 0.58 mg/m³, was recorded at the Project Site, whereas a minimum concentration of 0.50 mg/m³ was observed at Khanni Uparli.



	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7	AAQ8	CPCB Standards
Max	0.58	0.55	0.53	0.54	0.54	0.55	0.53	0.56	4
Min	0.51	0.52	0.50	0.51	0.51	0.53	0.51	0.53	
Avg.	0.55	0.54	0.52	0.53	0.53	0.54	0.52	0.55	

Ozone

The maximum concentration of ozone (O_3), measured at 26.6 µg/m³, was observed at Maira Batrah, whereas a minimum concentration of 20.1 µg/m³ was recorded at Project Site.



	AAQ1	AAQ2	AAQ3	AAQ4	AAQ5	AAQ6	AAQ7	AAQ8	CPCB Standards
Max	20.6	20.4	20.4	26.6	20.4	20.4	20.4	20.4	100
Min	20.1	20.2	20.2	20.2	20.2	20.2	20.2	20.2	
Avg.	20.4	20.3	20.3	23.4	20.3	20.3	20.3	20.3	

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.

3.8 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: 43P/15.

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 (superimposed with drainage map) and a 10 Km radius False Color Composite satellite map surrounding the project site is provided in figure 3.5 and figure 3.6 respectively.

Table: 3.6

Land Use and Land Cover Pattern of Surrounding Villages (in Hect.)

Name of Village	Area under Forest	Area under non-agricultural uses	Barren and unculturable lands	Permanent pastures	Land under misc. tree crops	Culturable waste	Fallow land (current and others)	Net area sown
Lihora	53.8	3.9	1.9	0	0	0.2	0	10.6
Dumal Kaila	177.8	59.9	13.2	1.5	1.6	2.4	0	63.2
Nala	134.8	3.9	4.8	0.3	0.1	6.2	0	27.7
Bharnu	44.4	4.4	7.1	0	0	0.6	0	18.6
Kharod	59.6	19.6	0	0	0	0	0	23.7
Khanni Uparli	19.6	42.7	0	0	16.1	0	0	76.3
Maira Batrah	62.9	152.2	4	0.5	0.8	25.9	0	61.7

Figure 3.5

Land Use Land Cover Map Superimposed with Drainage Map

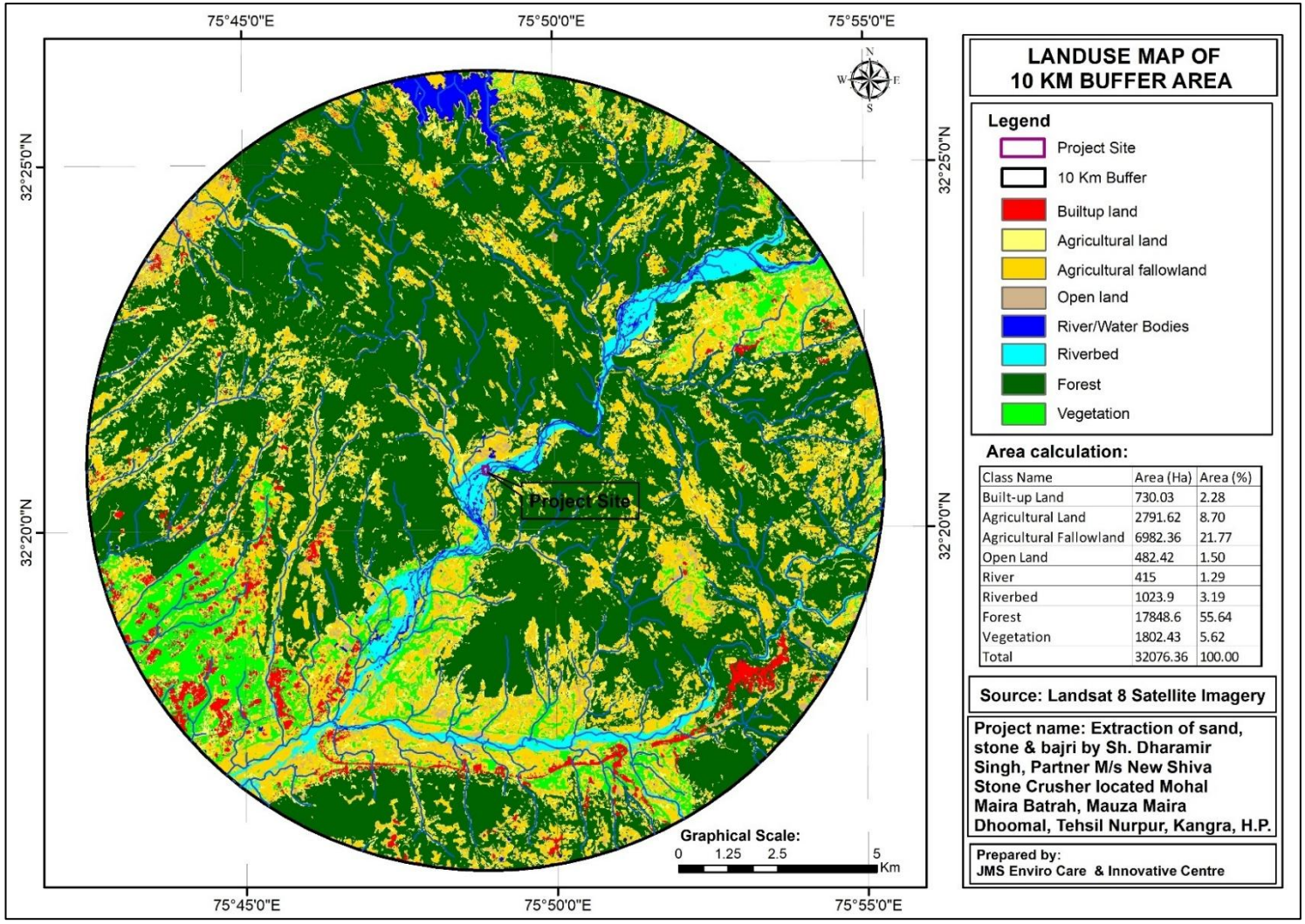
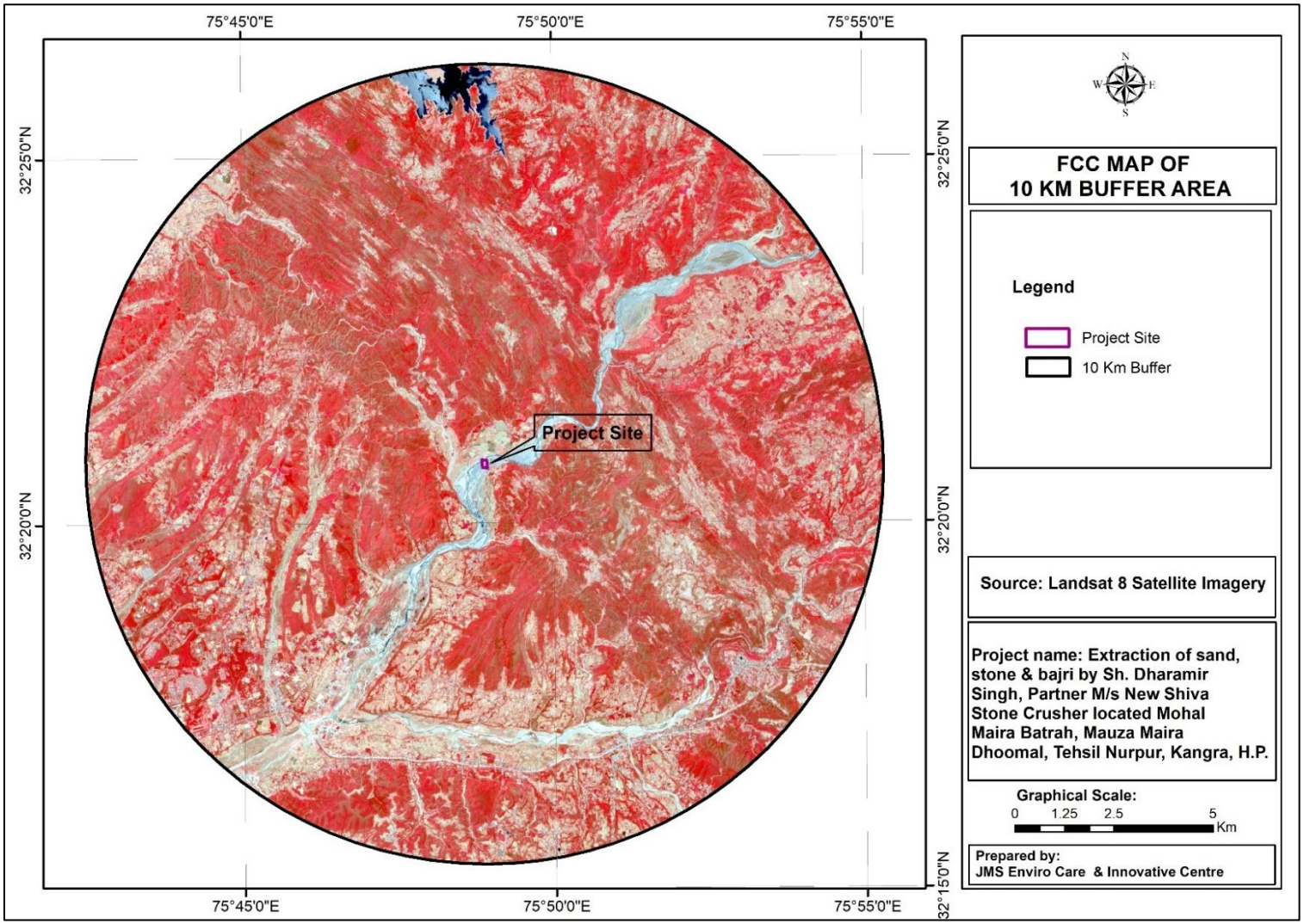


Figure - 3.6
10 Km Radius False Color Composite Satellite



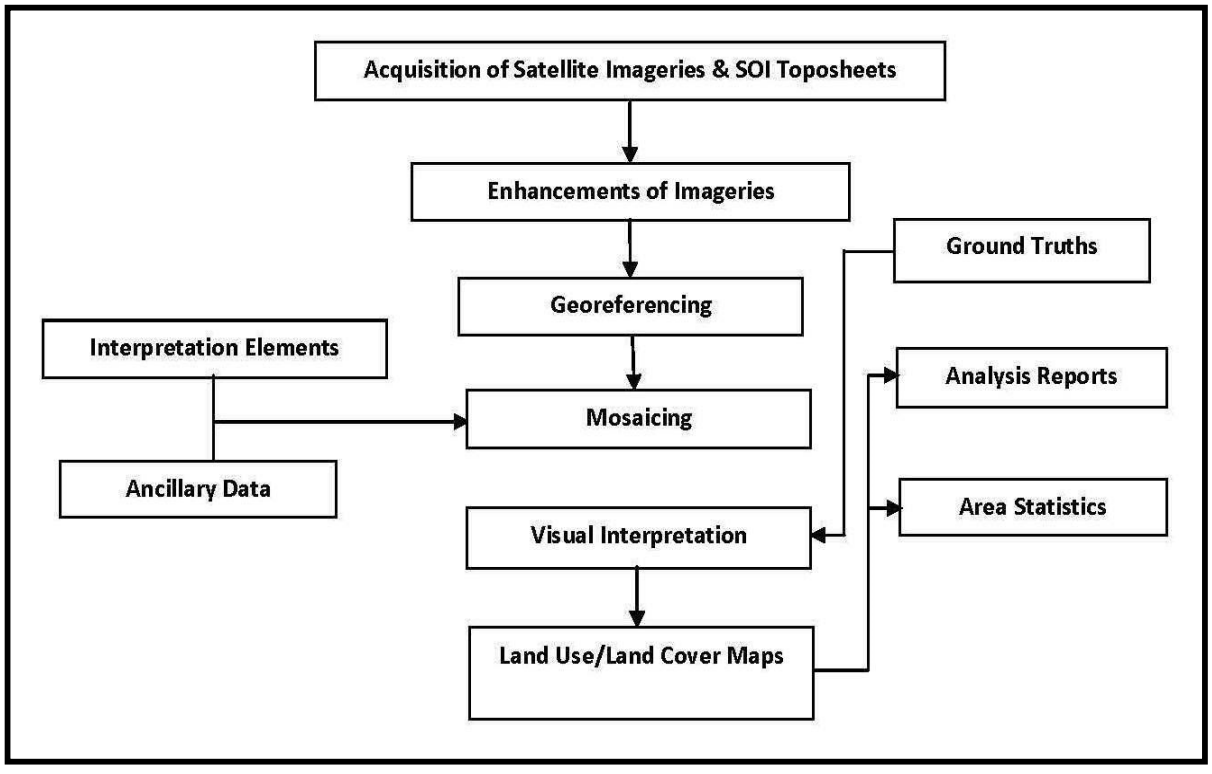
C) Methodology

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 andclassifying 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 below:

Fig 3.7: Flowchart showing the methodology adopted for land use/land cover mapping



3.8.1 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 1:50,000scale. ***Land Use / Land Cover Map of Study Area (10 Km Buffer) is shown in Fig 3.5.***

Table 3.7

Land Use/Land Cover Area Statistics

Land Use/Land Cover	Area (Hectare)	Area (Percentage)
Built-up Land	730.03	2.28
Agriculture land	2791.62	8.70
Agriculture Fallow land	6982.36	21.77
Open land	482.42	1.50
River	415	1.29
River-bed	1023	3.19
Forest	17848.6	55.46
Vegetation	1802.43	5.62
Total	**32076.36**	**100.00**

Source: Land use Land cover map

CONCLUSION:

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.

3.9 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.

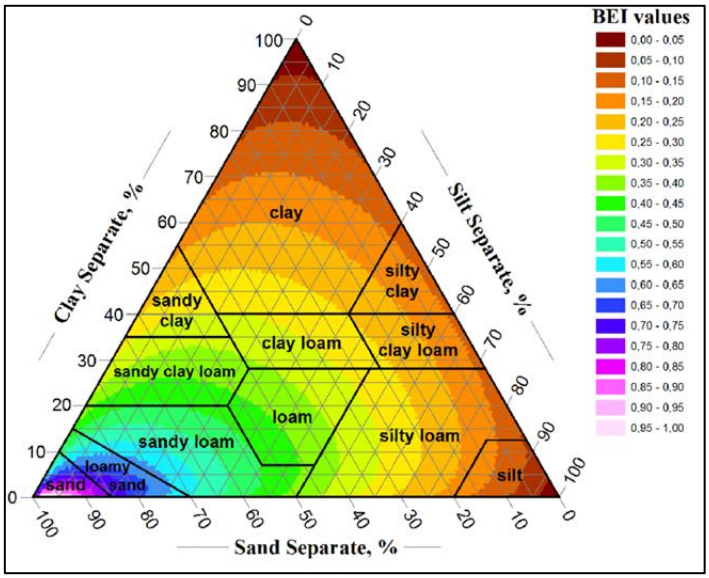
(ii) Porosity

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.

Balanced Entropy Index of Soil



CHEMICAL CHARACTERISTICS:

Locations of soil monitoring stations are given in **Figure 3.8.** 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

Soil Quality Monitoring Stations

S. No.	Sample Code	Name of Village/ Location	Distance & Direction (KM)	Co-ordinates
1.	SQ-1	**Project site**	3.69 (towards NW)	32°20'20.61"N 75°48'45.02"E
2.	SQ-2	Hara	2.33 (towards S)	32°21'46.23"N 75°46'40.30"E
3.	SQ-3	Khanni Uparli	1.14 (ESE)	32°19'27.15"N 75°48'38.36"E
4.	SQ-4	Maira Batrah	1.88 (ENE)	32°19'49.06"N 75°49'4.25"E
5.	SQ-5	Dumal Kaila	1.38 (towards N)	32°20'38.89"N 75°49'54.85"E

6.	SQ-6	Narainpur	2.59 (towards S)	32°34'94.74"N 75°80'28.39"E
7.	SQ-7	Chaugan	4.56 (towards SE)	32°18'54.97"N 75°48'40.80"E
8.	SQ-8	Galor Khas	3.69 (towards NW)	32°19'11.97"N 75°51'5.82"E

Figure -3.8

Location of Soil Monitoring Stations

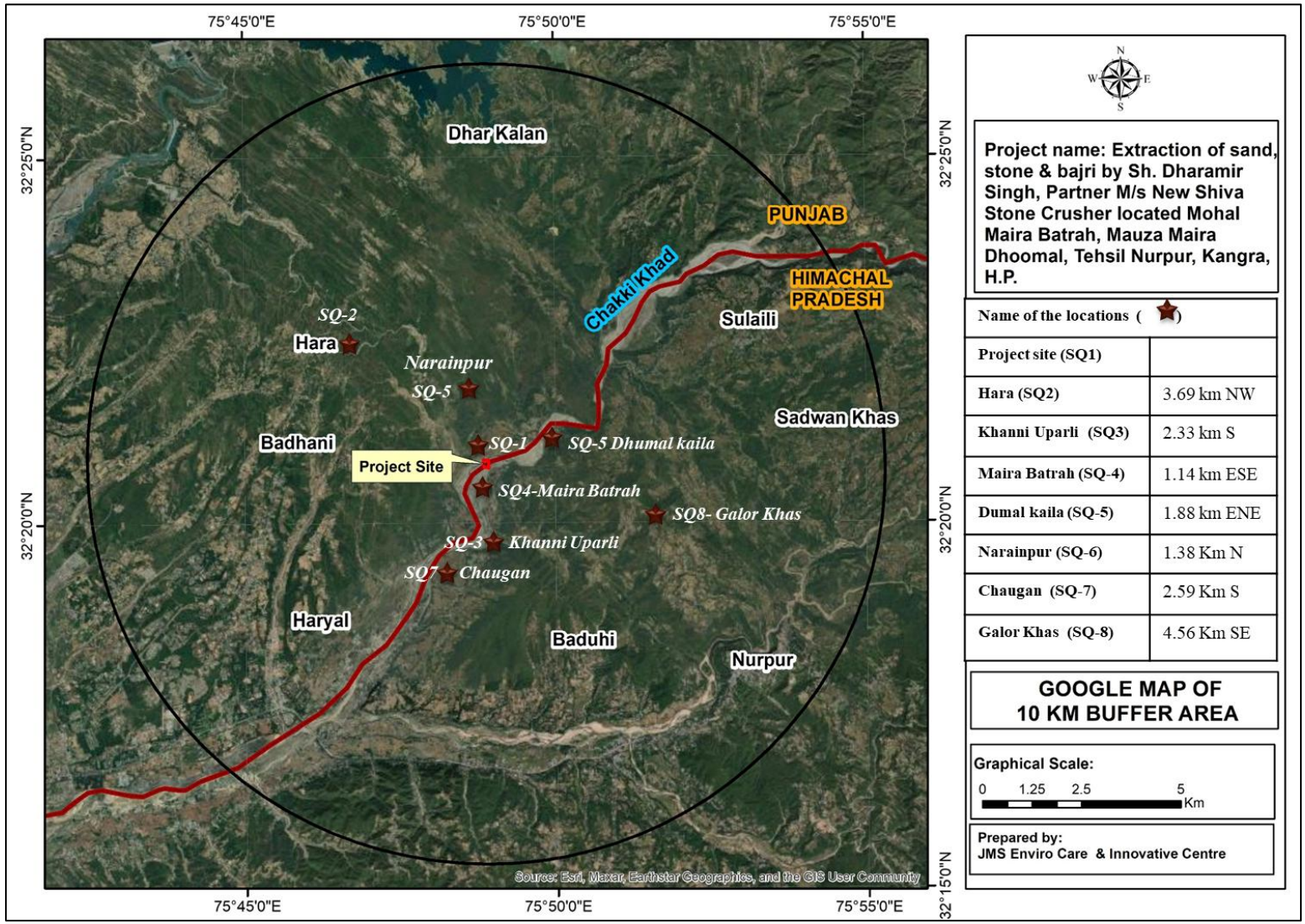


Table –3.9

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

S.No.	Parameter	Unit	SQ1	SQ2	SQ3	SQ4	SQ5	SQ6	SQ7	SQ8	Test Methods	Detection Limit
1.	**pH (1:2.5)**	--	7.29	7.44	7.35	7.47	7.31	7.41	7.45	7.58	IS 2720(P-26),1987	1
2.	**Electrical Conductivity (1:2)**	µmhos/cm	289	266	242	253	290	270	274	258	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)	1.47	1.38	1.29	1.44	1.57	1.48	1.63	1.38	IS 2720(P-3),1983	1g/cc
5.	**Soil Moisture Content**	%	12.8	15.6	15.4	11.4	12.8	10.4	8.6	6.8	IS 2720(P-2,1973	1%
6.	**Color/ Visual Observation**	--	Brown	Light Brown	Brown	Dark Brown	Brown	Light Brown	Brown	Dark Brown	Handbook of Agriculture, ICAR	--
7.	**Available Calcium**	(mg/kg)	155	136	152	132	175	158	186	198	Handbook of Agriculture ,ICAR	--

8.	**Available Magnesium**	(mg/kg)	25.7	23.2	19.2	17.4	32.8	24.4	22.6	28.4	Handbook of Agriculture, ICAR	--
9.	**Available Sodium**	(mg/hac)	69.5	63.2	53.4	61.4	52.6	62.7	54.6	56.5	CPTL, Lab SOP No. 59	--
10.	**Available Potassium**	(kg/hac)	35.5	31.4	37.2	41.4	24.4	18.6	26.4	22.5	CPTL, Lab SOP No.59	1.0 kg/ha
11.	**Available Nitrogen**	(%)	11.6	8.9	11.6	12.6	10.6	14.4	10.5	12.5	CPTL, Lab SOP No. 62	10%
12.	**Organic Matter**	(%)	0.55	0.56	0.65	0.63	0.65	0.57	0.50	0.54	IS 2720(P-22),2001	0.1%
13.	**Available Phosphorus**	Kg/hac	51.9	52.6	48.4	48.3	48.6	51.8	43.6	52.4	CPTL, Lab SOP No. 59	1.0 kg/ha
14.	**Cation Exchange Capacity**	(meq/100gm)	10.6	14.7	12.3	10.3	12.6	10.6	9.7	8.8	CPTL, Lab SOP No. 58	--
15.	**Iron as Fe**	(mg/kg)	14.5	10.4	8.9	14.7	12.6	14.5	10.6	12.4	CPTL, Lab SOP No. 63	--
16.	**Zinc as Zn**	(mg/kg)	12.5	8.7	6.9	8.7	6.6	4.3	10.4	10.6	CPTL, Lab SOP No. 63	1.0 mg/kg
17.	**Lead as Pb**	(mg/kg)	ND (DL-	ND (DL-	ND (DL-	ND (DL-	ND (DL-	ND (DL-	ND (DL-	ND (DL-	CPTL, Lab	1.0 mg/kg

			2.0)	2.0)	2.0)	2.0)	2.0)	2.0)	2.0)	2.0)	SOP No. 63	
18.	**Manganese as Mn**	(mg/kg)	12.3	14.3	16.1	12.1	18.4	16.5	16.7	18.3	CPTL, Lab SOP No. 63	1.0 mg/kg
19.	**Chromium as Cr**	(mg/kg)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	CPTL, Lab SOP No. 63	1.0 mg/kg
20.	**Cadmium as Cd**	(mg/kg)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	CPTL, Lab SOP No. 63	1.0 mg/kg
21.	**Copper as Cu**	(mg/kg)	6.2	4.2	2.5	3.9	8.9	6.5	10.5	8.7	CPTL, Lab SOP No. 63	1.0 mg/kg

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 valuesoils. 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 electrical conductivity in the study area is varying from 294 to 253 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 as major 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 14.4 to 8.9 %. Phosphorus influences the vigor of plants and improves the quality of crops. In the study area available, Phosphorus was found in varying quantities of 52.6 to 48.3 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 41.4 to 18.6 Kg/ hac. This is deficient for crops.
- Organic Matter in the study area ranges from 0.65% to 0.50 %. 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 observationduring field visit of 10km buffer zone from the boundary of cement plant, the soils are sandy loampredominantly. These soils can be classified as modularity good soil with traces or gentle slopes and is modulate land for sustained agriculture as per USDA.

3.9.1 Geomorphology & Soils*:*

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. 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.

Six types of soils are observed in the district, they are: - 1. Histosols (Snow field, Peaty and Saline Peaty), 2. Ultisols (Brown red and yellow), 3. Alfisols (Sub Mountain), 4. Ardisols (Grey Brown), 5. Entisols (Younger alluvium).

Source: https://www.cgwb.gov.in/old_website/District_Profile/HP/Kangra.pdf

3.10 WATER ENVIRONMENT

Water quality assessment is one of the essential components of EIA study. Such assessment helpsin 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 thecrusher 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 sourceof 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 3.9** and list of surface & ground water sample is givenin **Table 3.10 & 3.13** respectively. The results of surface water & ground water are given in **Table 3.11 & 3.14** respectively.

(a) Surface Water

Surface water bodies in the study area are crucial for supporting local ecosystems and human activities. To assess the water quality, samples were collected from nearby streams, rivers, and other surface water sources. Surface water sample was collected, to the study area and potential impact on local water quality. Standard protocols were followed for sampling and analysis of physio-chemical parameters, providing valuable insights into the surface water quality.

Criteria for selection of surface water quality sampling locations:

While selecting a sample it is always important to take care that the sample should be representative of the selected water body. In order to remove the bias in sample selection, grab samples were collected on random basis considering the following key aspects:

- The sampling locations were selected based on upstream and downstream uses of the water body.
- Drainage Pattern of study area in general.
- Domestic discharge points from the near-by villages.

Table 3.10

Surface Water Sampling Stations

Station	Sampling Location
SW-1	**Chakki River**

Table – 3.11

Results of surface water

S. No.	Parameters	Upstream	Downstream	Test Method
1.	pH	7.27	7.25	IS:3025 (P-11): 2022
2.	Color, HU	<5	<5	IS:3025 (P-4): 2021
3.	Odour	Agreeable	Agreeable	IS:3025 (P-5): 2018
4.	Turbidity, NTU	2.5	2.8	IS:3025 (P-10): 2023
5.	Total Dissolved Solids, mg/l	132	138	IS:3025 (P-16): 2023
6.	Total Suspended Solids, mg/l	8.8	8.4	IS:3025 (P-17): 2023
7.	Total Hardness (as $CaCO_3$), mg/l	110	120	IS:3025 (P-21): 2009
8.	Chemical Oxygen Demand, mg/l	12.0	10.0	IS:3025 (P-58): 2023
9.	BOD (at 27°C) for 3 days, mg/l	<2	<2	IS:3025 (P-44): 2023
10.	Dissolved Oxygen, mg/l	6.2	6.4	IS:3025 (P-38): 1989
11.	Calcium (as Ca^{++}), mg/l	28.0	22.0	IS:3025 (P-40):1991:
12.	Magnesium (as Mg^{++}), mg/l	14.0	12.0	IS:3025 (P-46): 2023
13.	Sodium (as Na^{+}), mg/l	17.5	15.5	IS:3025 (P-45):1983:
14.	Potassium (as K), mg/l	7.9	6.4	IS: 3025 (P-45):1983
15.	Nitrate (as NO_3), mg/l	1.2	1.4	IS:3025 (P-34): Sec-1:2023

16.	Chloride (as Cl), mg/l	14.5	13.5	IS:3025 (P-32): 1988
17.	Sulphate (as SO_4), mg/l	16.7	18.5	IS:3025 (P-24): Sec-1:2022
18.	Iron (as Fe), mg/l	0.12	0.13	IS:3025 (P-53), 2024
19.	Total Chromium (as Cr), mg/l	ND (DL-0.005)	ND (DL-0.005)	IS:3025 (P-52): 2021
20.	Zinc (as Zn), , mg/l	ND (DL-0.02)	ND (DL-0.02)	IS:3025 (P-49): 1994
21.	Fluoride (as F) mg/l	ND (DL-0.1)	ND (DL-0.1)	IS:3025 (P-60) : 2008
22.	Mercury (as Hg) mg/l	ND (DL-0.002)	ND (DL-0.002)	IS:3025 (P-48):1994:RA-2003
23.	Copper (as Cu), mg/l	ND (DL-0.04)	ND (DL-0.04)	IS:3025 (P -42): 1992 (RA:2019
24.	Boron (as B), mg/l	ND (DL-0.1)	ND (DL-0.1)	IS:3025 (P-57): 2005
25.	Aluminium (as Al) mg/l	ND (DL-0.1)	ND (DL-0.1)	IS:3025 (P-55):2003
26.	Cadmium (as Cd), mg/l	ND (DL-0.001)	ND (DL-0.001)	IS:3025 (P-41): 1992
27.	Total Ammonia, mg/l	ND (DL-1.0)	ND (DL-1.0)	IS: 3025(P-34):1988
28.	Fecal Coliform, MPN/100 ml	52	22	IS : 1622-1981, MPN Method
29.	Total Coliform, MPN/100 ml	92	42	IS : 1622-1981(RA2009) ,MPN Method

Table – 3.12

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.	Dissolve dOxygen	6	5	4	4	-
3.	BOD, 3days at 27^0C, max	2	3	3	-	-
4.	Total colifor morganism, MPN/100ML,	50	500	5000	-	-

	max					
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 7.27– 7.25
- TDS was found to be 138-132 mg/l. The tolerance limit is 1,500 mg/l as per IS:2296
- Total hardness was found to be 110-120 mg/l.
- Total Coliform in water was 42-92 MPN/100ml. The likely source of bacteriological contamination may be due to the proximity to residential area
- All the heavy metals were not detectable.

Conclusion: -

The surface water results of Chakki River when compared with water quality criteria as lay down by CPCB, falls in class 'E' and can be used for irrigation and industrial cooling.

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 monitoringand 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 3.13 shows the details of location of water sampling stations and results of different parametersare given in **Table 3.14**

The sampling sites were selected considering the following criteria –

1. Topography of the study area Pattern.
2. Areas which may be affected due to the activity.
3. Any probable locations with open discharge of sewage or waste water.
4. Location of any solid waste dumping facility in the vicinity of the project site.

Table- 3.13

Details of Ground Water Monitoring Stations

S. No.	Sample Code	Name of Village/ Location	Distance & Direction on (KM)	Observation	Co-ordinates
1.	GW-1	**Project site**	Within 1 km	Supply water from village Maira Batrah	32°19'49.06"N 75°49'4.25"E
2.	GW-2	Hara	2.33 (towards S)	Supply water sample was collected from a house in the village	32°21'46.23"N 75°46'40.30"E
3.	GW-3	Khanni Uparli	1.14 (towards ESE)	Sample was collected from a house in the village	32°19'27.15"N 75°48'38.36"E
4.	GW-4	Maira Batrah	1.88 (towards ENE)	Supply water sample was collected from Govt. Primary School	32°19'49.06"N 75°49'4.25"E
5.	GW-5	Dumal Kaila	1.38 (towards N)	Sample was collected from a house in the village	32°20'38.89"N 75°49'54.85"E
6.	GW-6	Narainpur	2.59 (towards S)	Supply water sample was collected from a house in the village	32°34'94.74"N 75°80'28.39"E
7.	GW-7	Chaugan	4.56 (towards SE)	Sample was collected from a house in the village	32°18'54.97"N 75°48'40.80"E
8.	GW-8	Galor Khas	3.69 (towards NW)	Sample was collected from a house in the village	32°19'11.97"N 75°51'5.82"E

Figure - 3.9

Locations of Surface Water & Ground Water

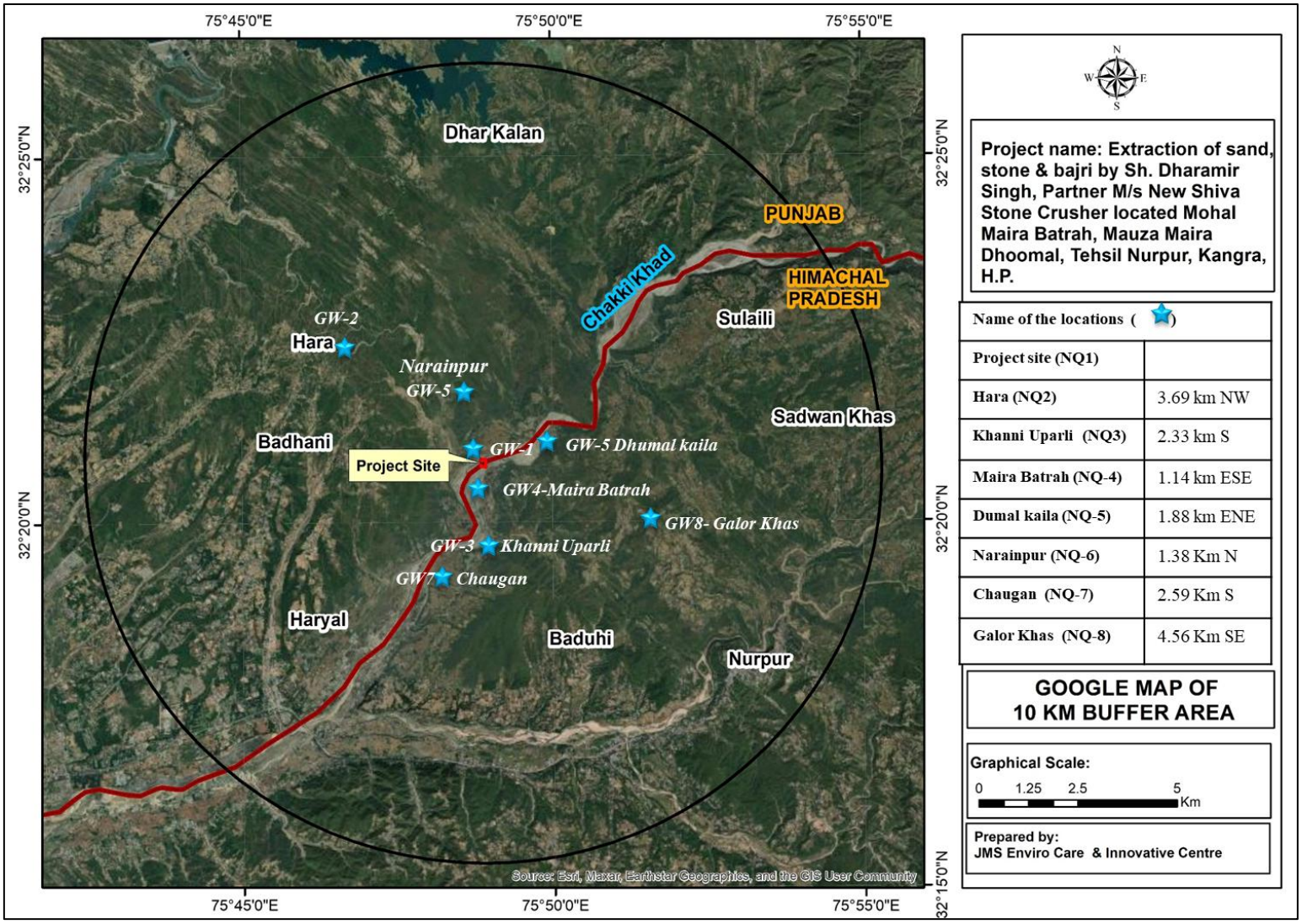


Table – 3.14

Results of Ground Water Samples

Parameters	Unit	GW1	GW2	GW3	GW4	GW5	GW6	GW7	GW8	Acceptable Limits	Permissible Limit
pH	-	7.31	7.47	7.45	7.58	7.42	7.47	7.55	7.28	6.5-8.5	No relaxation
Colour	Hazen	<5	<5	<5	<5	<5	<5	<5	<5	5	15
Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
Turbidity	NTU	<1	<1	<1	<1	<1	<1	<1	<1	1 Max.	5
Total Dissolved Solids	mg/l	380	395	375	385	385	367	375	350	500 Max.	2000
Total Hardness as CaCO3	mg/l	370	385	365	365	370	385	335	355	200 Max.	600
Calcium as Ca	mg/l	40.0	43.0	49.0	37.0	50.0	43.0	33.0	37.0	75 Max.	200
Magnesium as Mg	mg/l	20.0	21.5	29.8	26.2	27.4	19.0	27.4	26.2	30 Max.	100
Total Alkalinity (as CaCO3),	mg/l	350	365	355	355	340	295	295	325	200 Max.	600

mg/l											
Chloride (as Cl), mg/l	mg/l	24.0	24.0	18.5	23.5	19.0	26.0	18.5	21	250 Max.	1000
Sulphate (as SO4), mg/l	mg/l	21.6	16.9	18.6	24.8	26.4	18.2	16.6	14.6	200 Max.	400
Iron (as Fe), mg/l	mg/l	0.16	0.29	0.34	0.27	0.18	0.27	0.17	0.16	1.0 Max.	No relaxation
Zinc (as Zn), mg/l	mg/l	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	5 Max.	15
Nitrate (as NO3), mg/l	mg/l	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	45 Max.	No relaxation
Chromium (as Cr), mg/l	mg/l	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	0.05 Max.	No relaxation
Manganese (as Mn), mg/l	mg/l	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	0.1 Max.	0.3
Mercury (as	mg/l	ND (0.0.00	ND (0.0.00	ND (0.0.001)	ND (0.0.001	ND (0.0.001	ND (0.0.0	ND (0.0.001	ND (0.0.0	0.001	No

Hg), mg/l		1)	1)		)	)	01)	)	01)	Max.	relaxation
Cadmium (as Cd), mg/l	mg/l	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	0.003 Max.	No relaxation
Fluoride (as F), mg/l	mg/l	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	1.0 Max.	1.5
Selenium (as Se), mg/l	mg/l	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	0.01	No relaxation
Residual Chlorine (as Cl2), mg/l	mg/l	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND	ND
E. coli/100ml	---	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
Total Coliform, MPN/100ml	---	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

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.

3.10.1 Hydrogeology:

The rock formations occupying the district range from pre-Cambrian to Quaternary period. The Hydrogeological frame work of the district is essentially controlled by the geological setting, distribution of rainfall, snow fall, which facilitates circulation and movement of water through inter-connected primary and secondary porosity of the rocks constituting the aquifers. Based on the geological diversities and relative ground water potentialities of different geological formations, the district can broadly be divided into two Hydrogeological units.

i. Fissured formations

ii. Porous formations

3.10.2 Status of Ground Water Development:

In Kangra district, CGWB monitors 28 hydrograph stations for groundwater regime monitoring, under its National Network. The water levels are monitored four times and ground water quality once, during pre-monsoon period every year. In pre-monsoon (May 2012), the depth to water level range was from 1.56 to 15.44 m bgl and in post-monsoon (November 2012), from 0.48 to 12.30 m bgl. State departments has also drilled hand pumps in the district, with the depth ranging from 30 to 60 m, depending upon the lithology of the area and discharge varying from 0.5 lps to 2 lps. Few of them are energized with submersible pumps. CGWB has constructed, so far 79 exploratory/observation wells in the district, in the depth range of 23.5 m to 432 m bgl. The discharge of these wells was noted between 0.54 lpm to 3,410 lpm, for a drawdown of less than 1 to 60.55 m. Transmissivity ranges from 7.28 to 2,985 m2/day.

Source: https://www.cgwb.gov.in/old_website/District_Profile/HP/Kangra.pdf

3.11 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 thesite.

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 thesound signal as received by the human ear and the magnitude of sound level in this scale is denotedas 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. GazettesNotification {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 silencezones. 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 Topo sheet is given in **Figure 3.10.** Details list of noise monitoring stations is shown in **Table 3.15.**

Figure - 3.10

Locations of Noise Monitoring Stations

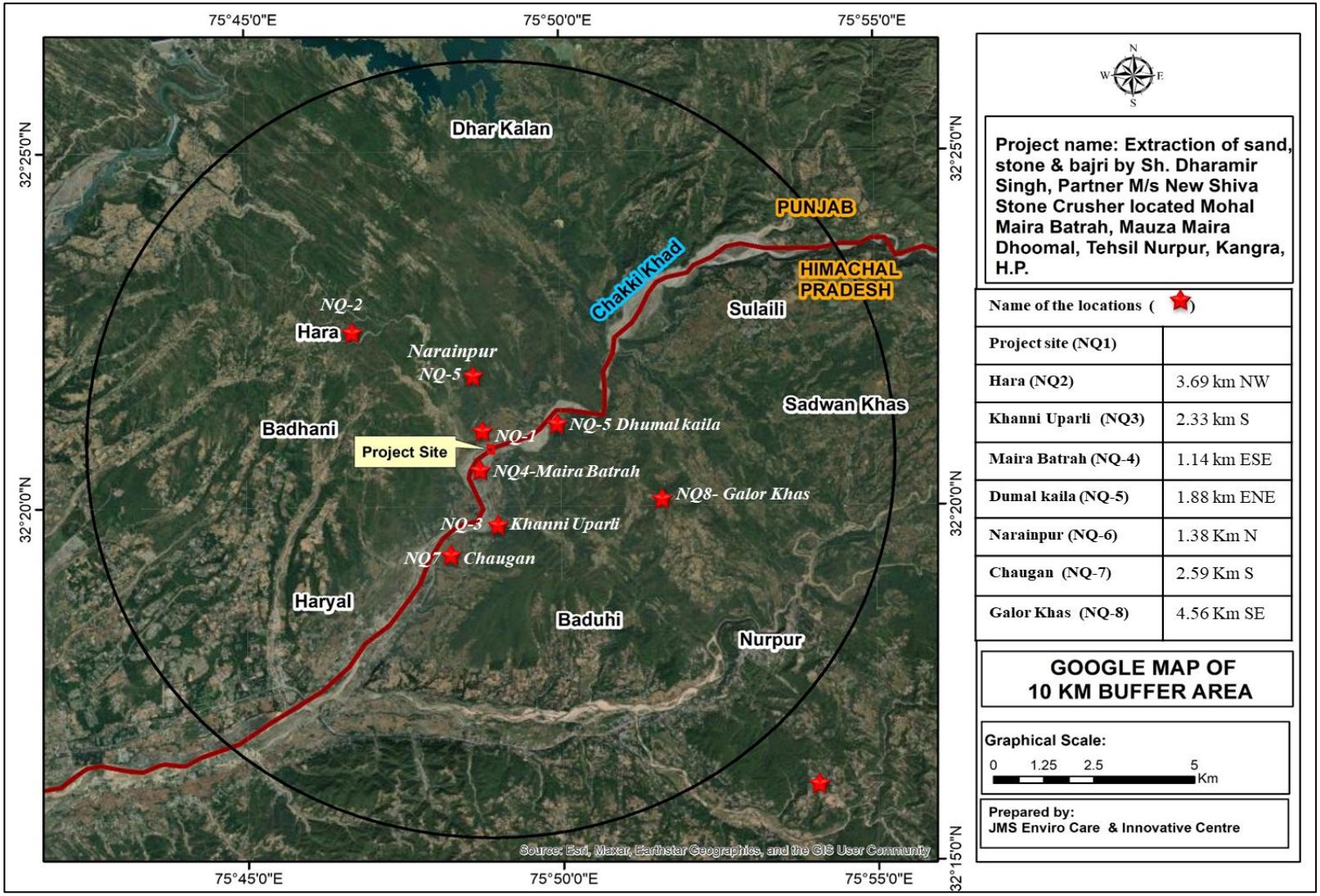


Table 3.15

Details of Noise Monitoring Stations

S. No.	Sample Code	Name of Village/ Location	Distance & Direction (KM)	Observation	Co-ordinates
1.	NQ-1	Project Site	**0**	Mining Site	32°20'46.48"N 75°48'51.77"E
2.	NQ-2	Hara	3.69 Km NW	Middle School	32°21'46.23"N 75°46'40.30"E
3.	NQ-3	Khanni Uparli	2.33 Km S	Residential	32°19'27.15"N 75°48'38.36"E
4.	NQ-4	Maira Batrah	1.14 Km (ESE)	Residential	32°20'14.13"N 75°49'17.41"E
5.	NQ-5	Dumal Kaila	1.88 Km (ENE)	Residential	32°20'38.89"N 75°49'54.85"E
6.	NQ-6	Narainpur	1.38 Km (towards N)	Residential	32°21'31.78"N 75°48'56.42"E
7.	NQ-7	Chaugan	2.59 (towards S)	Residential	32°18'54.97"N 75°48'40.80"E
8.	NQ-8	Galor Khas	4.56 (towards SE)	Residential	32°19'11.97"N 75°51'5.82"E

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

Table 3.16

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	66.8	33.6	IS 9989:1981(Rev.2001)
02.	Hara	54.4	33.4	
03.	Khanni Uparli	52.5	34.5	
04.	Maira Batrah	53.6	33.6	
05.	Dumal Kaila	53.9	35.2	
06.	Narainpur	52.3	33.3	
07.	Chaugan	52.6	36.5	
08.	Galor Khas	52.4	33.3	

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

Table 3.17
Noise Standards

Area Code	Category of Area	Noise dB(A) Leq	
		Day Time (6.00 A.M. -10.00 P.M.)	Night Time (10.00 P.M.-6.00 A.M.)
A	Industrial Area	75	70
B	Commercial Area	65	55
C	Residential Area	55	45
D	Silence Zone	50	40

Source- CPCB

CONCLUSION

Ambient noise levels were measured at 08 locations in the study area. Equivalent noise level varies from 66.8 to 52.4 dB (A) during day time and 36.5 to 33.3 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.

3.12 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 wereaimed 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 3.18.

Table-3.18

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 3.19.

Table-3.19

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 & Wildlife Department and literature review
Aquatic Ecology	Primary field Survey and secondary literature survey	Diversity of Species and them Importance	One Season (Winter)	Field studies, Forest/ Wildlife 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.

3.12.1 FOREST/ WILD LIFE SANCTUARIES:

There are no Notified Wild Life Sanctuaries, Protected and Reserved Forests within the 10Km radius of the study area.

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.

A) FLORA:

Methodology for floral study

1. **Secondary literature survey:** Published literature, including those from relevant organizationslike the Botanical Survey of India (BSI), the Wildlife Institute of India (WII- Dehradun), therespective Forest Department of the State concerned etc., research papers, articles, books andreliable 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 prepared into 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 area were 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 magnifying glass, 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 bushy growth 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- 3.20
List of Flora & Fauna (Buffer zone)

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 faunas are expected to be found in this area and it include mammals, reptiles, birds, etc.

List of Mammals

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

List of Reptiles

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

List of Birds

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

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

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

Table- 3.21 Floral Species in the Study Area (Core Zone)			
S.No.	**Common Name**	**English Name**	**Botanical Name**
1.	Bakkar bel	Black creeper	*Ichnocarpus frutescens*
2.	Bans Bainj, Sotha	Male bamboo	*Dendrocalamus strictus*
3.	Kehmal	Indian ash tree	*Lannea coromandelica*
4.	Palakh		*Ficus rumphii*
5.	Rajain, Pardesi	Indian elm, kanju	*Holoptelea integrifolia*
6.	Shisham, Tali	Bombay blackwood, Indian rosewood, sissoo	*Dalbergia sissoo*
7.	Simble	Silk cotton tree	*Bombax ceiba*
8.	Chopar chilla	Velvety Miliusa	*Miliusa velutina*
9.	Jaman	Black-plum	*Syzygium cumini*
10.	Kachnar Karal	Malabar ebony, mountain ebony	*Bauhinia malabarica*
Faunal Species in the Study Area (Core Zone)			
S.No.	**Common Name**	**English Name**	**Scientific Name**
1.	Jangli Soor	Wild Boar	*Sus sacrofa*
2.	Kakkar	Barking Deer	*Muntiacus Muntjak (vaginlis)*
3.	Bandar	Monkey	*Macaca mulatta*
4.	Jangli Murga	Red Jungle Fowl	*Gallus gallus*
5.	Kala Titar	Black Partridge	*Framcolinus francolinus*
6.	Titar	Grey Partridge	*F pondicrianus*
7.	Lomari	Fox	*Vulpie bengalensis*

Source: Himachal Pradesh State Biodiversity Board, 2018

3.13 SOCIO ECONOMIC

The socio-economic study encompasses the analysis of socio-economic conditions of habitation and communities living in the study area in addition to the potential issues & concerns of study area. In this regard, the view of stakeholders was invested through focused group discussions and questionnaire. The study involves the collection of baseline data including demographic details such as households, population literacy, employment pattern, health, transportation, communication & welfare facilities such as educational, recreational, hospitals and project awareness amongst the stakeholder. In addition, the economic resources,

infrastructure facilities, communication, and aesthetic attributes are also considered in the study as per the requirements under the Ministry MoEF&CC.

Objectives & Methodology:

- Identification of people living in the study area & demographic profile of the area- through secondary data collection from Census of India.
- Social status of society in the- through focused group discussion (FGD) selected villages.
- Vulnerable group of people such as BPL, SC & ST- from PRI representatives & interval method.
- Occupational pattern- from secondary data via Census of India.
- Physical infrastructure e.g. roads, transport, medical, recreational and educational facilities- from PRI.
- Likely impact of proposed development on the core zone as assessed in association with.
- Needs of different communities based- from data analysis.
- Social management plan with budget, timeline on study- from data analysis.

Methodology applied for selection of sample & data collection:

The methodology which is applied for primary source of data collection i.e. gathering data through field survey for socio- economic environment is depicted below:

a) **Sampling Method:** A judgmental and purposive sampling method was used for choosing respondents of various sections of the society i.e. Sarpanch, Adult Males and Females, Teachers, Medical Practitioners, Businessmen, Agriculture Laborers, Unemployed Group etc. Judgmental and purposive sampling method to access the total population that helps to fulfill the purpose of research needs.

b) Data Collection Method: For the process of data collection through primary source certain methods were used amongst them is:

i. Field Survey and Observations: Field survey and observations was made in nearby sampling village and the socioeconomic status of that region was studied. Visits were made at Health Centers, Schools, Gurudwaras, Panchayat office etc.

ii. Interview Method: Structured interview method was used to collect data regarding the awareness and opinion from the samples selected of the various socio- economic sections of the community. Structured interviews involve the use of a set of pre-decided questions that includes fixed and alternative questions.

The questionnaire mainly highlights the parameters such as income, employment and working conditions, housing, food, water supply, sanitation, health, energy, transportation and communication, education, environment and pollution to assess the standard of living of that particular region and general awareness, opinion and expectation of the respondents about the proposed project. Interview method helps to collect more correct and accurate information as the interviewer is present during the field survey.

Secondary data collection & Review:

Demographic profile of the district based on Census-2011 is tabulated below. In order to create a baseline of villages/habitation in the study area.

- The villages located in the study area were collected on the basis of land use maps.
- The demographic data of villages were collected from the district census data.

3.13.1 Socio-economic data of study area:

Kangra is a prominent district in the western part of Himachal Pradesh. As per the 2011 Census, the district comprises 15 tehsils and 3 sub-tehsils, encompassing 3,869 villages. The district is administratively divided into eight sub-divisions: Dharamshala, Nurpur, Palampur, Kangra, Dehra, Jaisinghpur, Jawali, and Baijnath. Dharamshala sub-division includes the Municipal Corporation of Dharamshala and tehsils like Dharamshala and Shahpur. Kangra sub-division includes Kangra tehsil and Nagrota Bagwan. Other sub-divisions such as Palampur, Baijnath, and Nurpur govern respective tehsils and several Nagar Panchayats, providing decentralized governance across the district. The details of the socio-economic study of kangra district are tabulated below:

Particulars	Total	Male	Female
Population	1,510,075	7,50,591	7,59,484
Child (0-6)	1,64,607	87,741	76,866
Literacy Rate	85.67%	91.49%	80.02%
Schedule Caste	3,19,385	1,59,697	1,59,688
Schedule Tribe	84,564	41,745	42,819
Total Workers	6,48,915	4,58,294	1,90,621
Main Workers	4,58,294	3,14,278	1,44,016
Marginal Workers	1,90,621	1,44,016	46,605

We have chosen 4 villages in the study area for socioeconomic study. These villages are situated at different distance & direction from the project site, covering the whole study area which is mentioned below:

S. No.	Name of the Village	Distance and Direction from Project site
1.	Maira Batrah	1.14 Km SE
2.	Khani Upperli	2.33 Km S
3.	Dhumal Kaila	1.88 Km E
4.	Haral Jhikli	3.50 Km NE

1. Maira Batrah

According to Census 2011 information the location code or village code of Maira Batrah village is 008345. Maira Batrah village is located in Nurpur tehsil of Kangra district in Himachal Pradesh, India. It is situated 85km away from district headquarter Nurpur. Nurpur is the sub-district headquarter of Maira Batrah village. As per 2009 stats, Hadal is the gram panchayat of Maira Batrah village.

The total geographical area of village is 308.1 hectares. Maira Batrah has a total population of 327 peoples, out of which male population is 164 while female population is 163. This results in a sex ratio of approximately 993 females for every 1,000 males. Literacy rate of maira batrah village is 77.68% out of which 80.49% males and 74.85% females are literate. There are about 73 houses in maira Batrah. The details of the socio-economic study of selected village Maira Batrah is tabulated below:

Particulars	Total	Male	Female
Population	327	164	163
Child (0-6)	37	23	14
Literacy Rate	77.68%	80.49%	74.85%
Schedule Caste	59	30	29
Schedule Tribe	0	0	0

2. Khani Upperli

According to Census 2011. Khani Upperli village is located in Nurpur tehsil of Kangra district in Himachal Pradesh, India. It is situated 70km away from district headquarter Nurpur. Nurpur is the sub-district headquarter of Khani Upperli village. As per 2009 stats, Khanni Uperali is the gram panchayat of Khani Upperli village.

The total geographical area of village is 154.74 hectares. Khani Upperli has a total population of 834 peoples, out of which male population is 437 while female population is 397. This results in a sex ratio of

approximately 908 females for every 1,000 males. Literacy rate of khani upperli village is 77.82% out of which 81.24% males and 74.06% females are literate. There are about 181 houses in khani upperli village. The details of the socio-economic study of selected village Maira Batrah is tabulated below:

Particulars	Total	Male	Female
Population	834	437	397
Child (0-6)	100	57	43
Literacy Rate	77.81%	81.24 %	74.06 %
Schedule Caste	108	59	49
Schedule Tribe	0	0	0

3. Dhumal Kaila

According to Census 2011 Dumal Kaila village is located in Nurpur tehsil of Kangra district in Himachal Pradesh, India. It is situated 85km away from district headquarter Nurpur. Nurpur is the sub-district headquarter of Dumal Kaila village. As per 2009 stats, Hadal is the gram panchayat of Dumal Kaila village.

The total geographical area of village is 319.03 hectares. Dumal Kaila has a total population of 264 peoples, out of which male population is 134 while female population is 130. This results in a sex ratio of approximately 970 females for every 1,000 males. Literacy rate of dumal kaila village is 64.39% out of which 69.40% males and 59.23% females are literate. There are about 58 houses in dumal kaila village, it comes under Nurpur Vidhan Sabha constituency & Kangra Lok Sabha constituency. Nurpur is nearest town to khani upperli village for all major economic activities. The details of the socio-economic study of selected village Maira Batrah is tabulated below:

Particulars	Total	Male	Female
Population	264	134	130
Child (0-6)	38	18	20
Literacy Rate	64.39%	69.40 %	59.23 %
Schedule Caste	75	38	37
Schedule Tribe	50	23	27

4. Haral Jhikli

According to Census 2011 Haral Jhikli village is located in Nurpur tehsil of Kangra district in Himachal Pradesh, India. It is situated 85km away from district headquarter Nurpur. Nurpur is the sub-district headquarter of Haral Jhikli village. As per 2009 stats, Hadal is the gram panchayat of Haral Jhikli village.

The total geographical area of village is 94.27 hectares. Haral Jhikli has a total population of 119 peoples, out of which male population is 68 while female population is 51. This results in a sex ratio of approximately 750 females for every 1,000 males. Literacy rate of haral jhikli village is 78.99% out of which 89.71% males and 64.71% females are literate. The details of the socio-economic study of selected village Maira Batrah is tabulated below:

Particulars	Total	Male	Female
Population	119	68	51
Child (0-6)	9	4	5
Literacy Rate	78.99%	89.71%	64.71 %
Schedule Caste	17	8	9
Schedule Tribe	0	0	0

3.13.2 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 3.22.**

Table- 3.22

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					
Maira Batrah	73	327	164	163	37	93.62	81.88	59	0	106	84	22
Khanni Uparli	181	834	437	397	100	93.42	83.05	108	0	222	160	62
Haral Jhikli	25	119	68	51	9	95.31	71.74	17	0	29	29	0
Dhumal Kaila	58	264	134	130	38	80.17	70.00	75	50	138	99	39
Galor Khas	40	206	105	101	35	77.65	73.26	11	69	131	35	96
Hara	35	170	86	84	14	96.15	93.59	12	0	140	103	37

Ref: Census of India 2011

Figure - 3.11

Sampling Photographs

Economic profile of the area:

- **Agriculture:** Agriculture is the main occupation of the people in the district, having different types of soil and agro-climate conditions which are quite suitable for the growing of various types of cereals, vegetables, fruits and other crops. The major crops grown in the district are Wheat, Paddy, Maize, Barley, and Millet. Besides these, potato and a variety of vegetable like green-peas, cauliflower, cabbage, spinach tomatoes, etc. are also grown in the district. The economy is mostly agrarian and majority of population is depending on agriculture and activities allied to it for earning their lively hood. The most of the land is un-irrigated and depended upon the rainy season for irrigation.

- **Animal Husbandry:** Due to high cost of rearing, the livestock population is gradually decreasing in the area. Most of the people are meeting their daily milk requirement from reputed dairies e.g. Mother Dairy and Verka. However, Govt. of Himachal Pradesh has provided adequate veterinary facilities in the area.

- **Historical & Cultural Profits:** Although whole of Himachal Pradesh is dominated by religious perceptions having temples of locals deities and other places of worship, the study area is devoid of protected monuments notified by ASI or the State Govt. Within 10 km radius, only one archaeological site (Nurpur fort) exists.

Basic Infrastructure Facilities:

- **Medical:** The study area has a reasonable healthcare setup, with primary health centers, community health centers, veterinary hospitals, and non-government medical facilities available. The nearest government dispensary, located at Khanni, is about 3-4 km from the project site. However, specialized medical facilities are either available at District Headquarter or some private hospitals. People are availing specialized medical facilities from the nearby Punjab district of Pathankot.

- **Water supply:** Whereas some households have their own drinking water arrangements as handpumps, most of the population is dependent on Govt. water supply by IPH Deptt. of State Govt. Some areas experience water shortage in acute summers where the supply is assured through water tankers.

- **Education:** The area has a basic educational infrastructure, with the nearest school being Govt. Primary School, Maira Batrah, which has a strength of 32 students. Additionally, there is also an Anganwadi school available, providing early childhood education and care services. Thinly populated villages share common primary schools, while high and secondary schools cater to clusters of villages. For higher education, government and private colleges, as well as technical education institutions, are available in major towns within the district. Additionally, government hospitals in the district provide facilities for specialized

medical treatment, ensuring access to both education and healthcare services.

- **Transportation:** The area is well connected with roads & link road network. Both Govt. & Pvt. Bus service, taxi service is available in the area. People are using their own two wheelers & personal cars for short/long journey. However, there do not exist railway service in the area.

- **Communication facilities:** During the past decades, the area has undergone sea change in the communication network. Landlines are now virtually non- existent in the area. Majority of members of each household are having mobile phones. Post-offices/ Branch Post-Office area available in cluster of villages. However, internet facility is available in the area. However, courier service is not upto the mark. PCO are becoming extinct.

Conclusion:

Based on the perusal of socio-economic study of the area, it is seen that the women & children and aged people are not adequate in the area. Additionally, most villagers in the study area are non- workers due to which they are economically weak. The State Govt. must look into these aspects for socio-economic improvement of the area. However, the project authorities will contribute substantially to improve the economic conditions of surrounding village by way of providing direct & indirect employment to the surrounding population and the undulating of CSR/CER activities in the area.

3.14 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 site is from a link road originating from a place known as Naga bari on the Pathankot-Mandi NH 154.The site is located at the distance of 10 KM from the Naga Bari village.

The road is in enough good condition to bear the additional truck/ transport created by the mining operations Only 390 metric tonnes of material shall be transported at an average per day (Total working days 270/year) for which average 25-30 trucks with @15 MT capacity are required.

3.15 HYDROLOGY AND DRAINAGE PATTERN:

The Chakki Khad is a right bank tributary of the Beas River originating from near Janjru, on the Western side of Dhauladhar range at the altitude of 3212 Meter above Mean Sea Level (Entry at Kangra from 880 Meter above Mean Sea Level ,43 P/15) near Sanjhi Nalla bordering Chamba district. The Dhauladhar form the water divide between river Beas on the Southern side and river Ravi on the Northern side. The river Chakki flows through Bhatiyat Sub Division and then enter Kangra and then flows through the Nurpur and Indora Subdivisions of the Kangra district. The key characteristic of the river and its tributaries are as under in the Table 3.24.

Table 3.23

Hydrological and drainage details of the project area

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 Chakki Khad which is a tributary of the Beas River.
1.2	**Drainage System**	It forms a part of the Beas drainage system.
1.3	**Type of drainage**	The primary tributaries above 430mRL.exhibit a dendritic type of drainage pattern and then to its downstream side show a sub-dendritic type of dendritic type of drainage pattern.
1.4	**Origin of river / stream**	The Chakki Khad originated at a height of about 3212 meters near Janjru village and joins the Beas River after travelling distance of about 35Kms in Kangra and 5 Kms in the Chamba district, it joins the Beas River.
1.5	**Altitude of the origin**	About 3212 MRL above mean sea level in Chamba District. The maximum and minimum elevation varies from 464 AMSL upstream and 463 AMSL towards the downstream side respectively in the lease area.
1.6	**Geometry of the catchment of the Chakki River impacting the replenishment of deposits.**	Total area of catchment = 2000.00 Sq. Km Area of catchment up to mining site = 860 Sq. km
The following are the different ingredients of the Chakki River		
a.)	**Number of tributaries on right bank**	7 tributaries on the right bank and 5 on the left bank
b.)	**Maximum length of the watershed**	68.57 Km
c.)	**Maximum breadth of the watershed**	26.50 Km
d.)	**Elevation at origin**	3212 M

e)	**Elevation at lease area**	464 meters to 463 meters above MSL
	Total length of the river	89.3 Kms
f.)	**Width of the river**	400- 480 meters.
g.)	**Total length of river up to the mining lease**	45.93 Km
h.)	**Total elevation of Loss up to mining lease**	2783 M
i.)	**Average Slope**	1.74 % i.e. about 1.03°
k.)	**Slope angle at mining lease area**	0.35 i.e. about 0.20°

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

The cycle of erosion at the mining site is old.

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

The Chakki Khad has sufficient capacity to replenish almost equivalent to the stress on the mining lease area as this stream carries heavy sediment load and deposits it annually on the river bed. Replenishment of the river bed material is very much dependent on rainfall and run-off from the surrounding watershed area. In contrast to surface erosion, mass movements have always been common on steep slopes. Therefore, minerals excavated in a year shall be replenished during the monsoon season and hence, the whole block shall be exploited every year. The tributaries of this stream have carved a wide flood plain as the banks comprised of soft rocks hence, leading to higher deposition in this area. The stream approximately 700-750 meters wide in the mining lease area which gives a better chance of replenishment in this area.

- **The level of H.F.L**

During Monsoon, the flood level raises about 1.50 mts. to 2.00 meters for a short spell of time. The highest flood level is the maximum rise level and the lowest flood level is the river bed level.

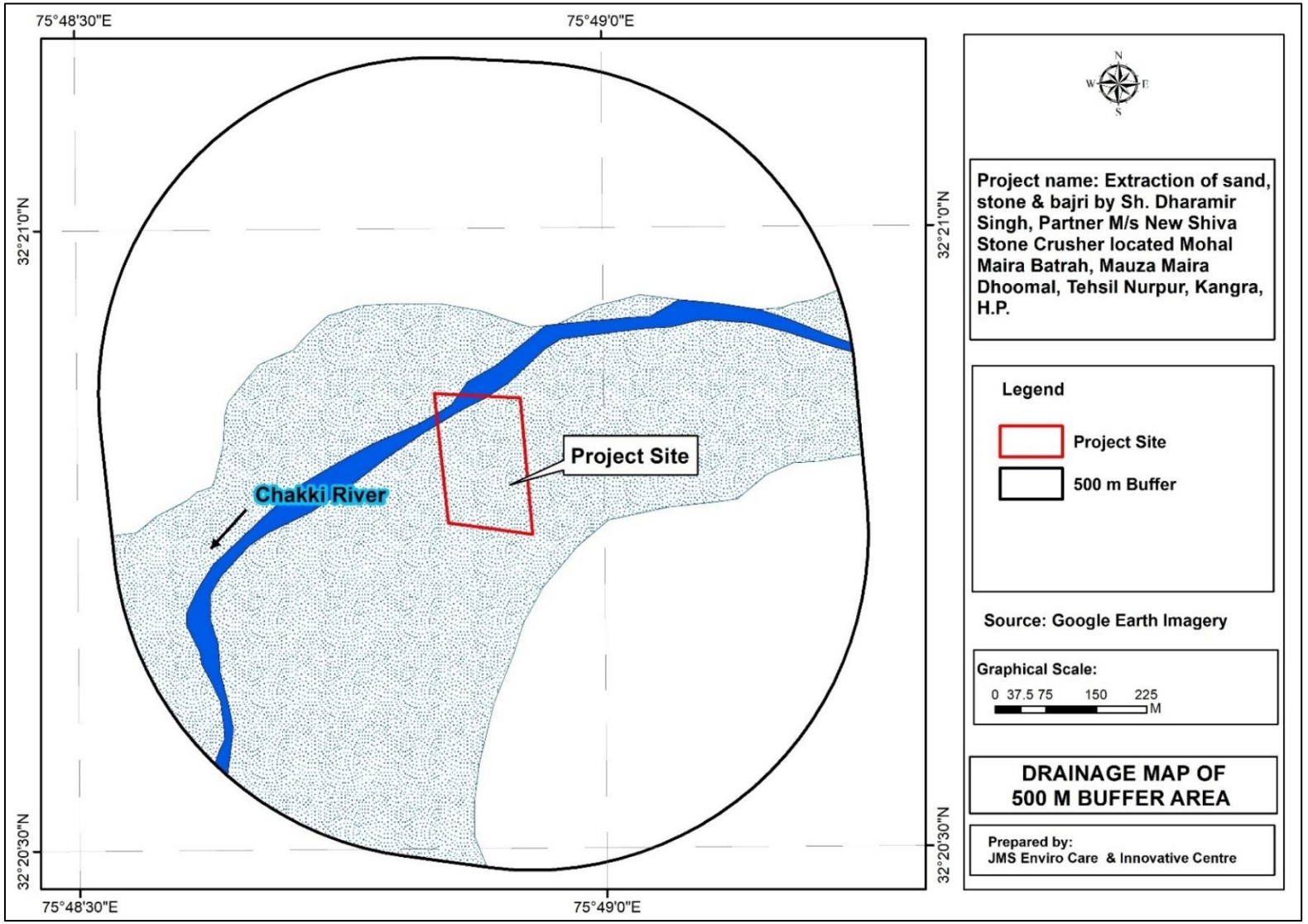
- **Description of Ground Water Table in The Mining area before and Post Monsoon**.

The Chakki River 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. After the monsoon period, the springs can be seen functional in a number of places but the intensity of discharge start reducing after September and most of the springs go dry after November and the major source of water remain the course of the stream where the water is available along the course of a river where the wells are developed.

❖ ***The drainage map of project site (500m buffer area) is shown in fig. 3.12.***

Figure- 3.12

Drainage map of the proposed mining area



CHAPTER 4.0

ANTICIPATED ENVIRONMENTAL IMPACTS & MITIGATION MEASURES

4.1GENERAL:

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 actions.

The primary function of an environmental impact assessment is to ascertain the potential impactsof 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 andimpacts 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.

4.2AMBIENTAIR QUALITY

Impacts:

As the mining is proposed in 02-49-20 Ha area over river bed upto a depth of 2.0 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 respirableand 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 insufficient 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 out in 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 PM2.5 from the proposed project are given in Table- 4.1. Isopleth 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
PM2.5	0.84	42.9	43.74

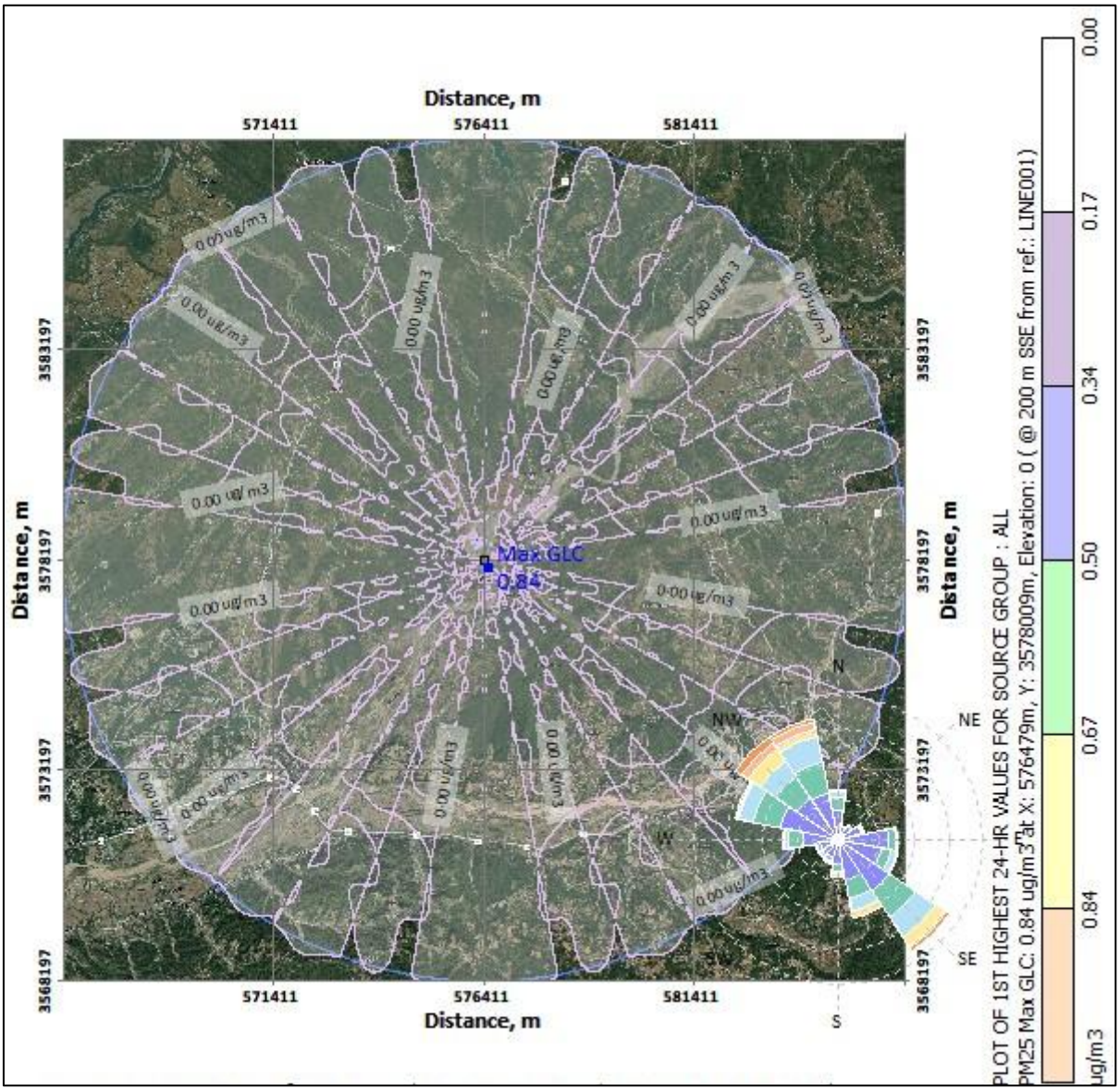
Predicted GLC's of the proposed project:

It is predicted that the maximum contribution in GLC's, with unit's operation will be 42.9 µg/m^3 for PM2.5 at a particular elevation of 464 and distance of 200 m from SSE. 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 25 vehicles per day both ways. The present max PM10 is 78.9 µg/m^3 and PM2.5 is 42.9 µg/m^3. There will be marginal increase in existing level of ambient air quality (PM10, which will be well within the permissible, limits i.e. 100ug/m^3.

Conclusion:

From the figures available and the studies made, it is concluded that with the mining activity, theambient 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 PM2.5



***Source-** *Envitrans Aermod Software*

Mitigation measures:

The proposed project is anticipated to have very low/ insignificant impact on the ambient air quality based on the marginal increase in GLC. The following mitigation measures have been suggested to ameliorate the adverse impact, if any:

- The mining surface will be kept wet.
- The dump height during loading shall be manufactured just above the truck height.
- Truck/dumpers will not be overloaded.

- Regular water sprinkling on haul road to avoid dust generation.
- Strict speed levels will be enforced for transport vehicles.
- Water sprinklers will be installed while unloading at crusher site.
- Multiple transport routes depending upon wind direction will be adopted.
- Paved road from mining site to approach road.
- Tree plantation along haul roads, mining lease boundary and near settlement to reduce impact of dust on nearby villages.
- Transportation of minerals in tarpaulin covered vehicles & in day time only.

Additional Mitigation Measures:

- Every time the material is moved, PM emissions are increased. Hence, the use of temporary storage piles should be avoided.
- At the crusher site, the crushing and screening areas will be shielded to reduce wind speed and enclosing the site of dust generation.
- Wet suppression at crusher site.
- Reduction of unnecessary traffic on haul road.
- All disturbed areas are subjected to wind erosion. Therefore, vegetation should be provided on all waste stockpiles and berms. Distributed soil should be compacted and stabilized by vegetation.
- Reduction in frequency of disturbance.
- Implementation of comprehensive air quality monitoring programme.

4.3 WATER QUALITY

The project site lies in the riverbed of Chakki River which is perennial in nature, and water flows only during rainy season. The mining activity is carried out except rainy season as per the approvedmining plan. So, surface water quality of the Khad will not be affected for mining activity.

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 and soak pits at crusher site before to put use for plantation. However, the following safeguards shall be adapted: -

- Check dams and gully checks will be raised to reduce the velocity of runoffs, thereby minimizing the flooding & carryover of deposits to the receiving waters
- Mine waste dumps will be stabilized during the course of their retention.
- There would not be any adverse effect on the ground water quality. The proposed mining shall be much

above the water table. However, regular monitoring of quality in the existing hand pumps/tube wells in the vicinity would be carried out.

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.
- Well maintained vehicles will be used in order to reduce the noise during movement of vehicles. Regular and proper maintenance of vehicles will be ensured.
- Vehicular movements will be restricted to day time only.
- Plantation of trees along the mining area or suitable land will be done to dampen the noise.
- 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 thevegetation & 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, theexisting ecology & biodiversity of the area shall be maintained & will not be affected. Table 4.2 shows the impact sand mitigation measures for biological environment:

Table 4.2: Anticipated impact and mitigation measures for biological environment

Impact Predicted	Mitigation measures
Disturbance to free movement / living of wild fauna viz. Birds, Reptiles etc.	• Noise produced due to vehicular movement for carrying sand materials will be within permissible noise limit. Higher noise level in the area may lead to restlessness and failure in detection of calls of mates and young ones. • If wild animals/birds are noticed crossing the core zone, they will not be disturbed at all. • Noise level will be maintained within permissible limit (silent zone-50dB (A) during day time or residential zone 55dB (A) as per Noise Pollution (Regulation and Control) Rules 2000, CPCB norms.
Impact on forest resources, economically important plants, medicinal plants and threat to rare, endemic and endangered species	• Regeneration of rare and endangered plants of economic importance including medicinal plants.
Impact on Agriculture	• There will be no impact on the agriculture. Dust generated will be suppressed during mining operation at

	mining site as well as during transportation will be suppressed by sprinkling.
Impact on land use and vegetation	• No tree cutting will be allowed.

Summary of Overall Impacts

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.

The main impacts will be during the mining activities with respect to Air, Noise, Land, Biological and Socio-economic. Following is the summary of overall significant impacts related to environmental components.

Environmental Attributes	Major Impacts
Air Environment	Fugitive emission due to excavation & screening vehicular emission due to transportation and operation of machineries, marginal damage of vegetation, health effects.
Noise Environment	Increase in Noise levels due to, excavator and dumpers.
Water Environment	Sewage generation, sedimentation, no waste water generation due to mining activities, however rainwater will be harvested in the mine excavated ponds and will be used for sprinkling & plantation.
Land Environment	Acquisition of land, loss of land use / land cover area, change in soil quality, generation of overburden, however positive impact due to plantation in the mine lease area and green belt around the mine lease area.
Biological Environment	Cutting of trees, loss of vegetation, migration of schedule fauna, disturbance to fauna due to noise

	generation and trenching positive impact due to plantation in and round mine lease area and along the road side.
Socio- economic Environment	Disturbance to the habitations due to mining activities, No R & R, influx of people, however positive impacts due to enhancement of economic benefits through allied industries, improvement in quality of life and employment etc.

CONCLUSION:

Major impacts are described above; there will not be any irreversible damage due to the project. However, assessment of impacts with respect to all the environmental components is made and measures are suggested. **CSR/CER scheme** as per project specific requirement according to the project economic benefit will be implemented and sufficient budgetary provision will be made available and implemented.

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 90-95 persons. All workers are drawn mostly from the local population. Thus, there is not any appreciable change in population in the nearby villages/towns. Inview 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 WASTE DISPOSAL

No liquid waste will be there on the mining site. And solid waste (i.e., silt, clay etc.) will be used in road making, embankment and the balance stabilized for extended use. There will be no effect of waste disposal on the environment in general.

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.

CHAPTER – 5.0

ANALYSIS OF ALTERNATIVES

5.1 GENERAL

This is the river bed mining project, where the material will be lifted manually up to the depth of 2.0 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 MONITORIN G 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 focusedon 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 analyzed. 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.

6.4 The objectives of the monitoring will be as follows:

- To verify the results of the Impact Assessment Study with respect to the proposed projects.
- 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, do not 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, NOX Silica & SO2	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.

6.5 ENVIRONMENT MANAGEMENT CELL

The Environment Management Cell shall include:

- Representative of Management (Head of Environment Cell)
- In charge of Maintenance Department
- A representative of Environmental Consultant.

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 shall be documented.

CHAPTER – 7.0

ADDITIONAL STUDIES

7.1 PUBLIC CONSULTATION:

Present report is for the purpose of public consultation only. The details of proceedings of public hearing will be incorporated in the final report, which will include the following:

- 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 risk hazard 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.

7.2.1 INUNDATION/FLOODING/EROSION:

The consequences of flooding/ inundation/ erosion 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.

7.2.2 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.

7.2.3 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.

7.2.4 RECOMMENDATION FOR RISK REDUCTION:

Measures to prevent Inundation/Flooding

Inundation of flooding is expected and beneficial for these mines as during this time only themineral

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 theupstream 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 (9: 00 a.m. to 6: 00 p.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 DISASTER MANAGEMNT PLAN:

The Disaster Management Plan is aimed to ensure safety of life, protection of environment, protection of installation and restoration of production. For effective implementation of the Disaster Management Plan, it should be widely circulated and personnel training should be given.

Objectives:

- Safeguard other people
- Minimize damage to property and the environment.
- Initially contain and ultimately bring the incident under control.

- Preserve relevant records and equipment for the subsequent inquiry into the cause and circumstances of the emergency.

7.3.1 PREPAREDNESS PLAN:

Natural Disasters:

(a) **Cyclone and Flood:**

- When warning of cyclone or heavy rains is received from Local Administration, the Commander shall alert Staff to be prepared.
- All the equipment should be withdrawn from mine and kept in a higher site.
- The Quarry Manager may advise to leave the staff depending on security of situation.

(b) **Earthquake:**

- When earthquake hits, all persons shall be encouraged to run out in the open areas designated as Assembly Points.
- All the electrical supply should be disconnected by the electrical department.

7.4 SOCIAL IMPACT ASSESSMENT:

7.4.1 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-Economic Impact 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.

7.4.2 OBJECTIVES OF SEIA:

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 neighborhoods. 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.

7.4.3 SCOPE:

The Scope of the study is as follows:

- To collect baseline data of the study area.
- To comprehend socio-economic status of the people living in the study area.
- To assess probable impact of the project on social and economic aspects in the study area.
- To measure the impact of the project on Quality of life of the people living in the study area.
- To ensure sustainability of positive impact.
- To suggest mitigation measures and agency responsible for taking action in case of adverse impact.

7.4.4 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 90-95 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 from 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 project will provide employment to local people who are in search of the same. The granting of Environment Clearance to the project will make mining of Sand legally valid and it will generate revenue for the state. With the implementation of the project there will be increase in the employment opportunities for the local villagers. The study area is still lacking in health and educational facilities. It is expected that same will improve to a great extent with opening of the project and associated activities. Also, Proposed CSR activity will improve the socio-economic status of the villagers of the study area.

CHAPTER – 8.0

PROJECT BENEFIT

8.1 PRELUDE:

The proposed project is mining of sand, stone and bajri mining from the riverbed, which will haveno 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 improvementin infrastructure development and economic growth of the area.

8.2 EMPLOYMENT POTENTIAL:

The mining activity will provide direct and indirect employment to around 90-95 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 an enhanced culture of quality throughout the organization.

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. 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

Budget for Corporate Environmental Responsibility (CER):

Subject to Environment Clearance requisite amount against the CER activities will be deposited in the account of Directorate of Environment, Science & Technology (DEST), GoHP for which the Director (DEST) will devise a plan in consultation with project proponent.

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 roadmetal 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 25,00,000/- or Twenty-Five 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 90-95 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.

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 otherform 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. Greenbelt 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

10.1 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 impactsarising 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.

10.2 Objectives of EMP:

- Overall conservation of environment.
- Minimization of waste generation and pollution.
- Judicious use of natural resources and water.
- Safety, welfare and good health of the work force and populace.
- Ensure effective operation of all control measures.
- Vigilance against probable disasters and accidents.
- Monitoring of cumulative and long-term impacts.
- Ensure effective operation of all control measures

In order to mitigate the impacts due to the proposed project on various environmental components, the following environmental management measures are recommended.

Environment	Anticipated Impacts	Mitigation Measures
Air Environment	➢ In river bed mining activity, the only source of emission is the particulate dust generation from the mining operation and the fugitive dust from loading and transportation activities. ➢ In addition, gaseous emissions as fugitive are generated from the vehicle exhaust engaged in transportation of minerals. ➢ All these emissions are human health hazard to workers & the surrounding population in terms of respiratory ailments and the vision impairments.	➢ Periodic air quality survey will be carried out to monitor the changes consequent upon mining activities as per the norms of State Pollution Control Board. ➢ To control the emission of harmful gasses, regular maintenance of equipment will be carried out. ➢ Proper mitigation measures like water sprinkling on haul roads will be adopted to control fugitive dust emission. ➢ Plantation will be carried out in vicinity of river bank (safety zone).
Noise Environment	➢ Noise will be produced at mining site due to working of mine and the movement of vehicles only. ➢ The lease area is not inhabited by any wild life, and 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 insignificant so as to cause any impacts.	➢ Periodical monitoring of noise will be done so as to take corrective actions wherever needed. ➢ Speed of the vehicles in the mining area will be restricted. ➢ Vehicles with proper maintenance will be utilized for material transportation.

Environment	Anticipated Impacts	Mitigation Measures
		➢ Proper maintenance of all vehicles & equipments 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 be domestic waste water generation from the mining operations. ➢ There is no chance of surface water pollution. The mining will be done away from water course on the dry 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 2m from the surface as per approved mining plan. ➢ Necessary stabilization of waste material stockpile will be done 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 and thereby river channel shifting and degradation of land, causing loss of properties.	➢ No reclamation/ restoration is required as the excavated area will be naturally reclaimed by successive monsoon. ➢ The proposed river bed mining is unlikely to change any characteristic of the river bed as the

Environment	Anticipated Impacts	Mitigation Measures
	➢ 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 mining site is a river bed and will remain the same post- mining. There will be no change in land-use.	permitted mining volume is based upon annual replenishment.
Solid/Hazardous Waste Management	➢ There will not be generation of solid waste from the project as all the mined material will be processed at crusher. ➢ The silt/clay mixture from the waste section will be stored & stabilized at the crusher site/private land for extended use in road making, land reclamation and soil conservation works.	➢ Domestic sewage after septic treatment at nearby crusher site will be disposed on to land for reclamation. ➢ The silt & clay mixture generated during mining will be processed at crusher along with after minerals.
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 is found that the mining activity will not have any significant impact on the biological environment of the region.

Environment	Anticipated Impacts	Mitigation Measures
		➢ 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	➢ There will not be any negative impact on the socio-economic pattern of the study area. Rather the area will be benefitted economically by way of employment to locals. ➢ The social fabric will remain intact as no migration from outside is anticipated.	➢ The proposal will significantly result in positive impacts.

10.3 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. In Lacs)	Recurring Cost (Rs. In Lacs)/annum	Time frame to Implement
1.	Air pollution control- Management of haulage road including water sprinkling with the help of tankers	6.0	0.50	Twice a day & as per requirement
2.	Green belt development. & its maintenance	12.0	1.0	As per local Forestry Department
3.	Waste management.	--	1.0	As per approved mine plan
4.	Testing of air, water and noise parameters as per norms of HP Pollution Control Board.	1.5	0.30	As per EC/consent conditions
5.	Occupational health measures- Provision of PPE, first aid and other miscellaneous.	2.0	1.0	As per Factory Act
Total		**21.5**	**3.8**	

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

11.1INTRODUCTION:

Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher, Village & P.O. Kandwal and Tehsil Nurpur, District-Kangra, Himachal Pradesh has been issued a "Letter of Intent "for grant of mining lease vide letter No. Udyog- Bhu (Khani-4)Laghu-230/2023 dated 06.02.2024 for the grant of mining lease area for the extraction of stone, bajri and sand over an area situated in Khasra no. 722/1 measuring 02-49-20 Ha (Pvt land-River bed), falling in Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, 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 B2. However, due to cluster formation (Around 3 mining lease area existing within the 500m radius of the project site) the project is categorized as ***'Cat. B1'***.; hence the Environmental Clearance is to be given by SEIAA, Shimla, H.P

11.2DETAILS OF MINING PROCESS & LOCATION:

Table No. 11.1: Details of Mining Process & Location

<table>
<tr><td>1.</td><td>Name of the project</td><td>Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher</td></tr>
<tr><td>2.</td><td>Type of project</td><td>Mining of Minor Minerals i.e. Sand, Stone and Bajri.</td></tr>
<tr><td>3.</td><td>Location</td><td>Khasra Nos. 722/1 (Pvt. Land - River bed), located at Mohal Maira Batrah, Mauza Maira Doomal, Tehsil Nurpur, District Kangra, Himachal Pradesh</td></tr>
<tr><td>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>32°20'23.11"N</td><td>75°48'40.62"E</td></tr>
<tr><td>P2</td><td>32°20'23.61"N</td><td>75°48'46.34"E</td></tr>
<tr><td>P3</td><td>32°20'15.19"N</td><td>75°48'46.63"E</td></tr>
<tr><td>P4</td><td>32°20'13.51"N</td><td>75°48'45.40"E</td></tr>
</table>
</td></tr>
<tr><td></td><td>Elevation (Altitude at origin)</td><td>Highest 464 meters above MSL.
Lowest 463 meters above MSL.</td></tr>
<tr><td>5.</td><td>Mining Area</td><td>02-49-20 Hectare</td></tr>
<tr><td>6.</td><td>Products</td><td>Sand, Stone and Bajri</td></tr>
</table>

7.	**Production Capacity**	1,05,300 MT/ Year or 5,26,500 MT over a period of five years (including silt/clay)
8.	**Cost**	Rs. 25 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**	10.0 KLD
13.	**Source of water supply**	**Through tankers** (Permission for the same has been taken from Gram Panchayat)
14.	**Air pollution control at mining site**	Water sprinklers & tree plantations
15.	**Hazardous chemical**	Nil.
16.	**Hazardous waste**	Nil.
17.	**Land Type**	Private Land, Gair Mumkin Kuhal
18.	**Manpower requirement**	95 persons
19.	**Validity of Lease**	As per grant
20.	**Name of the stream/ River**	The mining lease area lies in the river bed of **Chakki 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/tippers 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:

11.4.1 Air Environment

Anticipated Impacts:

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.

Mitigation Measures:

- 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.

11.4.2 Noise Environment

Anticipated Impacts:

- 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 insignificant so as to cause any impacts.

Mitigation Measures:

- 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 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.

11.4.3 Water Environment

Anticipated Impacts:

- 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.

Mitigation Measures:

- River bed mining will be done up to depth of 2m 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.

11.4.4 Land Environment

Anticipated Impacts:

- Deviation from planned mining procedure can lead to bank erosion/cutting 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.

Mitigation Measures:

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

11.4.5 Solid/Hazardous Waste Management

Anticipated Impacts:

- No solid waste generation is expected from the mining operation. Waste generation from human activities and vehicles usage can occur.

Mitigation Measures:

- 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.

11.4.6 Biological Environment

Anticipated Impacts:

- The mining activity will have insignificant effect on the existing flora and fauna.

Mitigation Measures:

- 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.

11.4.7 Socio-Economic Environment

Anticipated Impacts:

- As such no negative impact will be anticipated there.

Mitigation Measures:

- For improving the socio-economic environment, proper CER activities will be taken up in vicinity to uplift the condition of people.

11.4.8 Occupational Health & Safety of Workers

Anticipated Impacts:

- 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.

Mitigation Measures:

- 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.

11.5 Plantation Work:

As the maximum part of the area lies within the HFL of the river and is flooded during the rainy season, therefore, it **is** not suitable land for the growth of any plantation or grassing etc. Therefore, plantation will be done on their own suitable land (Khasra No. 47, measuring 3.5311 Ha) near the mining site. Specifically, 0.5 Ha of this land will be utilized for plantation, in addition to existing plantations already undertaken there. The total cost of plantation including its maintenance will be approx. Rs.12,00,000/-. The cost includes cost of plants, minerable and other labour activities. The estimated survival rate proposed to be achieved shall be 80%.

11.6 Strategy For Protection of Point of Public Utility etc.:

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

11.7 Budget Allocation of Environment Management Plan:

The total budget allocated for the Environmental Management Plan (EMP) is ₹21.5 lakhs for capital costs and ₹3.8 lakhs for recurring expenses, ensuring comprehensive environmental management and sustainability measures are implemented effectively.

11.8 Reclamation Plan:

The mined area being part of the river course cannot be reclaimed for any other purpose. The mining depth will be up to 2.0 meter or upto water level whichever is less, thus water regime will not be disturbed.

- The entire quarried area will be replenished 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.

11.9 Preventive Retaining Structures:

As the whole of the mining lease area lies within the HFL of Chakki Khad, no retaining structures can be constructed.

11.10 Use of mineral:

The boulders shall be used for the manufacturing of grit in the already established stone crusher unit and after screening/washing the stone and bajri shall be used for the manufacturing of grit and M-sand and the sand shall be sold in the open market. The material shall be used for approach road works or plantation work.

11.11 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.

11.12 Improvements in the Physical & Social 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. The social infrastructure like religious places (temple, gurudwara, etc.); marriage homes, Bus stations, railway stations, play grounds will be improved.

11.13 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

12.0 ORGANIZATIONAL PROFILE:

M/s JMS Enviro Care and Innovative Centre was established in 2024 and has been floated by the vast experienced technical experts to provide consultancy services in the field of environment matters. The registered office of the consultancy firm is located at SCO No: 6, Motia Plaza, Baddi, District Solan, Himachal Pradesh. The consultancy firm is accredited by QCI-NABET as Category-A under QCI-NABET scheme for accreditation of EIA consultant organization, Version-3, for preparation of EIA/EMP reports for the 10 sectors including mining of minerals by way of using open cast/underground mining techniques, vide certificate no. NABET/EIA/24-27/IA 0142 dated 01.10.2024.

The consultancy firm is an ISO 14001-2015 & ISO 9001-2015 certified. The firm has scope to work anywhere in the country but the entrepreneurs/ project proponents on the State of Himachal Pradesh especially will have opportunity to get hassle free 'Environment Clearance and 'No Increase in Pollution Load Certificate'.

The consultancy firm has qualified and experienced in-house and empaneled manpower

12.1 Scope of Services:

In addition to the consultancy services for preparation of EIA/EMP Reports for which the consultancy firm is accredited by QCI-NABET, the consultancy firm is also providing services with regard to following thematic areas:

- Provide guidance and act as Environmental consultants for obtaining 'Environmental Clearance 'and' No Increase in Pollution Load Certificate' under EIA Notification
- Environmental consultants for projects for obtaining environmental clearance under EIA
- Preparation of environmental Statement Reports as required under rule 14 of the Environment (Protection) Rules,1986.
- Designing of pollution control devices/ equipment based on latest technologies
- Preparation of feasibility reports of the pollution control equipment
- Legal guidance of environmental matters
- Filing of application for obtaining statuary clearances

- Preparation of adequacy report of pollution control devices
- Guidance about implementation of cleaner technologies
- Adoption of waste minimization techniques

In order to get the samples of water/ wastewater / soil/ noise/ ambient air, the consultancy firm has executed an agreement with M/s Chandigarh Pollution Testing Laboratory Mohali. This laboratory has well equipped laboratory with modern instruments and experienced staff, and is accredited by National Accreditation Board for Testing and Calibration Laboratories (NABL), a constituent Board of Quality Council of India. Besides, this laboratory is accredited by MoEF&CC as well as CPCB.

EIA Team Member

The work presented in this report was carried out by JMS Enviro Care and Innovative Centre, with active corporation from **M/s New Shiva Stone Crusher** by involving following EIA Coordinator and FAEs:

The manner of EIA coordinator and FAE's engaged for the project has already been detailed:

Functional Areas	Name of the Expert	Task
Project Coordinator	Mr. Jagir Singh	Site visit, identification of the project, assist in identification of impacts of projects and suggestions of mitigation measures, preparation of EMP & environment Budgetary issues.
Air Pollution Prevention, Monitoring & Control (AP),	Mr. Surinder Singh Matharu	Finalization of monitoring locations, checking air quality data, evaluation of result of Ambient Air Quality Monitoring (AAQM) and contribution to EIA documentation.
Meteorology, Air Quality Modeling & Prediction (AQ)	Mr. Surinder Singh Matharu FAA: Ms. Nitasha Thakur	Finalization of monitoring locations, checking air quality data, evaluation of results of Ambient Air Quality Monitoring (AAQM).

Water Pollution, Prevention, Control & Prediction of Impacts (WP)	Mr. Rajiv Kumar Garg	Finalization of sampling locations for Ground water and Surface water, water balance for the project, evaluation of water pollution management, identification of impact, suggestions and finalization of mitigation measures, contribution to EIA documentation.
Risk and hazard Management (RH)	Mr. Punit Lal Mahto	Assistance in perfection of risk Assessment report and developing. and interpreting consequence analysis
Socio-Economics (SE)	Mrs. Ramandeep Kaur	Site visit, assist in identification of report and suggesting mitigation measures, preparation of EMP and environmental budgetary issue, identification of Project
Solid and Hazardous waste management	Mr. Surinder Singh Matharu FAA: Ms. Shivani Thakur	Identification of water generation from the proposed plant, suggesting adequacy of mitigation measures and management of wastes, contribution to EIA documentation.
Ecology & Biodiversity (EB)	Mr. Durga Singh Verma FAA: Ms. Shivani Thakur	Site visit, field services, assessment of impacts of proposed project as biological environment, preparation of EIA report.
Hydrogeology (HG)	Mr. Punit Lal Mahto	Understanding and reporting Ground water conditions, finalization of Ground water sampling locations
Geology (Geo)	Mr. Punit Lal Mahto	Geology & Geomorphologic analysis based on the secondary data, Finalization of sampling locations, analysis of collected data, identification of mitigation measures.
Noise and Vibration (NV)	Mr. Jagir Singh	Site visit, checking of noise monitoring results, analysis of data, identification of impacts and mitigation measures

Land Use (LU)	Mr. Samarjit Kumar Goyal	Site visit, development of land use maps of study area using GIS, related tasks, site visit for ground truth survey, finalization of land use maps, contribution of EIA documents.
Soil Conservation (SC)	Mr. Samarjit Kumar Goyal	Site Visit, Finalization of soil sampling locations, finalization of survey findings, identification of impacts, suggestion of mitigation measures and contribution to EIA documentation
Laboratory	CPTL & Team	Sample analysis of water, soil and air collected from the study area as per MoEF&CC requirement.
Independently review	Mr. Jagir Singh	Independent review of EIA report against pre-set structure.

NABET CERTIFICATE

भारतीय गुणवत्ता परिषद
QUALITY COUNCIL OF INDIA
QCI Creating an Ecosystem for Quality

NABET

National Accreditation Board for Education and Training

Certificate of Accreditation

JMS Enviro Care and Innovative Centre, Solan

Building No./Flat No.: SCO6, Road/Street: 2nd Floor Motia Plaza, Saraj Majra Lavan, Baddi, Solan, Himachal Pradesh-173205

*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)	B
2.	Mining of minerals-opencast mining only			A
3.	Metallurgical industries (ferrous & non-ferrous)	8	3 (a)	A
4.	Cement plants	9	3 (b)	B
5.	Synthetic organic chemicals industry	21	5 (f)	A
6.	Distilleries	22	5 (g)	A
7.	Industrial estates/ parks/ complexes/areas, export processing Zones(EPZs), Special Economic Zones(SEZs), Biotech Parks, Leather Complexes	31	7 (c)	B
8.	Highways,	34	7 (f)	A
9.	Building and construction projects	38	8 (a)	B
10.	Townships and Area development projects	39	8 (b)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in IAAC minutes dated July 12, 2024, and Supplementary Assessment minutes dated September 20, 2024 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/24/3373 dated October 1, 2024. The accreditation needs to be renewed before the expiry date by JMS Enviro Care and Innovative Centre, Solan following due process of assessment.

Issue Date
October 1, 2024

Valid up to
June 20, 2027

Mr. Ajay Kumar Jha
Sr. Director, NABET

Certificate No.
NABET/EIA/24-27/IA 0142

Prof (Dr) Varinder S Kanwar
CEO-NABET

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

NABL CERTIFICATE

National Accreditation Board for Testing and Calibration Laboratories

CERTIFICATE OF ACCREDITATION

CHANDIGARH POLLUTION TESTING LABORATORY

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

PLOT NO. E-126, PHASE-VII,INDUSTRIAL AREA, MOHALI, PUNJAB, INDIA

in the field of

TESTING

Certificate Number: TC-6728

Issue Date: 09/11/2024 **Valid Until:** 08/11/2028

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of thislaboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Entity: Chandigarh Pollution Testing Laboratory

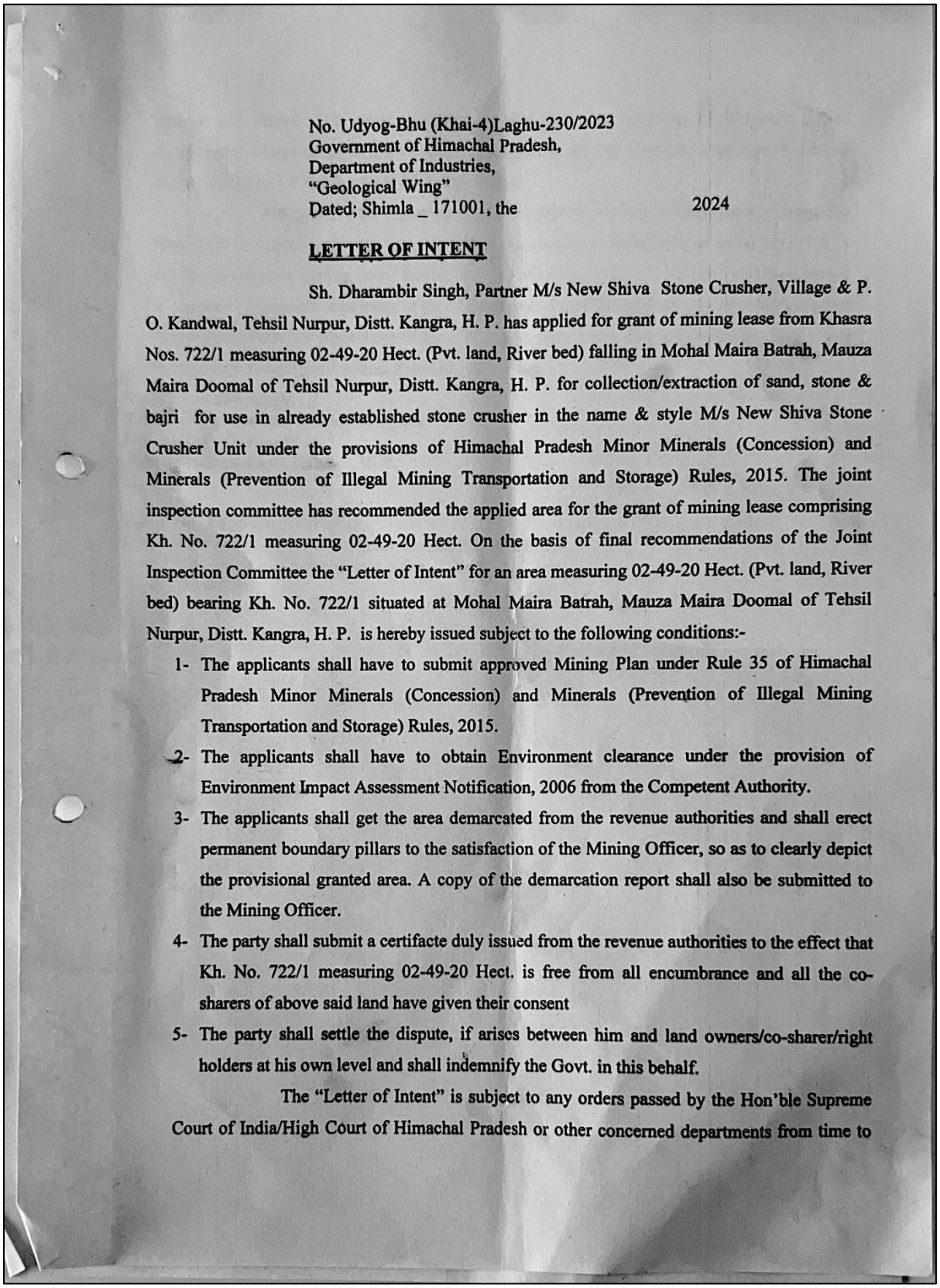
Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

ANNEXURES

ANNEXURE-I(a)

LETTER OF INTENT



No. Udyog-Bhu (Khai-4)Laghu-230/2023
Government of Himachal Pradesh,
Department of Industries,
"Geological Wing"
Dated; Shimla _ 171001, the 2024

LETTER OF INTENT

Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher, Village & P. O. Kandwal, Tehsil Nurpur, Distt. Kangra, H. P. has applied for grant of mining lease from Khasra Nos. 722/1 measuring 02-49-20 Hect. (Pvt. land, River bed) falling in Mohal Maira Batrah, Mauza Maira Doomal of Tehsil Nurpur, Distt. Kangra, H. P. for collection/extraction of sand, stone & bajri for use in already established stone crusher in the name & style M/s New Shiva Stone Crusher Unit under the provisions of Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining Transportation and Storage) Rules, 2015. The joint inspection committee has recommended the applied area for the grant of mining lease comprising Kh. No. 722/1 measuring 02-49-20 Hect. On the basis of final recommendations of the Joint Inspection Committee the "Letter of Intent" for an area measuring 02-49-20 Hect. (Pvt. land, River bed) bearing Kh. No. 722/1 situated at Mohal Maira Batrah, Mauza Maira Doomal of Tehsil Nurpur, Distt. Kangra, H. P. is hereby issued subject to the following conditions:-

1- The applicants 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 applicants shall have to obtain Environment clearance under the provision of Environment Impact Assessment Notification, 2006 from the Competent Authority.
3- The applicants 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.
4- The party shall submit a certifacte duly issued from the revenue authorities to the effect that Kh. No. 722/1 measuring 02-49-20 Hect. is free from all encumbrance and all the co-sharers of above said land have given their consent
5- The party shall settle the dispute, if arises between him and land owners/co-sharer/right holders at his own level and shall indemnify the Govt. in this behalf.

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 5 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.

Sh. Dharambir Singh,
Partner M/s New Shiva Stone Crusher,
Village & P. O. Kandwal,
Tehsil Nurpur, Distt. Kangra, H. P.

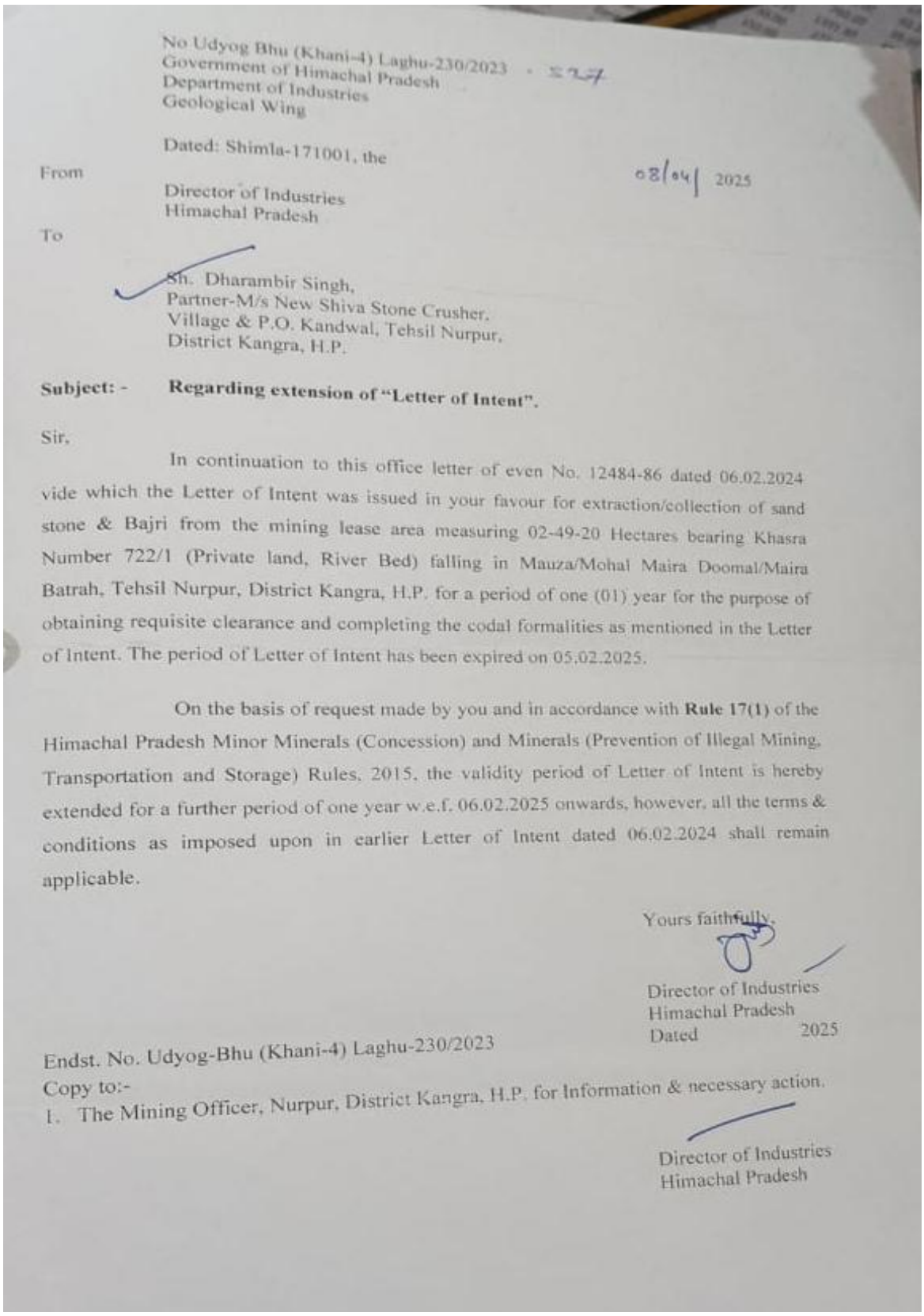
Director of Industries
Himachal Pradesh
Dated; 06/02 2024

Endst. No. As above. 12484
Copy to the following for information and necessary action:-
1. The Mining Officer, Nurpur, Distt. Kangra, H. P.
2. Guard file.

Director of Industries
Himachal Pradesh

ANNEXURE-I(b)

LETTER OF INTENT (EXTENSION)



No Udyog Bhu (Khani-4) Laghu-230/2023 - 527
Government of Himachal Pradesh
Department of Industries
Geological Wing

Dated: Shimla-171001, the 03/04/ 2025

From

Director of Industries
Himachal Pradesh

To

Sh. Dharambir Singh,
Partner-M/s New Shiva Stone Crusher,
Village & P.O. Kandwal, Tehsil Nurpur,
District Kangra, H.P.

Subject: - Regarding extension of "Letter of Intent".

Sir,

In continuation to this office letter of even No. 12484-86 dated 06.02.2024 vide which the Letter of Intent was issued in your favour for extraction/collection of sand stone & Bajri from the mining lease area measuring 02-49-20 Hectares bearing Khasra Number 722/1 (Private land, River Bed) falling in Mauza/Mohal Maira Doomal/Maira Batrah, Tehsil Nurpur, District Kangra, H.P. for a period of one (01) year for the purpose of obtaining requisite clearance and completing the codal formalities as mentioned in the Letter of Intent. The period of Letter of Intent has been expired on 05.02.2025.

On the basis of request made by you and in accordance with **Rule 17(1)** of the Himachal Pradesh Minor Minerals (Concession) and Minerals (Prevention of Illegal Mining, Transportation and Storage) Rules, 2015, the validity period of Letter of Intent is hereby extended for a further period of one year w.e.f. 06.02.2025 onwards, however, all the terms & conditions as imposed upon in earlier Letter of Intent dated 06.02.2024 shall remain applicable.

Yours faithfully,

Director of Industries
Himachal Pradesh
Dated 2025

Endst. No. Udyog-Bhu (Khani-4) Laghu-230/2023

Copy to:-

1. The Mining Officer, Nurpur, District Kangra, H.P. for Information & necessary action.

Director of Industries
Himachal Pradesh

ANNEXURE-II

APPROVAL LETTER

REGISTERED

No. Udyog-Bhu (Khani-4) Laghu-230/2023 -10281
Government of Himachal Pradesh
Department of Industries
"Geological Wing"
Dated; Shimla- 171001, 28/01/ 2025

To

Sh. Dharambir Singh,
Partner- M/s New Shiva Stone Crusher,
Village & P. O. Kandwal,
Tehsil Nurpur, District Kangra, H. P.

Subject:- **Approval of Mining Plan of mining lease area for collection/extraction of sand, stone & bajri from Khasra No. 722/1 over an area measuring 02-49-20 Hect.(Pvt. land, River bed) falling in Mohal Maira Batrah, Mauza Maira Doomal of Tehsil Nurpur, District Kangra, H. P. for which Letter of Intent has been issued on 06.02.2024.**

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 of the Mining Lease Area for the purpose of obtaining Environment Clearance for which the letter of intent has been issued on 06.02.2024. The mining plan is approved for a period of five (05) years and shall be effective from the date of execution of Mining Lease. 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 Mining Plan is approved without prejudice to any orders or directions from any Court of competent jurisdiction.
6. That the lease holder shall procure Environment clearance from the competent authority as per Environmental Impact Assessment notification, 2006 and amendments/notifications issued time to time in this regard.

7. That the approval of proposed mining operations is restricted to the mining lease area only.
8. 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.
9. 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.
10. That the lease holder shall carry out production of mineral in accordance to the production shown in Mining Plan and Environmental Clearance whichever is less.
11. 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.
12. 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.
13. 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.
14. 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.
15. 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)
Geological Wing
Department of Industries,
Himachal Pradesh
Dated 2025

Endst. No. As above.
Copy for kind information to:-

1. The Mining Officer, Nurpur, Distt. Kangra, H. P. along with a copy of Mining Plan for further necessary action.
2. Sh. Arun Dhiman, S/o Sh. Jagan Nath, V.P.O. Dhaloon (Panchpuli), Tehsil Nagrota Bagwan, District Kangra, Himachal Pradesh.

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

ANNEXURE-III

JAMABANDI

राजस्व विभाग, हिमाचल प्रदेश - नकल जमाबंदी

: कांगड़ा
: नूरपुर
: नूरपुर
: हडल
: 64

एस.सी.ए रसीद संख्या: 8103726755007
नाम : aa
पिता/पति : aa

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

मोहाल : मैरा बटराह
साल : 2020-2021
रकबा ईकाई: है-आ-सै

खतौनी नं. लगान जो मुजारा अदा करता है व तफसील शरह नाम 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
2	3	4	5	6	7	8	9
32	कुल भाग (1663) धर्म वीर	कब्जा स्वंय		722	07-98-24	कब्जा व पड़ता	न.ई. कि.ई.
31	सिहं पुत्र स्वदेश सिंह				गै.मु.खड्ड	बशरह खेवट न.	265 आड रहन
	पुत्र केसर सिंह (600) भाग					(1)	302 वै
	राजिन्द्र सिहं पुत्र						नोट- वरुए ई० न० 265
	श्रीमति शकुन्तला देवी						आड रहन द्वारा खाता
	पुत्री साहवो (1063) भाग						हजा मे राजिन्दर
	स्थानिय वासी						सिंह पुत्र श्रीमति
							शकुंतला देवी का
							हिस्सा वहके HGB
							शाखा वरन्डा के पास
							बदले मु० 18,50,000
							मे आड रहन है।

Lok Mitra Kendra (CSC)
Kandwal, Amit Kumar
M. 9625041642,7009870299

hat this copy has been generated from the database of Revenue Department at
erver- HP as accessed by the Lok Mitra Kendra 174213450018 on 27-July-2023

To Verify; enter the Copy No above Bar Code at
https://himbhoomilmk.nic.in
For Validity Refer : Notific. No:Rev-C(F)/10-1/2009 Dated 14-Feb-2011

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माचल प्रदेश - शिमला
दिनाँक: 27-Jul-2023
पृष्ठ संख्या: 1

ANNEXURE-IV

DISTANCE CERTIFICATE

REGISTERED

No. Udyog Bhu (Khani-4.)Laghu-230/2023 -7901
Government of Himachal Pradesh,
Department of Industries,
"Geological Wing"

Dated Shimla-171001, 29-11- 2024

To

Sh. Dharambir Singh,
Partner M/s New Shiva Stone Crusher,
Villge Gudli, P. O. Khanni Uprli,
Tehsil Nurpur, District Kangra, H.P.

Subject:- **Regarding issuance of Distance Certificate regarding mining lease.**

Sir,

Please find enclosed herewith countersigned distance certificate by the undersigned issued by the Mining Officer, Nurpur, District Kangra, H. P. on the report of Halqa Patwari in favour of Sh. Dharambir Singh, Partner M/s New Shiva Stone Crusher, Village Gudli, P. O. Khanni Uprli, Tehsil Nurpur, District 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, Nurpur, Distt. Kangra, H. P. w.r.t. his letter No. Udyog (Bhu) NPR- New Shiva SCU-2498 dated 21.11.2024 for information and further necessary action.

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

No. Udyog (Bhu)NPR-New Shiva SCU-
Office of the Mining Officer, Nurpur
Distt Kangra (H.P.)
Nurpur

Dated: 21-11-2024

CERTIFICATE

Certified that as per the report of Halqa Patwari three mining leases exists/granted with in radius of 500 meters from the periphery of the area applied for grant of mining lease in favour of Sh. Dharambir Singh Part. M/s New Shiva Stone Crusher, Village Gudli, PO Khanni Uprli, Tehsil Nurpur, Distt, Kangra (H.P.) comprising of Khasra No. 722/1 measuring 02-49-20 Hect. (Private Land, River bed) falling in Mauja Maria doomal and Mohal Maira Batrah , Tehsil Nurpur, District Kangra (H.P.) is as under:

Sr. No.	Name and Address	Mohal/ Mauza	Khasra No.	Area	Remarks
1.	M/s New Shiva Stone Crusher, VPO Kandwal, Tehsil Nurpur, Distt. Kangra (HP)	Maira Batrah/ Maira Doomal	700, 731/2/2	04-97-93	
2.	M/s Shiva Stone Crusher, VPO Kandwal, Tehsil Nurpur, Distt. Kangra (HP)	Maira Batrah/ Maira Doomal	731/1 and 732	03-87-70	
3.	M/s Mahadev Stone Crusher, VPO Kandwal, Tehsil Nurpur, Distt. Kangra (HP)	Maira Batrah/ Maira Doomal	731/3	05-40-07	

Mining Officer
Nurpur Distt. Kangra (HP)

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

प्रमाणित किया जाता है कि धर्मवीर सिंह पुत्र स्वरूप सिंह पुत्र केसर सिंह मुताबिक Lease Deed मालिक मैसर्स न्यू शिव स्टोन क्रशर गांव गुरली डा० खन्नी उपली तह० नूरपुर जिला कांगड़ हि०प्र० का mining lease area खसरा नम्बर 722/1 रकबा 02-49-20 हे० वाकय मोहाल मैरा बतराह मौजा मैरा डूमल तह० नूरपुर है। मुताबिक Lease Deed उसने रकबा लगते mining lease area लिया है।

क्रमांक	नाम	खसरा नं०	रकबा	मोहाल	मौजा
1.	पवन सिंह मालिक महादेव स्टोन क्रशर गांव कण्डवाल	731/3	05-40-07 हैक्टे०	मैरा बतराह	मैरा डूमल
2	रणवीर सिंह मालिक शिवा स्टोन क्रशर गांव कण्डवाल	731/1, 732	03-87-70 हैक्टे०	मैरा बतराह	मैरा डूमल
3	धर्मवीर मालिक न्यू शिव स्टोन क्रशर	700, 731/2/2	04-97-93	मैरा बतराह	मैरा डूमल

प्रिया पटवार वृत Hadal... हस्ताक्षर 30/11/24

ANNEXURE-V

JOINT INSPETION REPORT

No. udyog(Bhu)-Laghu_NPR-JIR- M/s New Shive Stone Crusher- 662
Office of the Mining Officer, Nurpur
Distt. Kangra (H.P.)
Nurpur Dated: 20.7.2023

To

The Geologist (Zone-II)
Himachal Pradesh, Shimla-1.

Subject: **Regarding Joint Inspection of the area applied for Fresh Mining Lease.**

Sir,

Kindly refer to your online application no. IUID 27708083 on the subject cited above.

In this connection it is informed that the Joint Inspection of the area applied for mining lease for extraction of Stone Boulder and sand over an area comprising of Kh. No. 722/1 measuring to 02-49-20 Hect. (Private Land) in Mouza Maira Doomal and Mohal Maira Batrah, village and PO Kandwal, Tehsil Nurpur , District Kangra(HP) by was the conducted by the Sub-Divisional Committee constituted under the Chairmanship of SDO (C) Nurpur.

Please find enclosed herewith Joint Inspection Report along with relevant documents for your kind perusal and further necessary action at your end please.

1. Joint Inspection Report of the area applied for fresh mining lease. (10 Pages).
2. Check List.

Encl: As above.

Yours Faithfully,

Mining Officer,
Nurpur, Distt. Kangra (H.P.)
Dated:

Endst. No : As above.

Copy to:
1. The Sub Divisional Officer (C) Indora for information.
2. Sh. Dharambir Singh Prop. M/s New Stone Crusher, Village and PO Kandwal, Tehsil Nurpur, Distt. Kangra (HP) for information please.

Mining Officer,
Nurpur, Distt. Kangra (H.P.)

CHECK LIST

1.	Name of the applicant and address	**Sh Dharamvir Singh prop. M/s New Shiva Stone Crusher VPO Kandwal** Tehsil Nurpur Distt Kangra			
2.	Details of the area applied for the grant /renewal of mining lease	**Mauja/Mohal**	**Khasra No.**	**Area (In Hect.)**	**Classification**
		Maira Batrah/Maira Doomal	722/1	2-49-20	Gair Mumkin Khad
3.	Member present in joint inspection	S.D.O (C) Nurpur, RO Nurpur, AE JSV Nurpur Asstt. Env.En. HPPCB Nurpur AEPWD Sulyali Mining Officer, Nurpur			
4.	Separate consent	-			
5.	Whether the Joint Inspection Committee has recommended whole of the area applied for or part thereof for the grant/renewal of mining lease?	Yes .			
6.	Whether consent/views of concerned Gram Panchayat (s) has/have been obtained?	Yes.			
7.	Whether competent authority of the Forest Department has issued NOC?	Private Land			
8.	Whether any road/bridge/public utility structure exists near/ with in the area?	Yes.			
9.	Whether any drinking/irrigation Water Supply Scheme/Kuhal etc exist near/within the area?	Nc.			
10	Whether Environment Protection and Pollution Control Board has recommenced the area for grant/renewal of mining lease?	Yes.			
11	Whether applicant has obtained the consent of private land owners (in case of private land)?	N.A.			
12	Whether applicant has No Dues Certificate?	Yes.			
13	Whether lease is for open sale of mineral or of minerals in the mineral based industries?	For existing SCU			
14	Whether sufficient mineral deposits are available in the area applied to cater the need of mineral based industry?	Yes.			

Mining Officer,
Distt Kangra at Dharamshala

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

1. General		
1.1 Name of the applicant		*Sh. Dharamvir Singh* *Prop. M/s New Shiva Stone Crusher*
1.2 Address of the applicant	Father's Name	
	Village	*Kandwal*
	P.O	*Kandwal*
	Tehsil	*Nurpur*
	District	*Kangra*
	Pin No	
1.3 Approach and location of the area	*The area applied for grant of mining lease is located at a distance of approx. 17 Km. from Nurpur and can be approached by Nurpur –Pathankot road i.e. NH 20 up to Nagabari and thereafter, by Nagabari– Maira Batrah-Haddal link road up to Maira and the last spell of approx. 1 km can be approached through an unmetteld road developed on the Nallah and bed of Chakki Khad.*	
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*
1.5 Date of Joint Inspection		*16.06.2023*

1.6 Members present during joint inspection

Sr. No	Name and Designation	Particulars
1	*Sh. Gursimar Singh* *S.D.O (Civil) Nurpur*	*Chairman*
2	*Shri Shashi Pal* *Range Forest officer, Nurpur*	*Member*
3	*Sh. Anurag Sharma* *AE IPH, Nurpur*	*Member*
4	*Er. Rahul Sharma* *Asstt. En. Environmental Engineer, HPSP CB, Nurpur*	*Member*
5	*Sh Kuldeep Sharma* *AE, HPPWD, Sulyali*	*Member*
6	*Shri Jyoti Kumar Puri* *Mining Officer, Nurpur*	*Member Secretary*

Contd.----2

2.Revenue Department

2.1 Status w.r.t. Demarcation of Applied for area *Conducted on 15.06.2023*

2.2 Detail of area applied

Kh. No	Area (In Hect)	Owner Govt/ private	Kism	Mohal	Mauza	Panchayat	Any other
722/1	02-49-20	Pvt. Land	Gair Mumkin Khad	Maira Batrah	Maira Doomal	Hadal	
Total	2-49-20						

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

The area applied for grant of mining lease was shown physically by concerned Halqa Patwari. Since the area under reference exists in the form of bed of Chakki Khad, primary tributary to river Beas. Hence 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

Gram Panchayat Haddal vide its resolution No. 9 dated 07-06-2023 has issued its consent for proposed mining activities in the area under reference, the photocopy of the same as well as "Karyawahi Register" (proceeding book) was found enclosed along with the application form

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

Patwari Haddal

3. Forest Department		
3.1 Types of land i.e Reserve Forest/Protected Forest/ Demarcated Forest/ Non Forest Government Land/ Private Land etc.	*Pvt. 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 nallas/stream etc ,if yes please specify and mark on location plan and what precautions are required

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

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

No property of forest department exists near the area under reference which shall likely to have any adverse effect due to proposed mining activities

3.5 Any other observation/condition

Since no property or activities of forest exists within or near the area applied for grant of mining lease hence the representative of forest department has no objection from the Forest point of view w.r.t. proposed mining activities in the area applied for grant of mining lease.

Range Forest Officer
Nurpur Forest Range

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	7 Km		100 m
	State highway	8 km		25 m
	Link road	500 mtr		10 m
	Village road	N.A.		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 — Yes / ✓ No

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	*NA*
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.

Assistant Engineer
Suliali Sub Division
H.P.P.W.D. Suliali

5. IPH Department

5.1 Whether there exist any water supply scheme within/near the area	**Yes**	**✓ No**

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	*NA*		*NA*
	Lift Irrigation Scheme	*NA*		*NA*
	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 gravity irrigation / Lift irrigation scheme (LIS) / Water supply scheme (WSS) exists within or near the area applied for grant of mining lease hence the representative of I&PH has no objection w.r.t. proposed mining activities in the area applied for grant of mining lease.

Assistant Engineer,
Jal Shakti, Sub-Division
Jassur

6. Industries Department		
6.1 Location of applied for area (nearest village/important features)		*Maira Bhatrah*
6.2 Purpose of Mining Lease.		*Raw material for existing Stone Crusher unit under the name and style of M/s New Shiva SCU*
6.3 Overlapping of areas with any other lease/contract	Yes	✓ No *(As per this office record)*
If yes please give detail		*N/A*
6.4 Location of the nearest mining area/quarry		*Adjoining to the area within 1 Kms four mining leases exist.*
6.5 Average daily production anticipated in Metric Tonns		*Approx. 80 MT (by taking 300 working days)*
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*

6.7 Feasibility of Mining

(i) Name of Mineral : *Stone/bajri/sand*
(ii) Type of mining Hill slope/River Bed: *River 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: ***Chakki Khad***
(ii) Width of river bed: *Approx. 100 Mtrs.*
(iii) Approximate length of applied for area: *Approx. 280 mtrs.*
(iv)Availability of mineral w.r.t anticipated Production:
Sufficient quantum of mineral shall be available for full term of mining lease period.

(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 from Nurpur as well as from village Nagabari, Maira Batrah and Khanni.

(vii) Location of
(iii) Habitation along the banks *Approx. 100 Mtrs.*
(iv) Agriculture field along the banks: *Approx. 50 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: *Yes*

(c) Additional information on case of Renewal of Mining Lease

(i) Report under Rule 16(1)of Himachal Pradesh Minor Mineral rule:
(iv) Investment for developing the area NA
(v) Investment on machinery & equipment NA
(vi) Labourer Employed NA
(ii) Production of mineral for the last tenure: NA
(iii) Violation of condition mining noticed in the tenure No
(iv) Detailed note on scientific mining w.r.t working cum Environment Management Plan in the last tenure:
By physical observation made during the course of joint inspection no signs of unscientific mining were noticed which shows that the applicant lessee has made efforts to carry out mining activities in accordance to the Plan.

6.8 Whether mining can pose threat to existing object of Public Utility or private property? If any, Give detail and precaution required
If the mining activities are confined towards depositional side and the central portion of the khad bed it shall not pose any threat to private/public property

If no, the reason thereof:

6.9 Any other special point pertaining to Industries Department

The area applied for grant of mining lease is a part of Chakki Khad passing through in Mohal Maira Bathrah having deposits of loose Stone boulder, Bajri and sand transported as a result of flash beds during the monsoon and the other additional information required are as under:

5. *The area applied for grant of mining lease forms a compact block and having gentle slope.*
6. *The area applied for grant of mining lease the area found suitable by the committee 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 Pvt. land.*
7. *The quantum of stone / boulders of varying size easily available in the area can cater the demand of existing stone crusher of the applicants the based on daily production shown at item no.- 6.5 of the report.*
8. *As on date no mining lease is in operational within the radius of approx. 1 km and the total potential of minor mineral in Chakki Khad are shown as 27000000 MT with annual replenishment of 810000 MT as per survey document of Kangra Distt.*

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.

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

The site of applied mining lease was inspected on dated 16.06.2023. Shri Dharamveer Singh, Proprietor New Shiva Stone Crusher, Village & P.O Kandwal Tehsil Nurpur, Distt. Kangra has applied for fresh river bed mining lease for collection of sand, stone& bajri for feeding of Existing Stone Crusher M/s New Shiva Stone Crusher at Village Gudli Post Office Khanni upperly, Tehsil Nurpur, Distt. Kangra. The area applied for grant of mining lease is river bed of Chakki Khad, primary tributary of river Beas situated at mohal Maria Batrah,Mauza Maira Doomal, Tehsil Nurpur, Distt. Kangra, H.P and area is mention as given below.

Sr. No.	Area (Hect.)	Khasra No.	Owner Govt./Pvt Land	Panchyat
1.	02-49-20	722/1	Pvt. Land	Haddal
Total Area	02-49-20 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 river bed of Chakki Khad, primary tributary of river Beas situated at Mohal Maria Batrah, Mauza Maira Doomal, Tehsil Nurpur, Distt. Kangra, H.P, So the sand, stone & Bajri should be picked up as per mining policy.
- No blasting shall be carried out.
- The unit shall apply for grant of consent to establish, operate & renewal there off as the case may be with the competent authority of HPSPCB.
- 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.
- The waste material arising out of mining operation shall be used to ditches formed due to mining and also in retaining the loose material as replenishment measure.
- Natural course of river/Nalla shall not be disturbed & especially step shall be taken to control the soil erosion.
- Any guidelines issued by state Pollution Control Board Shall be binding.
- The Proponent shall obtain the consent to operate from state board and 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. The proponent shall not carry out any mining activity till consent to operate & EIA-clearance obtained from the competent authority.
- Water sprinkling shall be carried out on approach road during transport the material from mining area.
- Mining material should be covered during transportation.

Asstt. Environmental Engineer,
Sub. Regional Office,
H.P. State Pollution Control Board
Nurpur, Distt. Kangra (H.P.)

8. Recommendations		
8.1 Whether whole of the area is being recommended for mining	✓ yes	No
If no, please specify the Kh. Nos. being recommended *N.A.*		
Any other recommendation in addition to recommendations given at to *----NA---*		
Final recommendation of the Committee *Keeping the facts given above, the area applied for grant of mining lease comprising of Kh. No. 722/1 measuring to 02-49-20 Hects. In Mohal Maira Batrah was found suitable by the committee and is being recommended for grant subject to stipulation made above, and after obtaining Environmental clearance from competent authority of MoEF*		
Signatures		
SDO(C) Sub Divisional Officer (C) Nurpur (H.P.) 176202	ACF/R.O. Range Forest Officer Nurpur Forest Range	Repersentative of P.W.D. Assistant Engineer Suliali Sub Division H.P.P.W.D. Suliali
Representative of IPH Assistant Engineer, Jal Shakti, Sub-Division Jassur	Repersentative of H.P.P.C.B. Asstt. Environmental Engineer, Sub. Regional Office, HP State Pollution Control Board Nurpur, Distt. Kangra (H.P.)	Mining Officer Mining Officer Nurpur, Distt. Kangra (H.P.)

ANNEXURE-VI

DFO CERTIFICATE

No.RK/68/5940
H.P. Forest Department.

Dated Nurpur, the/- 21 NOV 2024

From :

Divisional Forest Officer,
Nurpur, Forest Division,
Nurpur.

To:

Sh. Dharmbir Singh S/o Swadesh Singh
Part New Shiva Stone Crusher
VPO Kandwal Tehsil Nurpur Distt Kangra

Subject: Regarding Details of Fauna and Flora Sh. Dharmbir Singh S/o Swadesh Singh Part New Shiva Stone Crusher VPO Kandwal Tehsil Nurpur Distt Kangra.

Sir,

Kindly refer to your application dated 18.11.2024 on the subject cited above.

2 Please find enclosed herewith the authenticated list of Flora & Fauna study report for Mining project of Sh. Dharmbir Singh S/o Swadesh Singh Part New Shiva Stone Crusher VPO Kandwal Tehsil Nurpur Distt Kangra H.P for information.

Encl:- As above

Divisional Forest Officer,
Nurpur Forest Division,
Nurpur

Endst No. RK/68/..... Dated.....

1. Copy is forwarded to RO Nurpur w. r.t to his officer memo No. 1011/N dated 20.11.2024 for information.

Divisional Forest Officer,
Nurpur Forest Division,
Nurpur

No. 1011/N
HP Forest Department
Dated Nurpur, the 20/11/24

From:-Range Forest Officer
Nurpur

To:- Divisional Forest Officer
Nurpur

Subject:-Regarding issuance details of Floura and fauna in the favour of Sh.Dharmbir Singh S/o Swadesh Singh Part.New Shiva Stone Crusher VPO.Kandwal Tehsil Nurpur Distt.Kangra HP.

Memo:

Kindly refer to your end.No.5805 dated 18/11/2024 on the subject cited above.

Sir,

Detail of floura and fauna in favour of Sh.Dharmbir Singh S/o Swadesh Singh Part.New Shiva Stone Crusher VPO.Kandwal Tehsil Nurpur Distt.Kangra HP.for fresh mining lease of khasra no.722/1 2-49-20 (Pvt.Land) in mahal maira batrah mauza maira domal Tehsil Nurpur Distt.Kangra HP.is as under :-

Sr No	Botanical Name	Common Name
1	Sanegalia catechu	Khair
2	Mallotus philipensis	Kamal

Fauna

Domestic animals include cow, buffalo, mules, hen, got, dogs, ox, cat, are common The fauna including in the area are viper,parrot,owl,monkey,jackel,Rabbit,Peacock,Sambhar etc.

List of Fast Growing season

Sr No	Botanical Name	Common Name
1	Sanegalia catechu	Khair
2	Mallotus philipensis	Kamal

It is submitted for favour of information & necessary action please.

RF 21/11/24

Range Forest Officer
Nurpur Forest Range

पत्र संख्या 1009/N

वन विभाग हि0 प्रदेश

दिनांक – 20/11/2024

प्रेषित – वन मण्डल अधिकारी

सेवा मे

वन परिक्षेत्र अधिकारी

नुरपुर

विषय– वाईल्ड लाईफ सैन्चरी एरिया दुंरी पमाण पत्र लेने वारे ।

महोदय

झापन– आपके कार्यालय के पत्र संख्या न0 RK/5805 दिनांक 18–11–2024 के सदर्भ में

महोदय

उपरोक्त विषय के सदर्भ में इस कार्यालय द्वारा रिर्पोट की जाती है वन खंड अधिकारी खन्नी की रिर्पोट के अनुसार जो आवेदन धर्मवीर सिंह पुत्र श्री स्वदेश सिंह हिस्सेदार न्यु शिवा सटोन क्रैशर गॉव व डाकखाना कण्डवाल तहसील नुरपुर जिला कागंड़ा हि0 प्रदेश द्वारा माइनिंग लीज हेतू भूमि खसरा न0 722/1 महाल मैरा बटराह मौजा मैरा डूमल तह0 नुरपुर जिला कागंड़ा हि0 प्रदेश हेतू वाईल्ड लाईफ सैन्चरी एरिया से दुंरी पमाण पत्र वारे किया गया है उसकी दुंरी 45000 मीटर (45KM) है ।

अता रिर्पोट आगामी कारवाही हेतू प्रेषित है ।

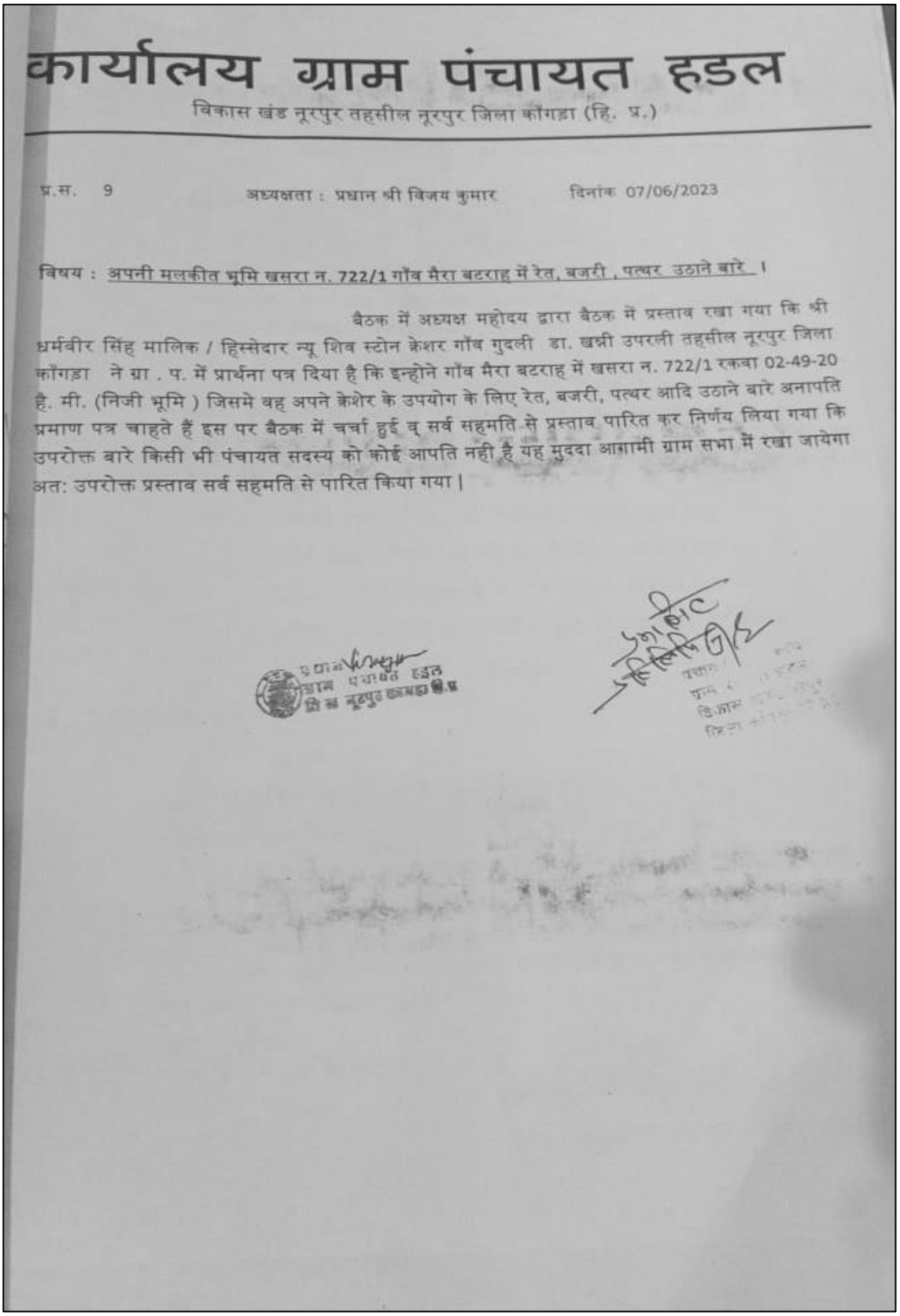
वन परिक्षेत्र अधिकारी

नुरपुर वन परिक्षेत्र

नुरपुर

ANNEXURE-VII

NOC FROM GRAM PANCHAYAT



कार्यालय ग्राम पंचायत हडल

विकास खंड नूरपुर तहसील नूरपुर जिला कॉगड़ा (हि. प्र.)

प्र.स. 9 अध्यक्षता : प्रधान श्री विजय कुमार दिनांक 07/06/2023

विषय : अपनी मलकीत भूमि खसरा न. 722/1 गॉव मैरा बटराह में रेत, बजरी , पत्थर उठाने बारे ।

बैठक में अध्यक्ष महोदय द्वारा बैठक में प्रस्ताव रखा गया कि श्री धर्मवीर सिंह मालिक / हिस्सेदार न्यू शिव स्टोन क्रेशर गॉव गुदली डा. खन्नी उपरली तहसील नूरपुर जिला कॉगड़ा ने ग्रा . प. में प्रार्थना पत्र दिया है कि इन्होने गॉव मैरा बटराह में खसरा न. 722/1 रकबा 02-49-20 है. मी. (निजी भूमि) जिसमे वह अपने क्रेशेर के उपयोग के लिए रेत, बजरी, पत्थर आदि उठाने बारे अनापति प्रमाण पत्र चाहते हैं इस पर बैठक में चर्चा हुई व् सर्व सहमति से प्रस्ताव पारित कर निर्णय लिया गया कि उपरोक्त बारे किसी भी पंचायत सदस्य को कोई आपति नही है यह मुददा आगामी ग्राम सभा में रखा जायेगा अत: उपरोक्त प्रस्ताव सर्व सहमति से पारित किया गया ।

ANNEXURE-VIII(a)

WATER NOC

कार्यालय ग्राम पंचायत, हड़ल

विकास खण्ड नूरपुर, जिला कांगड़ा (हि.प्र.)

प्रस्ताव संख्या ..... दिनांक 25/11/2024

अनापत्ति प्रमाण पत्र

प्रमाणित किया कि धर्मवीर सिंह पुत्र श्री सुदेश सिंह आपने खनन क्षेत्र न्यू शिवा स्टोन क्रशर रिवर बेड रेत, बजरी, व पत्थर खसरा नं॰ 722/1 रकबा 2-49-20 हैक्टेयर मौहाल मैरा बटराह मौजा मैरा डूमल तहसील नूरपुर जिला कांगड़ा (हि॰ प्रदेश) में स्थित है। इस साईट में पर्यावरण धूल नियंत्रण के लिए पानी का छिड़काव और पीने के पानी के लिए उपयोग में लाए जाने वाला पानी ग्राम पंचायत के अधिकार क्षेत्र में स्थित पानी के स्त्रोत में से लिया जाने पर पंचायत समिति को कोई अपत्ति व आपत्ति नहीं है।

ANNEXURE-VIII(b)

PLANTATION AFFIDAVIT

सत्यमेव जयते

INDIA NON JUDICIAL

Government of Himachal Pradesh

e-Stamp

Certificate No.	:	IN-HP49722303007017X
Certificate Issued Date	:	13-Jun-2025 12:09 PM
Account Reference	:	NEWIMPACC (SV)/ hp19026304/ NURPUR/ HP-KG
Unique Doc. Reference	:	SUBIN-HPHP19026304928160289971 99X
Purchased by	:	DHARMVIR SINGH SON OF SWADESH SINGH
Description of Document	:	Article 4 Affidavit
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	DHARMVIR SINGH SON OF SWADESH SINGH
Second Party	:	Not Applicable
Stamp Duty Paid By	:	DHARMVIR SINGH SON OF SWADESH SINGH
Stamp Duty Amount(Rs.)	:	20 (Twenty only)

UMESH C
S.V.Dist...
Distt. Kangra H.P.

Please write or type below this line

NOTARY Advocate Appointed by Govt. of India Teh. Nurpur (H.P.) GOVERNMENT OF INDIA

"ATTESTED"
Advocate & Notary
Appointed by Govt. of India
Revenue Distt. Nurpur (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 GOVERNMENT OF INDIA

AFFIDAVIT

I, Dharambir Singh, Partner M/s New Shiva Stone Crusher, V.P.O.Kandwal, Tehsil Nurpur, District Kangra, H.P. do solemnly affirm and declare on oath as under:

1. That I have taken area measuring 02-49-20 Hectares bearing Khasra nos. 722/1, falling in Mohal Maira Batrah, Mauza Maira Dhoomal, Tehsil Nurpur, District Kangra, H.P. to carry out mining activities for the extraction/collection of sand, stone & bajri for crusher unit.
2. That I will plant deep-rooted grass & native tree saplings varieties conducive to agro-climatic conditions of the area such as Vetiver grass, Poplar and Bamboo on the ownprivate land (Khasra No. 47, measuring 3.5311 Ha) near the mining site. Specifically, 0.5 Ha of this land will be utilized for plantation, in addition to existing plantations already undertaken there. having co-ordinates 32°20'50.7"N and 75°48'39.2"Erespectively.

Deponent

Date: 13-6-2025

Verification:

I the above-named deponent further affirm and declare that the statement in the affidavit is true and correct to the best of my knowledge and belief.

Deponent

Date: 13-06-2025

"ATTESTED"
Advocate & Notary
Appointed by Govt. of India
Revenue Distt. Nurpur (H.P.)

ANNEXURE-IX

TEST REPORTS

CHANDIGARH POLLUTION TESTING LABORATORY
(Environmental Monitoring, EIA, NOC, ETP, STP)
NABET Accredited EIA Consultant

H.O. : #372, Sector 15-A, Chandigarh-160 015
Phone : 0172-4669295
Lab : E-126, Phase-VII, Indl. Area, Mohali - 160055
Phone : 0172-5090312
E-mail : cptle126@gmail.com ; lab@cptl.co.in
Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/01(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Date of Sampling	03-03-2025, 05-03-2025, 10-03-2025, 12-03-2025, 17-03-2025, 19-03-2025, 24-03-2025, 26-03-2025, 01-04-2025, 06-06-2025, 07-04-2025, 09-04-2025, 14-04-2025, 16-04-2025, 21-04-2025, 23-04-2025, 01-05-2025, 03-05-2025, 05-05-2025, 07-05-2025, 12-05-2025, 14-05-2025, 19-05-2025, 22-05-2025.
Point of Sample Collection	Project Site (32°20'50.79"N & 75°48'54.46"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/NSSC/2025/01(A)
Analysis Duration	04-03-2025 To 27-05-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	BaP (ng/m^3)	CO (mg/m3)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)
04-03-2025	72.4	39.2	6.6	12.2	BDL	20.4	BDL	BDL	0.55	BDL	BDL	BDL
06-03-2025	74.4	37.9	6.4	15.4	BDL	20.5	BDL	BDL	0.55	BDL	BDL	BDL
11-03-2025	75.5	40.0	6.3	12.6	BDL	20.6	BDL	BDL	0.54	BDL	BDL	BDL
13-03-2025	74.6	39.6	6.5	12.3	BDL	20.3	BDL	BDL	0.51	BDL	BDL	BDL
18-03-2025	78.9	38.8	6.4	13.6	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
20-03-2025	77.8	38.3	6.5	13.2	BDL	20.6	BDL	BDL	0.53	BDL	BDL	BDL
25-03-2025	74.4	38.3	6.6	14.6	BDL	20.6	BDL	BDL	0.55	BDL	BDL	BDL
27-03-2025	75.7	39.6	6.3	14.2	BDL	20.4	BDL	BDL	0.55	BDL	BDL	BDL
02-04-2025	76.4	40.0	6.2	14.4	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
04-04-2025	73.5	39.2	6.4	15.1	BDL	20.5	BDL	BDL	0.52	BDL	BDL	BDL
08-04-2025	76.2	40.4	6.4	12.2	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
10-04-2025	75.3	40.0	6.4	12.4	BDL	20.3	BDL	BDL	0.56	BDL	BDL	BDL
15-04-2025	74.3	41.7	6.2	12.2	BDL	20.3	BDL	BDL	0.54	BDL	BDL	BDL
17-04-2025	72.4	41.7	6.3	12.2	BDL	20.6	BDL	BDL	0.52	BDL	BDL	BDL
22-04-2025	73.5	42.1	6.6	13.6	BDL	20.4	BDL	BDL	0.55	BDL	BDL	BDL
24-04-2025	72.5	42.5	6.3	13.4	BDL	20.4	BDL	BDL	0.55	BDL	BDL	BDL
02-05-2025	77.1	42.5	6.4	14.5	BDL	20.3	BDL	BDL	0.55	BDL	BDL	BDL
05-05-2025	75.4	42.9	6.2	14.2	BDL	20.1	BDL	BDL	0.54	BDL	BDL	BDL
06-05-2025	75.5	42.9	6.3	14.3	BDL	20.4	BDL	BDL	0.58	BDL	BDL	BDL
08-05-2025	74.8	41.7	6.6	14.	BDL	20.1	BDL	BDL	0.54	BDL	BDL	BDL
13-05-2025	75.5	41.7	6.2	13.0	BDL	20.2	BDL	BDL	0.55	BDL	BDL	BDL
15-05-2025	72.6	40.8	6.3	12.4	BDL	20.3	BDL	BDL	0.56	BDL	BDL	BDL
20-05-2025	73.3	42.5	6.6	12.2	BDL	20.6	BDL	BDL	0.53	BDL	BDL	BDL
23-05-2025	76.2	40.8	6.3	12.3	BDL	20.2	BDL	BDL	0.56	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

(Reviewed & Authorized By)
Date: 06/06/2025

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END OF REPORT

CHANDIGARH POLLUTION TESTING LABORATORY
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Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/02(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-1
Sampling Method	CPTL/SM/01
Date of Sampling	03-03-2025, 05-03-2025, 10-03-2025, 12-03-2025, 17-03-2025, 19-03-2025, 24-03-2025, 26-03-2025, 01-04-2025, 06-06-2025, 07-04-2025, 09-04-2025, 14-04-2025, 16-04-2025, 21-04-2025, 23-04-2025, 01-05-2025, 03-05-2025, 05-05-2025, 07-05-2025, 12-05-2025, 14-05-2025, 19-05-2025, 22-05-2025.
Point of Sample Collection	Hara (32°21'46.23"N & 75°46'40.30"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/ NSSC/2025/02(A)
Analysis Duration	04-03-2025 To 27-05-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	BaP (ng/m^3)	CO (mg/m3)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)
04-03-2025	66.0	37.9	6.1	10.2	BDL	20.2	BDL	BDL	0.55	BDL	BDL	BDL
06-03-2025	69.0	40.0	6.4	11.1	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
11-03-2025	67.4	39.2	6.2	10.3	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
13-03-2025	68.2	38.8	6.3	10.2	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
18-03-2025	67.5	39.2	6.3	10.6	BDL	20.4	BDL	BDL	0.54	BDL	BDL	BDL
20-03-2025	67.0	37.9	6.2	10.4	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
25-03-2025	68.0	40.0	6.2	11.1	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
27-03-2025	68.1	39.6	6.3	11.1	BDL	20.4	BDL	BDL	0.52	BDL	BDL	BDL
02-04-2025	66.6	38.8	6.3	11.0	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
04-04-2025	67.9	38.3	6.4	11.1	BDL	20.2	BDL	BDL	0.54	BDL	BDL	BDL
08-04-2025	68.4	38.3	6.1	11.8	BDL	20.2	BDL	BDL	0.54	BDL	BDL	BDL
10-04-2025	66.1	39.6	6.1	10.8	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
15-04-2025	66.7	40.0	6.1	10.3	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
17-04-2025	68.0	39.2	6.4	12.0	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
22-04-2025	69.0	40.0	6.4	11.5	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
24-04-2025	66.3	39.2	6.4	10.2	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
02-05-2025	67.5	38.3	6.3	11.1	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
05-05-2025	68.6	39.6	6.3	11.0	BDL	20.4	BDL	BDL	0.52	BDL	BDL	BDL
06-05-2025	69.0	40.0	6.2	11.0	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
08-05-2025	66.0	39.6	6.2	10.8	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
13-05-2025	66.2	38.3	6.1	10.4	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
15-05-2025	68.4	38.8	6.1	10.2	BDL	20.4	BDL	BDL	0.52	BDL	BDL	BDL
20-05-2025	69.0	40.0	6.3	10.6	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
23-05-2025	66.1	38.3	6.3	12.0	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

(Reviewed & Authorized By)
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Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/03(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Date of Sampling	03-03-2025, 05-03-2025, 10-03-2025, 12-03-2025, 17-03-2025, 19-03-2025, 24-03-2025, 26-03-2025, 01-04-2025, 06-06-2025, 07-04-2025, 09-04-2025, 14-04-2025, 16-04-2025, 21-04-2025, 23-04-2025, 01-05-2025, 03-05-2025, 05-05-2025, 07-05-2025, 12-05-2025, 14-05-2025, 19-05-2025, 22-05-2025.
Point of Sample Collection	Khanni Uparli (32°19'27.15"N & 75°48'38.36"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/NSSC /2025/03(A)
Analysis Duration	04-03-2025 To 27-05-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Benzene (µg/m³)	BaP (ng/m³)	CO (mg/m3)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)
04-03-2025	62.0	38.8	6.0	11.0	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
06-03-2025	65.0	38.0	6.2	10.3	BDL	20.4	BDL	BDL	0.50	BDL	BDL	BDL
11-03-2025	64.0	38.3	6.1	10.3	BDL	20.3	BDL	BDL	0.50	BDL	BDL	BDL
13-03-2025	63.7	38.8	6.1	11.0	BDL	20.3	BDL	BDL	0.51	BDL	BDL	BDL
18-03-2025	64.2	38.3	6.0	10.4	BDL	20.3	BDL	BDL	0.51	BDL	BDL	BDL
20-03-2025	64.9	38.3	6.0	10.5	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
25-03-2025	65.0	38.3	6.2	10.3	BDL	20.2	BDL	BDL	0.50	BDL	BDL	BDL
27-03-2025	62.1	38.8	6.2	10.6	BDL	20.4	BDL	BDL	0.52	BDL	BDL	BDL
02-04-2025	62.7	38.3	6.1	10.3	BDL	20.4	BDL	BDL	0.50	BDL	BDL	BDL
04-04-2025	64.1	38.3	6.1	11.0	BDL	20.3	BDL	BDL	0.51	BDL	BDL	BDL
08-04-2025	64.9	38.8	6.2	10.2	BDL	20.3	BDL	BDL	0.50	BDL	BDL	BDL
10-04-2025	62.0	38.3	6.2	10.0	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
15-04-2025	63.0	38.8	6.2	11.0	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
17-04-2025	64.0	38.8	6.0	10.5	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
22-04-2025	64.3	38.3	6.0	10.4	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
24-04-2025	62.8	38.3	6.0	11.0	BDL	20.3	BDL	BDL	0.50	BDL	BDL	BDL
02-05-2025	63.9	38.3	6.0	10.0	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
05-05-2025	62.4	38.8	6.1	11.0	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
06-05-2025	62.8	39.0	6.1	11.0	BDL	20.3	BDL	BDL	0.50	BDL	BDL	BDL
08-05-2025	62.0	38.3	6.1	11.0	BDL	20.3	BDL	BDL	0.51	BDL	BDL	BDL
13-05-2025	65.0	38.3	6.2	10.0	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
15-05-2025	64.1	38.8	6.2	10.3	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
20-05-2025	63.0	38.8	6.2	10.0	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
23-05-2025	62.0	38.3	6.2	10.2	BDL		BDL	BDL	0.53	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

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Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/04(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Date of Sampling	03-03-2025, 05-03-2025, 10-03-2025, 12-03-2025, 17-03-2025, 19-03-2025, 24-03-2025, 26-03-2025, 01-04-2025, 06-06-2025, 07-04-2025, 09-04-2025, 14-04-2025, 16-04-2025, 21-04-2025, 23-04-2025, 01-05-2025, 03-05-2025, 05-05-2025, 07-05-2025, 12-05-2025, 14-05-2025, 19-05-2025, 22-05-2025.
Point of Sample Collection	Maira Batrah (32°19'49.06"N & 75°49'4.25"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/NSSC /2025/04(A)
Analysis Duration	04-03-2025 To 27-05-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Benzene (µg/m³)	BaP (ng/m³)	CO (mg/m3)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)
04-03-2025	63.0	36.7	6.0	10.9	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
06-03-2025	64.0	37.9	6.4	10.0	BDL	24.2	BDL	BDL	0.54	BDL	BDL	BDL
11-03-2025	63.2	36.7	6.1	10.0	BDL	21.6	BDL	BDL	0.51	BDL	BDL	BDL
13-03-2025	63.7	37.1	6.1	10.4	BDL	24.2	BDL	BDL	0.54	BDL	BDL	BDL
18-03-2025	63.9	37.5	6.3	10.8	BDL	21.2	BDL	BDL	0.54	BDL	BDL	BDL
20-03-2025	63.1	37.9	6.3	10.5	BDL	23.2	BDL	BDL	0.51	BDL	BDL	BDL
25-03-2025	63.0	36.7	6.4	11.8	BDL	24.2	BDL	BDL	0.53	BDL	BDL	BDL
27-03-2025	64.0	37.5	6.0	11.0	BDL	22.2	BDL	BDL	0.54	BDL	BDL	BDL
02-04-2025	64.0	37.1	6.0	10.3	BDL	21.3	BDL	BDL	0.54	BDL	BDL	BDL
04-04-2025	63.6	37.5	6.0	11.2	BDL	21.6	BDL	BDL	0.54	BDL	BDL	BDL
08-04-2025	63.6	36.7	6.3	10.7	BDL	24.2	BDL	BDL	0.54	BDL	BDL	BDL
10-04-2025	63.7	37.5	6.4	10.9	BDL	25.2	BDL	BDL	0.54	BDL	BDL	BDL
15-04-2025	63.5	37.1	6.4	10.6	BDL	26.6	BDL	BDL	0.51	BDL	BDL	BDL
17-04-2025	63.2	37.1	6.2	11.5	BDL	22.2	BDL	BDL	0.53	BDL	BDL	BDL
22-04-2025	63.1	36.3	6.0	10.2	BDL	21.2	BDL	BDL	0.54	BDL	BDL	BDL
24-04-2025	63.9	36.7	6.0	10.8	BDL	24.4	BDL	BDL	0.51	BDL	BDL	BDL
02-05-2025	63.1	37.1	6.1	10.7	BDL	21.2	BDL	BDL	0.54	BDL	BDL	BDL
05-05-2025	63.2	37.5	6.0	11.6	BDL	23.2	BDL	BDL	0.51	BDL	BDL	BDL
06-05-2025	63.8	37.1	6.0	11.6	BDL	24.2	BDL	BDL	0.51	BDL	BDL	BDL
08-05-2025	63.0	37.9	6.1	10.0	BDL	23.3	BDL	BDL	0.51	BDL	BDL	BDL
13-05-2025	63.7	37.1	6.1	10.0	BDL	24.4	BDL	BDL	0.51	BDL	BDL	BDL
15-05-2025	63.9	37.1	6.0	10.2	BDL	25.2	BDL	BDL	0.52	BDL	BDL	BDL
20-05-2025	64.0	37.9	6.0	12.0	BDL	24.2	BDL	BDL	0.54	BDL	BDL	BDL
23-05-2025	63.0	36.3	6.3	10.0	BDL	23.3	BDL	BDL	0.54	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

(Reviewed & Authorized By)
Date: 06/06/2025

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TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/05(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Date of Sampling	06-03-2025, 08-03-2025, 13-03-2025, 15-03-2025, 20-03-2025, 22-03-2025, 27-03-2025, 29-03-2025, 05-04-2025, 10-04-2025, 12-04-2025, 17-04-2025, 19-04-2025, 24-04-2025, 26-04-2025, 29-04-2025, 08-05-2025, 10-05-2025, 15-05-2025, 17-05-2025, 22-05-2025, 24-05-2025, 29-05-2025, 31-05-2025.
Point of Sample Collection	Dumal Kaila (32°20'38.89"N & 75°49'54.85"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/NSSC /2025/05(A)
Analysis Duration	07-03-2025 To 04-06-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	BaP (ng/m^3)	CO (mg/m3)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)
07-03-2025	62.0	38.3	6.1	10.0	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
10-03-2025	65.0	40.8	6.2	11.0	BDL	20.4	BDL	BDL	0.52	BDL	BDL	BDL
15-03-2025	64.0	39.2	6.2	10.2	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
17-03-2025	63.6	39.6	6.2	10.2	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
21-03-2025	64.7	38.8	6.1	11.0	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
24-03-2025	65.0	38.8	6.1	10.2	BDL	20.2	BDL	BDL	0.54	BDL	BDL	BDL
28-03-2025	62.7	39.2	6.1	10.2	BDL	20.4	BDL	BDL	0.52	BDL	BDL	BDL
31-03-2025	62.8	39.6	6.2	10.5	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
06-04-2025	63.4	39.6	6.2	11.0	BDL	20.2	BDL	BDL	0.54	BDL	BDL	BDL
11-04-2025	63.6	40.0	6.1	10.3	BDL	20.3	BDL	BDL	0.54	BDL	BDL	BDL
14-04-2025	64.0	40.0	6.1	11.0	BDL	20.3	BDL	BDL	0.51	BDL	BDL	BDL
18-04-2025	64.1	40.4	6.1	10.5	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
21-04-2025	65.0	40.8	6.1	11.0	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
25-04-2025	62.9	40.8	6.2	10.9	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
28-04-2025	63.1	39.2	6.2	11.0	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
30-04-2025	63.6	39.2	6.2	11.0	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
09-05-2025	63.0	38.8	6.2	11.0	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
12-05-2025	64.0	38.8	6.2	10.2	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
16-05-2025	64.5	40.8	6.1	10.5	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
19-05-2025	64.1	40.8	6.1	10.4	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
23-05-2025	64.2	40.0	6.1	10.3	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
26-05-2025	65.0	39.2	6.1	10.2	BDL	20.3	BDL	BDL	0.54	BDL	BDL	BDL
30-05-2025	62.7	38.3	6.1	10.8	BDL	20.3	BDL	BDL	0.54	BDL	BDL	BDL
02-06-2025	62.0	39.2	6.2	10.3	BDL	20.3	BDL	BDL	0.51	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

(Reviewed & Authorized By)
Date: 06/06/2025

- The results are related to test items only.
- This certificate is not to be reproduced wholly or in part and cannot be used as evidence in the court of law.
- Sample will be destroyed after retention time unless otherwise specified.

Page 1 of 1

*****END OF REPORT*****

CHANDIGARH POLLUTION TESTING LABORATORY
(Environmental Monitoring, EIA, NOC, ETP, STP)
NABET Accredited EIA Consultant

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Phone : 0172-4669295
Lab : E-126, Phase-VII, Indl. Area, Mohali - 160055
Phone : 0172-5090312
E-mail : cptle126@gmail.com ; lab@cptl.co.in
Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/06(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Date of Sampling	06-03-2025, 08-03-2025, 13-03-2025, 15-03-2025, 20-03-2025, 22-03-2025, 27-03-2025, 29-03-2025, 05-04-2025, 10-04-2025, 12-04-2025, 17-04-2025, 19-04-2025, 24-04-2025, 26-04-2025, 29-04-2025, 08-05-2025, 10-05-2025, 15-05-2025, 17-05-2025, 22-05-2025, 24-05-2025, 29-05-2025, 31-05-2025.
Point of Sample Collection	Narainpur (32°34'94.74"N & 75°80'28.39"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/NSSC /2025/06(A)
Analysis Duration	07-03-2025 To 04-06-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Benzene (µg/m³)	BaP (ng/m³)	CO (mg/m3)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)
07-03-2025	63.0	39.2	6.2	12.0	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
10-03-2025	66.0	41.7	6.4	10.0	BDL	20.4	BDL	BDL	0.55	BDL	BDL	BDL
15-03-2025	63.4	39.6	6.2	11.0	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
17-03-2025	65.0	39.6	6.2	11.0	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
21-03-2025	65.2	40.0	6.2	11.1	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
24-03-2025	63.6	40.4	6.2	10.7	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
28-03-2025	64.5	40.8	6.4	11.6	BDL	20.4	BDL	BDL	0.54	BDL	BDL	BDL
31-03-2025	65.6	40.8	6.3	11.5	BDL	20.3	BDL	BDL	0.54	BDL	BDL	BDL
06-04-2025	64.5	41.3	6.3	11.1	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
11-04-2025	63.9	41.7	6.4	10.2	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
14-04-2025	64.0	41.7	6.3	11.6	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
18-04-2025	65.8	41.7	6.2	10.9	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
21-04-2025	65.8	39.6	6.3	11.0	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
25-04-2025	66.0	39.6	6.2	11.2	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
28-04-2025	65.2	40.4	6.2	10.9	BDL	20.4	BDL	BDL	0.54	BDL	BDL	BDL
30-04-2025	63.0	40.8	6.3	10.1	BDL	20.3	BDL	BDL	0.54	BDL	BDL	BDL
09-05-2025	64.0	40.8	6.3	11.6	BDL	20.3	BDL	BDL	0.55	BDL	BDL	BDL
12-05-2025	64.5	40.0	6.4	10.5	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
16-05-2025	64.8	40.8	6.3	10.8	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
19-05-2025	65.0	41.7	6.2	11.4	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
23-05-2025	63.1	41.3	6.2	11.3	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
26-05-2025	64.2	39.6	6.4	10.9	BDL	20.3	BDL	BDL	0.55	BDL	BDL	BDL
30-05-2025	65.2	40.0	6.2	11.4	BDL	20.3	BDL	BDL	0.55	BDL	BDL	BDL
02-06-2025	66.0	39.6	6.3	12.0	BDL	20.2	BDL	BDL	0.55	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

(Reviewed & Authorized By)
Date: 6/6/2025

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END OF REPORT

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Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/07(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Date of Sampling	06-03-2025, 08-03-2025, 13-03-2025, 15-03-2025, 20-03-2025, 22-03-2025, 27-03-2025, 29-03-2025, 05-04-2025, 10-04-2025, 12-04-2025, 17-04-2025, 19-04-2025, 24-04-2025, 26-04-2025, 29-04-2025, 08-05-2025, 10-05-2025, 15-05-2025, 17-05-2025, 22-05-2025, 24-05-2025, 29-05-2025, 31-05-2025.
Point of Sample Collection	Chaugan (32°18'54.97"N & 75°48'40.80"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/NSSC/2025/07(A)
Analysis Duration	07-03-2025 To 04-06-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NO_2 ($\mu g/m^3$)	NH_3 ($\mu g/m^3$)	O_3 ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	BaP (ng/m^3)	CO (mg/m3)	Pb ($\mu g/m^3$)	Ni (ng/m^3)	As (ng/m^3)
07-03-2025	62.0	40.0	6.0	10.0	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
10-03-2025	64.0	40.8	6.2	10.9	BDL	20.4	BDL	BDL	0.52	BDL	BDL	BDL
15-03-2025	62.5	40.4	6.1	10.0	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
17-03-2025	63.1	40.4	6.1	10.8	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
21-03-2025	64.0	40.8	6.1	10.1	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
24-03-2025	63.8	40.4	6.2	10.7	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
28-03-2025	63.6	40.8	6.2	10.6	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
31-03-2025	62.4	40.0	6.0	10.5	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
06-04-2025	62.7	40.0	6.0	10.1	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
11-04-2025	62.9	40.4	6.0	10.2	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
14-04-2025	63.1	40.8	6.1	10.7	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
18-04-2025	63.7	40.8	6.1	10.9	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
21-04-2025	63.8	40.0	6.1	11.0	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
25-04-2025	64.0	40.8	6.1	11.0	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
28-04-2025	62.0	40.8	6.2	10.9	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
30-04-2025	62.8	40.8	6.2	10.1	BDL	20.2	BDL	BDL	0.52	BDL	BDL	BDL
09-05-2025	62.8	40.4	6.2	10.8	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
12-05-2025	63.7	40.4	6.1	10.5	BDL	20.4	BDL	BDL	0.51	BDL	BDL	BDL
16-05-2025	63.7	40.0	6.1	10.8	BDL	20.2	BDL	BDL	0.51	BDL	BDL	BDL
19-05-2025	62.5	40.8	6.1	10.7	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
23-05-2025	62.5	40.8	6.0	11.0	BDL	20.3	BDL	BDL	0.52	BDL	BDL	BDL
26-05-2025	63.1	40.4	6.0	10.9	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
30-05-2025	62.4	40.4	6.1	10.4	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
02-06-2025	62.8	40.8	6.1	10.1	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

(Reviewed & Authorized By)
Date: 06/06/2025

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END OF REPORT

CHANDIGARH POLLUTION TESTING LABORATORY
(Environmental Monitoring, EIA, NOC, ETP, STP)
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Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(AA)

REPORT No. CPTLE/NSSC/2025/08(A)
REPORTING DATE: 06-06-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, KANGRA, H.P.**

SAMPLE PARTICULARS

Type of Sample	Ambient Air
Time period for Sampling	1440 Minutes
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Date of Sampling	06-03-2025, 08-03-2025, 13-03-2025, 15-03-2025, 20-03-2025, 22-03-2025, 27-03-2025, 29-03-2025, 05-04-2025, 10-04-2025, 12-04-2025, 17-04-2025, 19-04-2025, 24-04-2025, 26-04-2025, 29-04-2025, 08-05-2025, 10-05-2025, 15-05-2025, 17-05-2025, 22-05-2025, 24-05-2025, 29-05-2025, 31-05-2025.
Point of Sample Collection	Galor Khas (32°19'11.97"N & 75°51'5.82"E)
Environmental Conditions	Normal
Sample Identification No.	CPTLE/NSSC /2025/08(A)
Analysis Duration	07-03-2025 To 04-06-2025
Sample Collected By	Amrit Singh & Team

RESULTS

Date of Sample Received	PM_{10} (µg/m³)	$PM_{2.5}$ (µg/m³)	SO_2 (µg/m³)	NO_2 (µg/m³)	NH_3 (µg/m³)	O_3 (µg/m³)	Benzene (µg/m³)	BaP (ng/m³)	CO (mg/m3)	Pb (µg/m³)	Ni (ng/m³)	As (ng/m³)
07-03-2025	63.0	38.3	6.2	10.0	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
10-03-2025	65.0	40.0	6.4	10.4	BDL	20.3	BDL	BDL	0.56	BDL	BDL	BDL
15-03-2025	63.8	40.0	6.3	10.0	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
17-03-2025	64.1	39.2	6.3	10.3	BDL	20.2	BDL	BDL	0.56	BDL	BDL	BDL
21-03-2025	64.7	39.2	6.3	10.1	BDL	20.2	BDL	BDL	0.54	BDL	BDL	BDL
24-03-2025	65.0	38.8	6.3	10.0	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
28-03-2025	63.9	39.6	6.3	10.4	BDL	20.4	BDL	BDL	0.54	BDL	BDL	BDL
31-03-2025	63.9	39.6	6.3	10.2	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
06-04-2025	64.2	40.0	6.4	10.1	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
11-04-2025	64.5	38.3	6.3	10.1	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
14-04-2025	65.0	38.8	6.3	12.0	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
18-04-2025	63.0	38.8	6.4	11.2	BDL	20.2	BDL	BDL	0.56	BDL	BDL	BDL
21-04-2025	63.9	39.2	6.4	10.2	BDL	20.2	BDL	BDL	0.53	BDL	BDL	BDL
25-04-2025	63.6	39.2	6.4	11.3	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
28-04-2025	64.5	39.6	6.4	10.3	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
30-04-2025	64.7	39.6	6.3	11.4	BDL	20.3	BDL	BDL	0.53	BDL	BDL	BDL
09-05-2025	65.0	40.0	6.3	10.0	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
12-05-2025	63.0	38.3	6.3	10.0	BDL	20.4	BDL	BDL	0.56	BDL	BDL	BDL
16-05-2025	63.2	40.0	6.3	11.4	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
19-05-2025	64.6	40.0	6.4	10.4	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
23-05-2025	65.0	39.2	6.4	12.0	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
26-05-2025	63.8	39.2	6.3	11.2	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
30-05-2025	64.7	39.6	6.2	10.2	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
02-06-2025	65.0	40.0	6.2	12.0	BDL	20.4	BDL	BDL	0.53	BDL	BDL	BDL
Prescribed Standard	**100**	**60**	**80**	**80**	**400**	**100**	**05**	**01**	**4.0**	**1.0**	**20.0**	**06**
DL	-	-	-	-	**20.0**	-	**0.5**	**0.9**	-	**0.1**	**5.0**	**0.7**
Test Methods	**IS:5182 (P-23)**	**IS:5182 (P-24)**	**IS:5182 (P-2)**	**IS:5182 (P-6)**	**IS:5182 (P-25)**	**IS:5182 (P-9)**	**IS:5182 (P-11)**	**IS:5182 (P-12)**	**IS:5182 (P-10)**	**IS:5182 (P-22)**	**IS:5182 (P-26)**	**CPCB Manual**

BDL- Below Detection Limit, DL-Detection Limit

(Chemist In-Charge)
Date: 06/06/2025

(Reviewed & Authorized By)
Date: 06/06/2025

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Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(W)

REPORT No. CPTLE/NSSC/2025/01-04(W)
REPORTING DATE: 11-03-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, DISTRICT- KANGRA, H.P.**

SAMPLE PARTICULARS

Date of Sample Collection	06-03-2025
Date of Sample Received in Lab.	07-03-2025
Type of Sample	Ground water
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Sample Identification No.	CPTLE/NSSC/2025/01-04(W)
Point of Sample Collection	Borewell-GW_1-Project Site (32°19'49.06"N & 75°49'4.25"E), GW_2 –Hara (32°21'46.23"N & 75°46'40.30"E), GW_3 –Khanni Uparli (32°19'27.15"N & 75°48'38.36"E), GW_4 –Maira Batrah (32°19'49.06"N & 75°49'4.25"E).
Environmental Conditions	Normal
Quantity & Packaging	2.0 liters in plastic bottle +250ml in sterilized glass bottle each
Analysis Duration	07-03-2025 To 11-03-2025
Sample Collected By	Amrit Singh & Team
Visual Observation	Clear and colorless.

TEST RESULTS

S. N	Parameters	Results				Acceptable Limit	Permissible Limit	Test Method
		GW_1	GW_2	GW_3	GW_4			
1.	pH	7.31	7.47	7.45	7.58	6.5-8.5	No relaxation	IS:3025 (P-11): 2022
2.	Color, HU	<5	<5	<5	<5	5	15	IS:3025 (P-4): 2021
3.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025:P-5:20218
4.	Turbidity, NTU	<1	<1	<1	<1	1 Max.	5	IS:3025 (P-10): 2023
5.	Total Dissolved Solids, mg/l	380	395	375	385	500 Max.	2000	IS:3025 (P-16) :2023
6.	Total Hardness (as $CaCO_3$), mg/l	370	385	365	365	200 Max.	600	IS:3025 (P-21): 2009
7.	Calcium (as Ca^{++}), mg/l	40.0	43.0	49.0	37.0	75 Max.	200	IS:3025 (P-40): 2004 (RA:2019)
8.	Magnesium (as Mg^{++}), mg/l	20.0	21.5	29.8	26.2	30 Max.	100	IS:3025:P-46:2023
9.	Total Alkalinity (as $CaCO_3$), mg/l	350	365	355	355	200 Max.	600	IS:3025 (P-23):2023
10.	Chloride (as Cl), mg/l	24.0	24.0	18.5	23.5	250 Max.	1000	IS:3025 (P-32): 1988
11.	Sulphate (as SO_4), mg/l	21.6	16.9	18.6	24.8	200 Max.	400	IS:3025 (P-24): Sec-1:2022
12.	Iron (as Fe), mg/l	0.16	0.29	0.34	0.27	1.0 Max.	No relaxation	IS: 3025(Part-53), 2024
13.	Zinc (as Zn), mg/l	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	5 Max.	15	IS:3025 (P-49) : 1994
14.	Nitrate (as NO_3), mg/l	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	45 Max.	No relaxation	IS: 3025(Part-34) Sec-1:2023
15.	Chromium (as Cr), mg/l	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	0.05 Max.	No relaxation	IS:3025 (P-52): 2021
16.	Manganese (as Mn), mg/l	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	0.1 Max.	0.3	IS:3025 (P-59): 2023

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E-mail : cptle126@gmail.com ; lab@cptl.co.in
Website : www.cptl.co.in

Type of Sample	Ground water
Date of Sample Received in Lab	07-03-2025

S. N	Parameters	Results				Acceptable Limit	Permissible Limit	Test Method
		GW_1	GW_2	GW_3	GW_4			
17.	Mercury (as Hg), mg/l	ND (0.0.001)	ND (0.0.001)	ND (0.0.001)	ND (0.0.001)	0.001 Max.	No relaxation	IS:3025:P-48:1994
18.	Cadmium (as Cd), mg/l	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	0.003 Max.	No relaxation	IS:3025 (P-41):2023
19.	Fluoride (as F), mg/l	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	1.0 Max.	1.5	APHA 24th Edition 4500-F (D) SPADNS Method: 2023
20.	Selenium (as Se), mg/l	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	0.01	No relaxation	IS:3025 (P-56): 2003
21.	Residual Chlorine (as Cl_2), mg/l	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND	ND	IS:3025 (P-26) :2021
22.	E. coli/100ml	Absent	Absent	Absent	Absent	Absent	Absent	IS: 15185: 2016
23.	Total Coliform, MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent	IS: 15185: 2016

ND-Not Detected, DL-Detection Limit

(Chemist In-Charge)
Date: 11/3/2025

(Reviewed & Authorized By)
Date: 11/03/2025

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TEST CERTIFICATE

Format No. CPTLEIA(W)

REPORT No. CPTLE/NSSC/2025/05-08(W)
REPORTING DATE: 15-03-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, DISTRICT- KANGRA, H.P.**

SAMPLE PARTICULARS

Date of Sample Collection	10-03-2025
Date of Sample Received in Lab.	11-03-2025
Type of Sample	Ground water
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Sample Identification No.	CPTLE/NSSC/2025/05-08(W)
Point of Sample Collection	Borewell-GW_5-Dumal Kaila (32°20'38.89"N & 75°49'54.85"E), GW_6 –Narainpur (32°34'94.74"N & 75°80'28.39"E), GW_7 –Chaugan (32°18'54.97"N & 75°48'40.80"E), GW_8 –Galor Khas (32°19'11.97"N & 75°51'5.82"E).
Environmental Conditions	Normal
Quantity & Packaging	2.0 liters in plastic bottle +250ml in sterilized glass bottle each
Analysis Duration	11-03-2025 To 15-03-2025
Sample Collected By	Amrit Singh & Team
Visual Observation	Clear and colorless.

TEST RESULTS

S. N	Parameters	Results				Acceptable Limit	Permissible Limit	Test Method
		GW_5	GW_6	GW_7	GW_8			
1.	pH	7.42	7.47	7.55	7.28	6.5-8.5	No relaxation	IS:3025 (P-11): 2022
2.	Color, HU	<5	<5	<5	<5	5	15	IS:3025 (P-4): 2021
3.	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	IS:3025:P-5:20218
4.	Turbidity, NTU	<1	<1	<1	<1	1 Max.	5	IS:3025 (P-10): 2023
5.	Total Dissolved Solids, mg/l	385	367	375	350	500 Max.	2000	IS:3025 (P-16) :2023
6.	Total Hardness (as $CaCO_3$), mg/l	370	385	335	355	200 Max.	600	IS:3025 (P-21): 2009
7.	Calcium (as Ca^{++}), mg/l	50.0	43.0	33.0	37.0	75 Max.	200	IS:3025 (P-40): 2004 (RA:2019)
8.	Magnesium (as Mg^{++}), mg/l	27.4	19.0	27.4	26.2	30 Max.	100	IS:3025:P-46:2023
9.	Total Alkalinity (as $CaCO_3$), mg/l	340	295	295	325	200 Max.	600	IS:3025 (P-23):2023
10.	Chloride (as Cl), mg/l	19.0	26.0	18.5	21	250 Max.	1000	IS:3025 (P-32): 1988
11.	Sulphate (as SO_4), mg/l	26.4	18.2	16.6	14.6	200 Max.	400	IS:3025 (P-24): Sec-1:2022
12.	Iron (as Fe), mg/l	0.18	0.27	0.17	0.16	1.0 Max.	No relaxation	IS: 3025(Part-53), 2024
13.	Zinc (as Zn), mg/l	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	ND (DL-0.02)	5 Max.	15	IS:3025 (P-49) : 1994
14.	Nitrate (as NO_3), mg/l	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	ND (DL-1.0)	45 Max.	No relaxation	IS: 3025(Part-34) Sec-1:2023
15.	Chromium (as Cr), mg/l	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	0.05 Max.	No relaxation	IS:3025 (P-52): 2021
16.	Manganese (as Mn), mg/l	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	ND (DL-0.09)	0.1 Max.	0.3	IS:3025 (P-59): 2023

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Phone : 0172-5090312
E-mail : cptle126@gmail.com ; lab@cptl.co.in
Website : www.cptl.co.in

Type of Sample	Ground water
Date of Sample Received in Lab	11-03-2025

S. N	Parameters	Results				Acceptable Limit	Permissible Limit	Test Method
		GW_5	GW_6	GW_7	GW_8			
17.	Mercury (as Hg), mg/l	ND (0.0.001)	ND (0.0.001)	ND (0.0.001)	ND (0.0.001)	0.001 Max.	No relaxation	IS:3025:P-48:1994
18.	Cadmium (as Cd), mg/l	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	ND (DL-.001)	0.003 Max.	No relaxation	IS:3025 (P-41):2023
19.	Fluoride (as F), mg/l	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	ND (DL-0.1)	1.0 Max.	1.5	APHA 24th Edition 4500-F (D) SPADNS Method: 2023
20.	Selenium (as Se), mg/l	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	ND (DL-0.005)	0.01	No relaxation	IS:3025 (P-56) : 2003
21.	Residual Chlorine (as Cl_2), mg/l	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND (DL-0.003)	ND	ND	IS:3025 (P-26) :2021
22.	E.coli/100ml	Absent	Absent	Absent	Absent	Absent	Absent	IS: 15185: 2016
23.	Total Coliform, MPN/100ml	Absent	Absent	Absent	Absent	Absent	Absent	IS: 15185: 2016

ND-Not Detected, DL-Detection Limit

(Chemist In-Charge)
Date: 15/3/2025

(Reviewed & Authorized By)
Date: 15/03/2025

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TEST CERTIFICATE

Format No. CPTLEIA(S)

REPORT No. CPTLE/NSSC/2025/01-04(S)
REPORTING DATE: 11-03-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, DISTRICT- KANGRA, H.P.**

SAMPLE PARTICULARS

Date of Sample Collection	06-03-2025
Date of Sample Received in Lab.	07-03-2025
Type of Sample	Soil sample
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Sample Identification No.	CPTLE/NSSC/2025/01-04(S)
Point of Sample Collection	SQ_1-Project Site (32°19'49.06"N & 75°49'4.25"E), SQ_2 –Hara (32°21'46.23"N & 75°46'40.30"E), SQ_3 –Khanni Uparli (32°19'27.15"N & 75°48'38.36"E), SQ_4 –Maira Batrah (32°19'49.06"N & 75°49'4.25"E).
Environmental Conditions	Normal
Quantity & Packaging	500 gm in plastic bag each
Analysis Duration	07-03-2025 To 11-03-2025
Sample Collected By	Amrit Singh & Team

TEST RESULTS

S. N	Parameters	Unit	Results				Test Method
			SQ_1	SQ_2	SQ_3	SQ_4	
1.	pH (1:2.5)	--	7.29	7.44	7.35	7.47	IS 2720(P-26),1987
2.	Electrical Conductivity (1:2)	µmhos/cm	289	266	242	253	IS 14767,2000
3.	Texture	--	Sandy loam	Sandy loam	Sandy loam	Sandy loam	Methods Manual for Soil Testing Govt. of India: 2011
4.	Bulk Density	(g/cc)	1.47	1.38	1.29	1.44	IS 2720(P-3),1983 (RA-2021)
5.	Soil Moisture Content	%	12.8	15.6	15.4	11.4	Methods Manual for Soil Testing Govt. of India: 2011
6.	Color	--	Brown	Light Brown	Brown	Dark Brown	Methods Manual for Soil Testing Govt. of India: 2011
7.	Available Calcium(as Ca)	meq/l	155	136	152	132	Methods Manual for Soil Testing Govt. of India: 2011
8.	Available Magnesium (as Mg)	meq/l	25.7	23.2	19.2	17.4	Methods Manual for Soil Testing Govt. of India: 2011
9.	Available Sodium(as Na)	kg/hac	69.5	63.2	53.4	61.4	Methods Manual for Soil Testing Govt. of India: 2011
10.	Available Potassium (as K)	kg/hac	35.5	31.4	37.2	41.4	Methods Manual for Soil Testing Govt. of India: 2011
11.	Available Nitrogen	(%)	11.6	8.9	11.6	12.6	Methods Manual for Soil Testing Govt. of India: 2011
12.	Organic Matter	(%)	0.55	0.56	0.65	0.63	Methods Manual for Soil Testing Govt. of India: 2011
13.	Available Phosphorus (as P)	Kg/hac	51.9	52.6	48.4	48.3	Methods Manual for Soil Testing Govt. of India: 2011
14.	Cation Exchange Capacity	(meq/100gm)	10.6	14.7	12.3	10.3	Methods Manual for Soil Testing Govt. of India: 2011
15.	Iron (as Fe)	(mg/kg)	14.5	10.4	8.9	14.7	USEPA-3050-B-1996: 1996
16.	Zinc (as Zn)	(mg/kg)	12.5	8.7	6.9	8.7	USEPA-3050-B-1996: 1996
17.	Lead (as Pb)	(mg/kg)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	USEPA-3050-B-1996: 1996

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Website : www.cptl.co.in

Type of Sample	Soil
Date of Sample Received in Lab	07-03-2025

S. N	Parameters	Unit	Results				Test Method
			SQ_1	SQ_2	SQ_3	SQ_4	
18.	Manganese (as Mn)	(mg/kg)	12.3	14.3	16.1	12.1	USEPA-3050-B-1996: 1996
19.	Chromium (as Cr)	(mg/kg)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	USEPA-3050-B-1996: 1996
20.	Cadmium (as Cd)	(mg/kg)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	USEPA-3050-B-1996: 1996
21.	Copper (as Cu)	(mg/kg)	6.2	4.2	2.5	3.9	USEPA-3050-B-1996: 1996

ND-Not Detected, DL-Detection Limit

(Chemist In-Charge)
Date: 11/3/2025

(Reviewed & Authorized By)
Date: 11/03/2025

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TEST CERTIFICATE

Format No. CPTLEIA(S)

REPORT No. CPTLE/NSSC/2025/05-08(S)
REPORTING DATE: 15-03-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, DISTRICT- KANGRA, H.P.**

SAMPLE PARTICULARS

Date of Sample Collection	10-03-2025
Date of Sample Received in Lab.	11-03-2025
Type of Sample	Soil sample
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Sample Identification No.	CPTLE/NSSC/2025/05-08(S)
Point of Sample Collection	SQ_5-Dumal Kaila (32°20'38.89"N & 75°49'54.85"E), SQ_6 –Narainpur (32°34'94.74"N & 75°80'28.39"E), SQ_7 –Chaugan (32°18'54.97"N & 75°48'40.80"E), SQ_8 –Galor Khas (32°19'11.97"N & 75°51'5.82"E).
Environmental Conditions	Normal
Quantity & Packaging	500 gm in plastic bag each
Analysis Duration	11-03-2025 To 15-03-2025
Sample Collected By	Amrit Singh & Team

TEST RESULTS

S. N	Parameters	Unit	Results				Test Method
			SQ_5	SQ_6	SQ_7	SQ_8	
1.	pH (1:2.5)	--	7.31	7.41	7.45	7.58	IS 2720(P-26),1987
2.	Electrical Conductivity (1:2)	µmhos/cm	290	270	274	258	IS 14767,2000
3.	Texture	--	Sandy loam	Sandy loam	Sandy loam	Sandy loam	Methods Manual for Soil Testing Govt. of India: 2011
4.	Bulk Density	(g/cc)	1.57	1.48	1.63	1.38	IS 2720(P-3),1983 (RA-2021)
5.	Soil Moisture Content	%	12.8	10.4	8.6	6.8	Methods Manual for Soil Testing Govt. of India: 2011
6.	Color	--	Brown	Light Brown	Brown	Dark Brown	Methods Manual for Soil Testing Govt. of India: 2011
7.	Available Calcium (as Ca)	meq/l	175	158	186	198	Methods Manual for Soil Testing Govt. of India: 2011
8.	Available Magnesium (as Mg)	meq/l	32.8	24.4	22.6	28.4	Methods Manual for Soil Testing Govt. of India: 2011
9.	Available Sodium (as Na)	kg/hac	52.6	62.7	54.6	56.5	Methods Manual for Soil Testing Govt. of India: 2011
10.	Available Potassium (as K)	kg/hac	24.4	18.6	26.4	22.5	Methods Manual for Soil Testing Govt. of India: 2011
11.	Available Nitrogen	(%)	10.6	14.4	10.5	12.5	Methods Manual for Soil Testing Govt. of India: 2011
12.	Organic Matter	(%)	0.65	0.57	0.50	0.54	Methods Manual for Soil Testing Govt. of India: 2011
13.	Available Phosphorus (as P)	Kg/hac	48.6	51.8	43.6	52.4	Methods Manual for Soil Testing Govt. of India: 2011
14.	Cation Exchange Capacity	(meq/100gm)	12.6	10.6	9.7	8.8	Methods Manual for Soil Testing Govt. of India: 2011
15.	Iron (as Fe)	(mg/kg)	12.6	14.5	10.6	12.4	USEPA-3050-B-1996: 1996
16.	Zinc (as Zn)	(mg/kg)	6.6	4.3	10.4	10.6	USEPA-3050-B-1996: 1996
17.	Lead (as Pb)	(mg/kg)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	USEPA-3050-B-1996: 1996

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CHANDIGARH POLLUTION TESTING LABORATORY
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E-mail : cptle126@gmail.com ; lab@cptl.co.in
Website : www.cptl.co.in

Type of Sample	Soil
Date of Sample Received in Lab	11-03-2025

S. N	Parameters	Unit	Results				Test Method
			SQ_5	SQ_6	SQ_7	SQ_8	
18.	Manganese (as Mn)	(mg/kg)	18.4	16.5	16.7	18.3	USEPA-3050-B-1996: 1996
19.	Chromium (as Cr)	(mg/kg)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	ND (DL-2.0)	USEPA-3050-B-1996: 1996
20.	Cadmium (as Cd)	(mg/kg)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	ND (DL-0.5)	USEPA-3050-B-1996: 1996
21.	Copper (as Cu)	(mg/kg)	8.9	6.5	10.5	8.7	USEPA-3050-B-1996: 1996

ND-Not Detected, DL-Detection Limit

(Chemist In-Charge)
Date: 15/3/2025

(Reviewed & Authorized By)
Date: 15/03/2025

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Website : www.cptl.co.in

TEST CERTIFICATE

Format No. CPTLEIA(SW)

REPORT No. CPTLE/NSSC/2025/01(W)
REPORTING DATE: 11-03-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, DISTRICT- KANGRA, H.P.**

SAMPLE PARTICULARS

Date of Sample Collection	06-03-2025
Date of Sample Received in Lab.	07-03-2025
Type of Sample	Surface Water
Sampling Plan Ref. No.	CPTLF7.3-I
Sampling Method	CPTL/SM/01
Sample Identification No.	CPTLE/NSSC/2025/01(S.W)
Point of Sample Collection	Chakki River Upstream
Environmental Conditions	Normal
Quantity & Packaging	2.0 liters in plastic bottle+250ml in sterilized glass bottle
Analysis Duration	07-03-2025 To 11-03-2025
Sample Collected By	Amrit Singh & Team
Visual Observation	Sample with suspended and settleable matter

TEST RESULTS

S. No.	Parameters	Results	Test Method
1.	pH	7.27	IS:3025 (P-11): 2022
2.	Color, HU	<5	IS:3025 (P-4): 2021
3.	Odour	Agreeable	IS:3025 (P-5): 2018
4.	Turbidity, NTU	2.5	IS:3025 (P-10): 2023
5.	Total Dissolved Solids, mg/l	132	IS:3025 (P-16): 2023
6.	Total Suspended Solids, mg/l	8.8	IS:3025 (P-17): 2023
7.	Total Hardness (as $CaCO_3$), mg/l	110	IS:3025 (P-21): 2009
8.	Chemical Oxygen Demand, mg/l	12.0	IS:3025 (P-58): 2023
9.	BOD (at 27°C) for 3 days, mg/l	<2	IS:3025 (P-44): 2023
10.	Dissolved Oxygen, mg/l	6.2	IS:3025 (P-38): 1989
11.	Calcium (as Ca^{++}), mg/l	28.0	IS:3025 (P-40):1991:
12.	Magnesium (as Mg^{++}), mg/l	14.0	IS:3025 (P-46): 2023
13.	Sodium (as Na^{+}), mg/l	17.5	IS:3025 (P-45):1983:
14.	Potassium (as K), mg/l	7.9	IS: 3025 (P-45):1983
15.	Nitrate (as NO_3), mg/l	1.2	IS:3025 (P-34): Sec-1:2023
16.	Chloride (as Cl), mg/l	14.5	IS:3025 (P-32): 1988
17.	Sulphate (as SO_4), mg/l	16.7	IS:3025 (P-24): Sec-1:2022
18.	Iron (as Fe), mg/l	0.12	IS:3025 (P-53), 2024
19.	Total Chromium (as Cr), mg/l	ND (DL-0.005)	IS:3025 (P-52): 2021
20.	Zinc (as Zn), mg/l	ND (DL-0.02)	IS:3025 (P-49): 1994

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E-mail : cptle126@gmail.com ; lab@cptl.co.in
Website : www.cptl.co.in

Type of Sample	Surface Water (Chakki River)
Date of Sample Received in Lab	07-03-2025

S. No.	Parameters	Results	Test Method
21.	Fluoride (as F) mg/l	ND (DL-0.1)	IS:3025 (P-60) : 2008
22.	Mercury (as Hg) mg/l	ND (DL-0.002)	IS:3025 (P-48):1994:RA-2003
23.	Copper (as Cu),mg/l	ND (DL-0.04)	IS:3025 (P -42): 1992 (RA:2019
24.	Boron (as B),mg/l	ND (DL-0.1)	IS:3025 (P-57): 2005
25.	Aluminium (as Al) mg/l	ND (DL-0.1)	IS:3025 (P-55):2003
26.	Cadmium (as Cd), mg/l	ND (DL-0.001)	IS:3025 (P-41): 1992
27.	Total Ammonia, mg/l	ND (DL-1.0)	IS: 3025(P-34):1988
28.	Fecal Coliform, MPN/100 ml	52	IS : 1622-1981 ,MPN Method
29.	Total Coliform, MPN/100 ml	92	IS : 1622-1981(RA2009) ,MPN Method

ND-Not Detected, DL-Detection Limit

(Chemist In-Charge)
Date: 11/3/2025

(Reviewed & Authorized By)
Date: 11-3-2025

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TEST CERTIFICATE

Format No. CPTLEIA(SW)

REPORT No. CPTLE/NSSC/2025/02(W)
REPORTING DATE: 11-03-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, DISTRICT- KANGRA, H.P.**

SAMPLE PARTICULARS

Date of Sample Collection	06-03-2025
Date of Sample Received in Lab.	07-03-2025
Type of Sample	Surface Water
Sampling Plan Ref. No.	CPTLF7.3-I
Samiing Method	CPTL/SM/01
Sample Identification No.	CPTLE/NSSC/2025/02(S.W)
Point of Sample Collection	Chakki River Downstream
Environmental Conditions	Normal
Quantity & Packaging	2.0 liters in plastic bottle+250ml in sterilized glass bottle
Analysis Duration	07-03-2025 To 11-03-2025
Sample Collected By	Amrit Singh & Team
Visual Observation	Sample with suspended and settleable matter

TEST RESULTS

S. No.	Parameters	Results	Test Method
1.	pH	7.25	IS:3025 (P-11): 2022
2.	Color, HU	<5	IS:3025 (P-4): 2021
3.	Odour	Agreeable	IS:3025 (P-5): 2018
4.	Turbidity, NTU	2.8	IS:3025 (P-10): 2023
5.	Total Dissolved Solids, mg/l	138	IS:3025 (P-16): 2023
6.	Total Suspended Solids, mg/l	8.4	IS:3025 (P-17): 2023
7.	Total Hardness (as $CaCO_3$), mg/l	120	IS:3025 (P-21): 2009
8.	Chemical Oxygen Demand,mg/l	10.0	IS:3025 (P-58): 2023
9.	BOD (at 27°C) for 3 days,mg/l	<2	IS:3025 (P-44): 2023
10.	Dissolved Oxygen,mg/l	6.4	IS:3025 (P-38): 1989
11.	Calcium (as Ca^{++}), mg/l	22.0	IS:3025 (P-40):1991
12.	Magnesium (as Mg^{++}), mg/l	12.0	IS:3025 (P-46): 2023
13.	Sodium (as Na^{+}), mg/l	15.5	IS:3025 (P-45):1983:RA:2003
14.	Potassium (as K), mg/l	6.4	IS: 3025 (P-45):1983
15.	Nitrate (as NO_3), mg/l	1.4	IS:3025 (P-34) :Sec-1:2023
16.	Chloride (as Cl), mg/l	13.5	IS:3025 (P-32): 1988
17.	Sulphate (as SO_4), mg/l	18.5	IS:3025 (P-24) : Sec-1:2022
18.	Iron (as Fe), mg/l	0.13	IS:3025 (P-53), 2024
19.	Total Chromium (as Cr), mg/l	ND (DL-0.005)	IS:3025 (P-52): 2021
20.	Zinc (as Zn), , mg/l	ND (DL-0.02)	IS:3025 (P-49) : 1994

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Website : www.cptl.co.in

Type of Sample	Surface Water (Chakki River)
Date of Sample Received in Lab	07-03-2025

S. No.	Parameters	Results	Test Method
21.	Fluoride (as F) mg/l	ND (DL-0.1)	IS:3025 (P-60): 2008
22.	Mercury (as Hg) mg/l	ND (DL-0.002)	IS:3025 (P-48):1994
23.	Copper (as Cu), mg/l	ND (DL-0.04)	IS:3025 (P -42): 1992
24.	Boron (as B), mg/l	ND (DL-0.1)	IS:3025 (P-57): 2005
25.	Aluminium (as Al) mg/l	ND (DL-0.1)	IS:3025 (P-55):2003
26.	Cadmium (as Cd), mg/l	ND (DL-0.001)	IS:3025 (P-41): 1992
27.	Total Ammonia, mg/l	ND (DL-1.0)	IS: 3025(P-34):1988
28.	Fecal Coliform, MPN/100 ml	22	IS: 1622-1981, MPN Method
29.	Total Coliform, MPN/100 ml	42	IS: 1622-1981(RA2009), MPN Method

ND-Not Detected, DL-Detection Limit

(Chemist In-Charge)
Date: 11/3/2025

(Reviewed & Authorized By)
Date: 11/03/2025

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Website : www.cptl.co.in

Format No. CPTLEIA(AN)

TEST CERTIFICATE

REPORT No. CPTLE/NSSC/2025/01-08(AN)
REPORTING DATE: 15-03-2025

NAME OF INDUSTRY: **Sh. DHARAMBIR SINGH (PARTNER), M/s. NEW SHIVA STONE CRUSHER, MINING LEASE AREA 02-49-20 Ha, FALLING IN KHASRA NO.722/1, MOHAL MAIRA BATRAH, MAUZA MAIRA DHOOMAL, TEHSIL- NURPUR, DISTRICT- KANGRA, H.P.**

SAMPLE PARTICULARS

Samling Method:	CPTLF7.3-I	**Type of Sample:**	Air Quality w.r.t Noise
Sampling Plan Ref. No:	CPTL/SM/01	**Sampling Locations:**	At different locations
Sample Identification No.	CPTLE/NSSC/2025/01-08(N)	**Environmental Conditions:**	Normal
Date of Monitoring:	06-03-2025 To 10-03-2025	**Monitoring Done By:**	Amrit Singh & Team
Nature of Sample:	Noise Level		

TECHNICAL DATA

S. No.	Locations	Value in dB(A) (Average)		Test Method
		Day Time (1 Hour)	Night Time (1 Hour)	
01.	Project Site (32°20'46.48"N & 75°48'51.77"E)	66.8	33.6	IS 9989:1981(Rev.2001)
02.	Hara (32°21'46.23"N & 75°46'40.30"E)	54.4	33.4	IS 9989:1981(Rev.2001)
03.	Khanni Uparli (32°19'27.15"N & 75°48'38.36"E)	52.5	34.5	IS 9989:1981(Rev.2001)
04.	Maira Batrah (32°20'14.13"N & 75°49'17.41"E)	53.6	33.6	IS 9989:1981(Rev.2001)
05.	Dumal Kaila (32°20'38.89"N & 75°49'54.85"E)	53.9	35.2	IS 9989:1981(Rev.2001)
06.	Narainpur (32°21'31.78"N & 75°48'56.42"E)	52.3	33.3	IS 9989:1981(Rev.2001)
07.	Chaugan (32°18'54.97"N & 75°48'40.80"E)	52.6	36.5	IS 9989:1981(Rev.2001)
08.	Galor Khas (32°19'11.97"N & 75°51'5.82"E)	52.4	33.3	IS 9989:1981(Rev.2001)

(Chemist In-Charge)
Date: 15/3/2025

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ANNEXURE-X

SITE PHOTOGRAPHS