DRAFT EIA/EMP REPORT

of

Minor Mineral Quarry Cluster Masonry Stone Block
At
Khasra no.- 147, Area- 8.92Ha.
Village- Dakteng (Zewan), Tehsil- Panthachowk,
District- Srinagar, State- J&K.

Schedule,	*1(a) i,*
Category	*B1*
Land/Plot Area/Revised Area	*8.92 Ha*
Production Capacity	*1,50,000 MT/ annum*
ToR Letter No.	*JKEIAA/2021/410/8100-8103, Dated 19.06.2023*
Lab Used	*Ultra Testing & Research Laboratory*
Approved By	*NABL*
Monitoring Period	*March to May 2023(Summer Season)*

Submitted by

Mr. Mohd Amin Wani S/o Gh. Mohd Wani
R/o: Sempora, Lasjan,
District- Srinagar, State- J&K.

Environment Consultant

GLOBUS ENVIRONMENT
ENGINEERING SERVICES
Excellence in Environmental Sustainability

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Certificate No. NABET/EIA/2124/RA0245, Valid Till August 24/2024

0191-2474553/0194-2490602
Government of India
Ministry of Environment, Forest & Climate Change
J&K ENVIRONMENT IMPACT ASSESSMENT AUTHORITY
(at) DEPARTMENT OF ECOLOGY, ENVIRONMENT AND REMOTE SENSING
S.D.A. Colony, Bemina, Srinagar-190018 (May-Oct)/ Paryavaran Bhawan, Transport Nagar, Gladni, Jammu-180006 (Nov-Apr)
Email: jkseiaa@gmail.com, website:www.parivesh.nic.in

Shri Mohd. Amin wani,
S/O Shri Gh. Mohd Wani.,
R/O Village Semmpora Lasjan
District Srinagar.

No.JKEIAA/2021/8100-8103 Dated 19- 06 - 2023

Subject:- Grant of Terms of Reference in favour of Shri Mohd Amin Wani, S/o Gh. Mohd Wani, R/O Village Semmpora, Lasjan, District Srinagar for proposed project Minor Mineral Quarry cluster Masonry Stone Block at Khasra No.147, Area 8.92 Ha. Village Dakteng (Zewan), Tehsil Panthachowk, District Srinagar under proposal No.SIA/JK/MIN/54417/2020

Reference:-i) Minutes of the Meeting of JKEAC held on 28th/30th January, 2021
ii) Minutes of the Meeting of JKEIAA held on 18th February, 2021

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In pursuance to the Hon'ble National Green Tribunal Order dated 4th/13th September, 2018 & subsequent office Memorandum dated 12th December, 2018 of Ministry, Forest & Climate Change, Government of India, I am directed to advise you to formulate the EIA, EMP & other documents as per check list through NABET Accredited Consultant as per Terms of Reference(TOR) enclosed herewith and get the public hearing conducted for proposed project Minor Mineral Quarry cluster Masonry Stone Block at Khasra No.147, Area 8.92 Ha. Village Dakteng (Zewan), Tehsil Panthachowk, District Srinagar through J&K Pollution Control Committee. The EIA/EMP, public hearing report & other documents as per Check list are required to be uploaded on www.parivesh.nic.in for further processing at this end.

Further you are advised to inform the Consultant to enrich the EIA report consulting the local stake holder departments.

Yours faithfully,

Staff Officer to
Member-Secretary, JKEIAA
19/6/2023

Encl:- As Above.

Copy to:-

1.Hon'ble Chairman, JKEIAA for favour of information please.
2.Chairman, J&K Pollution Control Board for favour of information and necessary action pl.
3.Secretary, JK Expert Appraisal Committee for favour of information

STANDARD TERMS OF REFERENCE

1) Year-wise production details should be given, clearly stating the highest production achieved in any one year.

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

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

4) All corner coordinates of the mine lease area, superimposed on a High Resolution Imagery/ toposheet, topographic sheet, geomorphology and geology of the areas should be provided. Such an Imagery of the proposed area should clearly show the land use and other ecological features of the study area (core and buffer zone).

5) Information should be provided on high resolution satellite image on with geological map of the area, geomorphology of land-forms of the area, existing minerals and mining history of the area, important water bodies, streams and rivers and soil characteristics.

6) Details about the land proposed for mining activities should be 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.

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

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

9) The study 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.

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.

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

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

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.

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

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

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

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

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

19) Proximity to Areas declared as 'Critically Polluted' should also be indicated and where so required, clearance certifications from the prescribed Authorities, such as the SPCB or State Mining Department should be secured and furnished to the effect that the proposed mining activities could be considered.

20) 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

S.E.I.A. Authority
Chairman
Orissa

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.

21) 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.

22) Air quality modelling 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 modelling 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.

23) 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.

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

25) 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.

26) 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.

27) 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.

28) 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.

29) 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.

30) 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.

31) 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.

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

33) 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.

34) 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.

35) 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.

36) 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.

37) 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.

38) 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.

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

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

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

42) 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.

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

a) Executive Summary of the EIA/EMP Report

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

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

d) 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.

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

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

g) While preparing the EIA report, the instructions for the Proponents and instructions for the Consultants issued by MoEF&CC 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.

h) 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.

i) 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.

j) The EIA report should also include (i) surface plan of the area indicating contours of main topographic features, drainage and mining area measurements, (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.

SPECIFIC TERMS OF REFERENCE

1. Impact of mining activity on adjacent agricultural land with particular reference to run off, soil erosion and top-soil loss due to change in topography.
2. Details of Gradient of area and 3-D view draped on the satellite image
3. Details of excavation schedule & sequential mining plan with a maximum mine depth
4. Details of transportation of mined out materials with respect to axle load specified for the road as per the Indian Road congress for both the ways (loaded as well as unloaded trucks) load and its impact on the environment.
5. Impact on mining activity on the existing land use in the study area.
6. NOCs from HoD/competent authority of Wildlife Protection Department and Disaster Management Department should be obtained and submitted while applying for EC.

7. A digitalised surface plan showing coordinates, physical measurements, gradient and inter-cross sections at different intervals should be a mandatory part of mining plan
8. The Photography and videography of the mining site shall be part of the Terms of Reference.
9. The maps shall be submitted on a scale of 1: 3000 and 1: 1500 within 10 kms. Radius
10. The shortest extraction route leading to the main road but with minimum interference with human settlements should be identified and described in detail. This along with the map and its KML file be part of an exclusive chapter in the EMP
11. Dust suppression measures should be prescribed in the EIA/EMP.
12. Post project monitoring plan should be included in the study.
13. Occupational health impacts should be assessed and plan for implementation of COVID-19 SOPs in the mining activity should be detailed.
14. The Consultant while presenting field data in the EIA report, should ensure that the site-specific date-wise datasheets duly attested by the local panchayat head with his name, signatures and stamp and attested by District Mineral Officer with seal and signature are included in the EIA report.
15. The impact of mining activity on the neighbouring villages need to be studied and extraction road need to be such that it has least crossing through village settlements.
16. The data displayed on air quality monitoring stations should be captured with digital camera displaying the date on the photograph so captured and same should be submitted in support of the date-wise data sheets. These digital photographs should be submitted in soft as well as appended with the EIA report.
17. Mining shall be proposed manually minimally supported by semi-mechanized methods.
18. Impact of stone quarrying on the human settlements in the vicinity should be assessed in detail.
19. Impact on human health and bovine population in the vicinity should be assessed and mitigative plans proposed.
20. **The prescribed TORs would be valid for a period of four years for submission of the EIA/EMP reports, as per the S.O. No. 751(E) dated 17th of Feb., 2020.**

Besides, the TORs are recommended without prejudice to the standing court orders, if any, w.r.t the concerned mining project or final outcome of writ petitions/LPAs pending disposal before any competent court of law w.r.t the concerned mining block.

CHAPTER: 1

INTRODUCTION

CHAPTER-1
INTRODUCTION

1.1 PURPOSE OF THE REPORT

The purpose of Environment Impact Assessment is to give the environment its due place in the decision making process by clearly evaluating the environmental consequences of the proposed activity before action is taken. Early identification and characterization of critical environmental impacts allows the public and the government to form a view about the environmental acceptability of a proposed developmental project and what conditions should apply to mitigate or reduce those risks and impacts.

The sole purpose of Environment Impact Assessment report is to assess impacts of project on the physical, natural & social (socio-economic) environment including the people. Probable effects of the activities both negative & positive are identified and assessed for facilitating decision making.

Environment Clearance is statutory requirement for all the "B1" category mining projects for which EIA/EMP has to be prepared and submitted to State Expert Appraisal Committee (SEAC) for granting environment clearance.

EIA is also necessary to develop the said mines for sustainable growth with respects to Mineral exploitation, social status and conserving the environment aspects of surroundings.

An Environmental Impact Assessment report is prepared to comply with the Terms of Reference (TOR) received under EIA notification of the MoEF dated 14-9-2006, as amended on 1st Dec 2009 and the EIA Guideline Manual for Mining of Minerals of MoEF&CC, Govt. of India, for seeking environmental clearance of Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- 147, Area- 8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K and the sum total Lease Area which is ≥5 ha. Therefore, as per MoEF&CC, GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018 if a cluster or an individual lease exceeds 5 Ha, the EIA/EMP be made applicable in the process of grant of prior Environmental Clearance.

1.2 IDENTIFICATION OF PROJECT & PROJECT PROPONENT

The project is being proposed by Mr. Mohd Amin Wani. The EIA-EMP report prepared as per the TOR granted vide letter No. JKEIAA/2021/410/8100-8103, Dated 19.06.2023 under the EIA Notification. In order to assess the impact on environment due to proposed mine, it is necessary to ascertain present status of environment prevailing at the project site, identification and assessment of impacts on the environment by the proposed operation.

1.2.1 Name & address of Project Proponent

Mr. Mohd Amin Wani S/o Gh. Mohd Wani
R/o: Sempora, Lasjan, District- Srinagar,
State- J&K, Pin-193223

1.3 BRIEF DESCRIPTION OF THE PROJECT

Table 1.1: Project Description

On-line Proposal No.	SIA/JK/MIN/54417/2020		
File No. allotted by SEIAA, JK	SEAC/JK/20/384		
Name of Proponent	Mr. Mohd Amin Wani S/o Gh. Mohd Wani,		
Full correspondence address of proponent	R/o: Sempora, Lasjan District- Srinagar, State- J&K		
Name of Project	Minor Mineral Quarry Cluster Masonry Stone Block		
Project location (Plot/Khasra/Gate No.)	Khasra No: 147, Village- Dakteng (Zewan), Tehsil : Panthachowk, District: Srinagar, State: J&K.		
Name of Minor Mineral	Minor Mineral Quarry Cluster Masonry Stone Block		
Type of Land	Khalsa Sarkar		
Land utilization Pattern	The area is barren land.		
Sanctioned Lease Area (in Ha)	8.29 Ha		
Schedule (as per EIA notification 2006)	1(a)i		
Category of Project	B (1)		
Method of Mining	Open Cast, Semi-mechanized		
Sanctioned Period of Mine lease	New Mine, The applicant being the highest bidder was issued with Letter of Intent (LOI) by DGM office vide letter No. 337/MCC/DGM/CQK/16/3520-22 Dated: 22-08-2017 for the exploitation for 5 Years.		
Pillar Coordinates	**Pillar**	**Latitude**	**Longitude**
	RP	34°02'38.98"N	74°54'25.28"E
	A	34°02'43.32"N	74°54'23.75"E
	B	34°02'47.00"N	74°54'24.14"E
	C	34°02'46.41"N	74°54'12.29"E
	D	34°02'44.54"N	74°54'02.31"E
	E	*34°02'38.83"N*	74°54'08.65"E
	F	34°02'39.25"N	74°54'15.77"E
	G	34°02'43.07"N	74°54'18.14"E
Toposheet No	43 J/16		
Total Geological Reserves	23,59,740 MT		
Total Mineable Reserves	20,43,510 MT		
Proposed Production/year in Mining Plan Approval Letter	1,50,000 MT/Annum (Average Annual Production)		
Production of mine/day	500 MT/day		
No. of Working days	300 Days		

Working hours/day	8 hours/day			
No. of Workers	34 Manpower			
No. of vehicles movement/day	50 Units (Assumed Loading Capacity: 10 Tonnes/Unit)			
Altitude of the Area	The Highest Point : 2510m amsl The Lowest Point : 1600m amsl			
Ultimate Depth of Mining (Bench Level)	8-12 m (average Depth) (1775 mRL – 1640 mRL) *(Source: Approved Mining Plan)*			
Ground Water Level	1.50 – 2.50 mbgl *Source:http://cgwb.gov.in/District_Profile/JandK/srinagar.pdf*			
Nearest metalled road from site	Metalled Road 0.57 km away from the mine site.			
Water Requirement	**Source**	**Purpose**	**Detail**	**Avg. Demand/ Day**
	Portable Tankers	Drinking @15lpcd/worker	34 workers x 15 lpcd = 510 lpcd	0.51 KLD
		Land reclamation / plantation @5 Lit/Tree (@ 100 trees/ Ha)	446 Trees x 5 lpcd) = 2230 lpcd	2.23 KLD
		Mine Operation	-	1.0 KLD
		Dust suppression @1 Lit/Sq.m	Approach Road Area = (570 m Length x 7m Width = 3990 m^2 lpcd	3.99 KLD
	Total			**7.73 KLD**
Name of QCI Accredited Consultant with QCI No. and period of validity.	**GLOBUS Environment Engineering Services** Certificate No. NABET/EIA/2124/RA0245, Valid Till August 24/2024			
Any litigation pending against the project or land in any court	No			
Total Proposed Project Cost	Rs. 97.33 Lakhs			
Proposed CER cost	Rs. 4.87 Lakhs (5% of the total Project Cost)			
Proposed EMP cost	Rs. 14.41 Lakhs (Haulage Road repair, Dust Suppression, Plantation & Environmental Monitoring)			
Length and breadth of Haul Road	Haul Road Length 570 m Length & Width 7 m			
No. of Trees to be Planted	446 trees will be planted			

1.3.1 Project's importance to the country and the region

Minor Mineral Quarry Cluster Masonry Stone Block Mining is one of the essential components for building and infrastructural development projects. It has high Demand in the market due to increased domestic, industrial and other infrastructural activities.

Minor Mineral Quarry Cluster Masonry Stone Block is one of the most sought-out building materials for the construction purposes. Being hard in texture and its property of durability, it is used chiefly for construction of roads and building etc. It is generally used because it helps to prevent mortar shrinkage. This will also generate employment opportunity for local people and enhance their socio - economic level which ultimately will improve education, health & sanitation, transport and other development of the surroundings. Thus, keeping in mind this requirement, mining of bed material is necessary for durability and to beautify by carving as per the requirement of the consumer. The Mine is important for development of economic growth and the country.

1.4.1 STATUTORY PERMISSIONS AND CLEARANCE RECEIVED

- New Mine, District Magistrate has given consent vide letter. No. 337/MCC/DGM/CQK/16/3520-22 Dated: 22/08/2017 for the exploitation for 5 Years.
- Baseline Study has been conducted during March 2023 to 30 May 2023 (Summer Season).
- Mine plan approved by Department of Geology and Mining, J&K Government, Srinagar on Vide letter No.- DDGK/DGM/AAMP-Sgr/F-103/225-227, Dated: 26/09/2018.

1.4.2 PROJECT CHRONOLOGY TILL DATE:

1. Project Proponent has submitted requisite documents, namely Form-1 (as per the EIA Notification 2006, as amended till date) along with a Pre-feasibility Report and proposed Terms of References (ToR) for carrying out environmental studies to the State Environment Impact Assessment Authority (SEIAA) J&K on 27.11.2020.
2. Technical presentation before the SEAC, J&K to finalize the ToR for the EIA study was held on Agenda of 25th JKEAC Meeting Dated: 28.01.2021 and 30.01.2021.
3. The SEIAA, J&K issued ToR vide Letter No. JKEIAA/2021/410/8100-8103, Dated 19.06.2023

1.5 ENVIRONMENT CLEARANCE OR EIA PROCESS FOR THIS PROJECT

This mine lease will be granted for a period of 5 years which shall commence from the date of grant of Environment Clearance from the competent authority, which is mandated by the EIA Notification of 2006 and subsequent amendments issued by MoEF&CC.

Project Proponent seeking environmental clearance of Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- 147, Area- 8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K and the sum total Lease Area including other mines which is ≥5 ha. Therefore, as per MoEF&CC, GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018 if a cluster or an individual lease exceeds 5 Ha, the EIA/EMP be made applicable in the process of grant of prior Environmental Clearance.

The Environmental Clearance process for the proposed project will comprise of three stages. These stages in sequential order are:-

- Scoping
- Public Consultation or Public Hearing
- Appraisal

The flow chart depicting the stages to obtain the prior Environmental Clearance for the project is as given below in Figure 1.1.

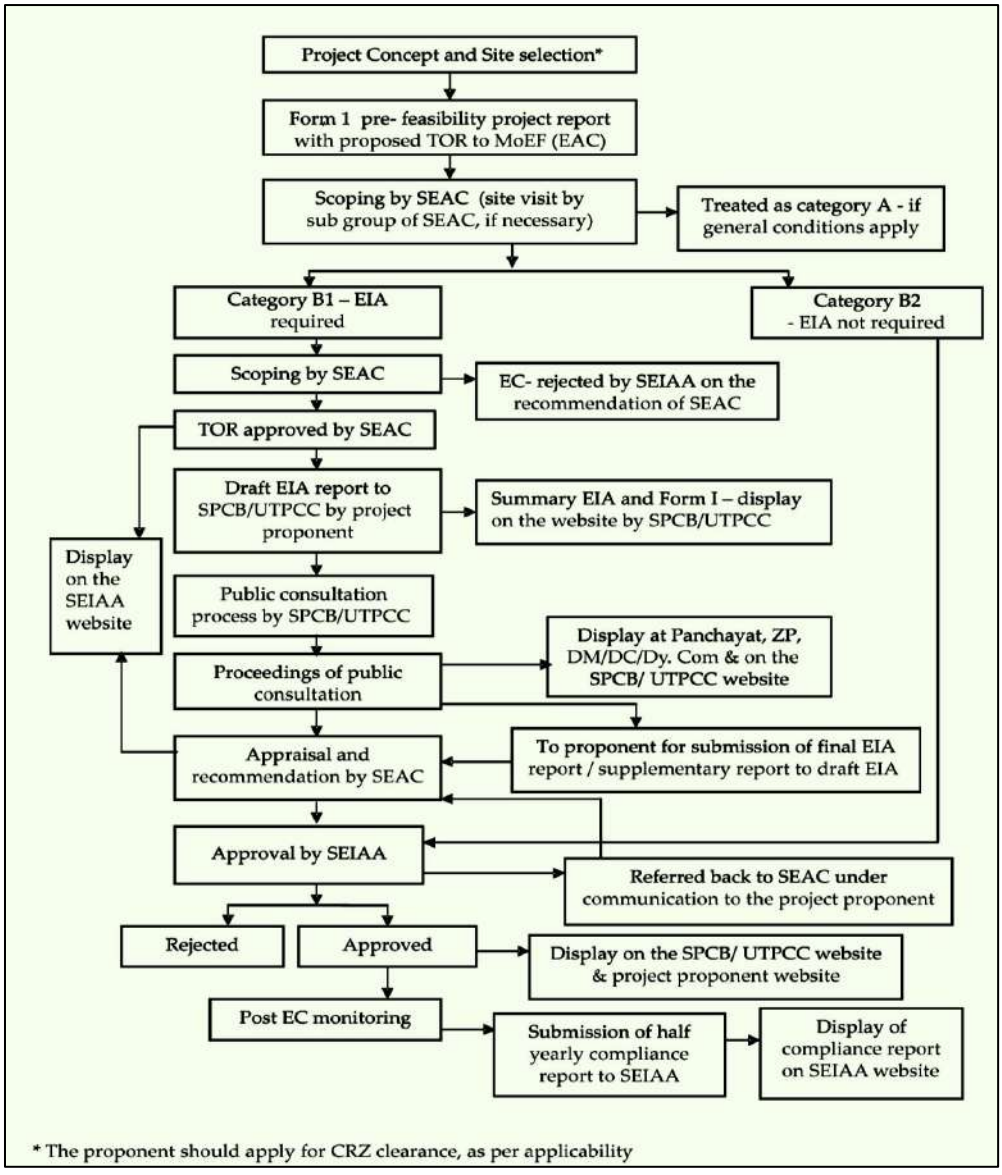

Figure 1.1: Flow Chart Showing the Process of Environment Clearance

1.6 SCOPE OF THE STUDY

The scope of the study includes a detailed characterization of the environment in an area of 10 Km. radius of the Mine Lease Area for various environmental parameters like Air, Water, Noise, and Land, Biological and Socio-economic aspects.

1.7 EIA Framework

This EIA Report is prepared in accordance with has been divided into eleven chapters as briefed here under:

Chapter 1 – Introduction
The chapter provides description of project background, site and surroundings, objectives, scope and organization of the study and format of this report.

Chapter 2 – Project Description
The chapter reports the information on project and capacity; need for the project; location; size or magnitude of operation; technology and process description; maps showing project layout, component of projects etc.

Chapter 3: Description of Environment
It includes a comparison of alternatives to determine the best method of achieving the project objectives with minimum environmental impacts or indicates the most environmentally friendly and cost effective options, if any.

Chapter 4: Anticipated Environmental Impact and Mitigation Measures
This chapter deals with the methodology and observed findings of field studies undertaken with respect to ambient air, meteorology, water, soils, noise levels, ecology to define the various existing environmental status in the area of the project.

Chapter 5: Analysis of Alternatives (Technology & Site)
The chapter identifies and discussed the potential impacts of the proposed mining and allied activities, which could cause significant environmental concerns. This discussion will form the basis for environmental management activities.

Chapter 6: Environmental Monitoring Program
The chapter portrayed the hierarchy of the environment management cell, with its respective roles and environment policy to be implemented.

Chapter 7 – Additional Studies
It embrace outcomes of public consultation, risk assessment, social impact assessment, R&R action plan, biodiversity conservation plan, watershed management etc.

Chapter 8 – Project Benefits
This chapter prescribes the benefits due to proposed project activity like improvements in the physical infrastructure, social infrastructure, employment potential etc.

Chapter: 9 Environmental Benefit Cost Analysis

This chapter prescribes the benefits cost analysis to proposed project

Chapter: 10 Environmental Management Plan

This chapter will include the description of administrative aspects of ensuring that the mitigation measures suggested are implemented and their effectiveness is monitored, after approval of the EIA.

Chapter- 11 Summary of EIA

All the chapters are précised in the summary of the EIA Report.

Chapter 12 – Disclosure of Consultant

The names of the consultants engaged in preparation of EIA and nature of consultancy rendered is given herewith.

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CHAPTER: 2
PROJECT DESCRIPTIONS

CHAPTER: 2

PROJECT DESCRIPTIONS

2.0 GENERAL

The Environmental Impact Assessment report has been prepared in terms of EIA notification of the MoEF&CC dated 14-9-2006, as amended on 1st Dec 2009 for seeking environmental clearance of Minor Mineral Quarry Cluster Masonry Stone Block Mining project (8.92 ha) and the sum total Lease Area including other mines which is ≥5 ha. Therefore, as per MoEF&CC, GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018 if a cluster or an individual lease exceeds 5 Ha, the EIA/EMP be made applicable in the process of grant of prior Environmental Clearance.

2.1 DESCRIPTION OF THE PROJECT

The project is proposed for mining unit of Minor Mineral Quarry Cluster Masonry Stone Block at Khasra No.- 147, Area- 8.92 Ha. Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K by Mr. Mohd Amin Wani.
It is an opencast, semi-mechanized mining project & proposed to produce 1,50,000 MT/annum of Minor Mineral Quarry Cluster Masonry Stone Block

The Mining Project is falling under cluster having other mine lease area also. The sum total of lease area is ≥5 ha. Therefore as per MoEF&CC, GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018 if a cluster or an individual lease exceeds 5 Ha, the EIA/EMP be made applicable in the process of grant of prior Environmental Clearance.

2.2 NEED FOR THE PROJECT

Minor Mineral Quarry Cluster Masonry Stone is a basic building construction material for constructing houses, bridges and roads. Mining of Stone is necessary for durability and to beautify by carving as per the requirement of the consumer.
The demand for Minor Mineral Quarry Cluster Masonry Stone is ever growing with the growth of the infrastructure sector in our country. The requirement for the Masonry Stone is always high in the state itself and also in the nearby cities and towns. Therefore there is always a good demand of the Minor Mineral Quarry Cluster Masonry Stone in the domestic market. With start of the project, it will bridge the gap between demand & supply of the Minor Mineral Quarry Cluster Masonry Stone.

2.3 LOCATION DETAILS ALONG WITH MAPS

The Proposed Project Site located at Khasra- 147, Area-8.92 Ha. Village- Dakteng (Zewan), Tehsil-Panthachowk, Distrct- Srinagar, State- J&K, which is about 10.51 km NW away from Srinagar District & 523 m away from village:- Dakteng (Zewan) Masonry Stone Mining area is 0.44 km away from khanmo Rd. The location plan is shown below:

Table 2.1: GPS Co-ordinates of Site

Pillar	Latitude	Longitude
RP	34°02'38.98"N	74°54'25.28"E
A	34°02'43.32"N	74°54'23.75"E
B	34°02'47.00"N	74°54'24.14"E

C	34°02'46.41"N	74°54'12.29"E
D	34°02'44.54"N	74°54'02.31"E
E	34°02'38.83"N	74°54'08.65"E
F	34°02'39.25"N	74°54'15.77"E
G	34°02'43.07"N	74°54'18.14"E

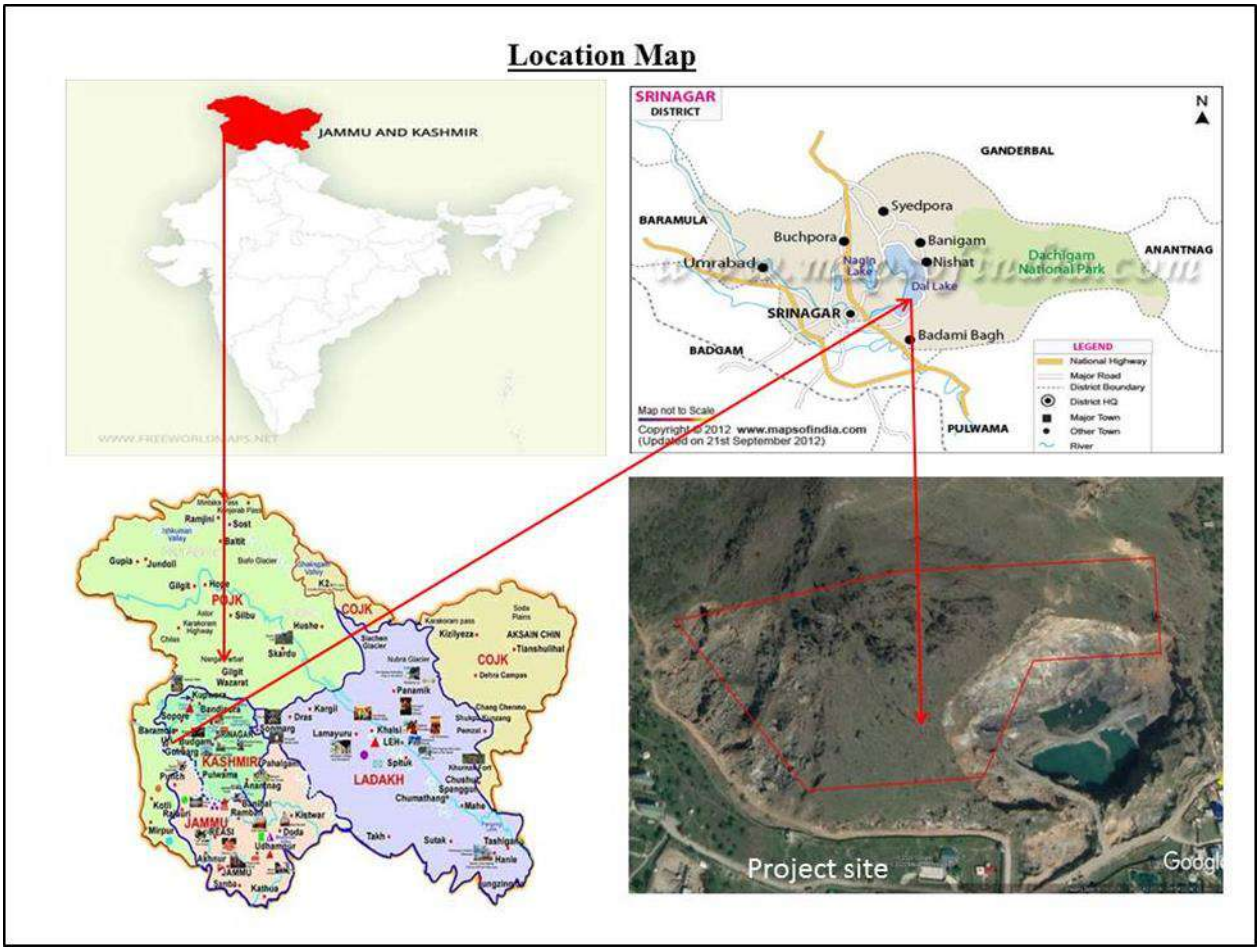
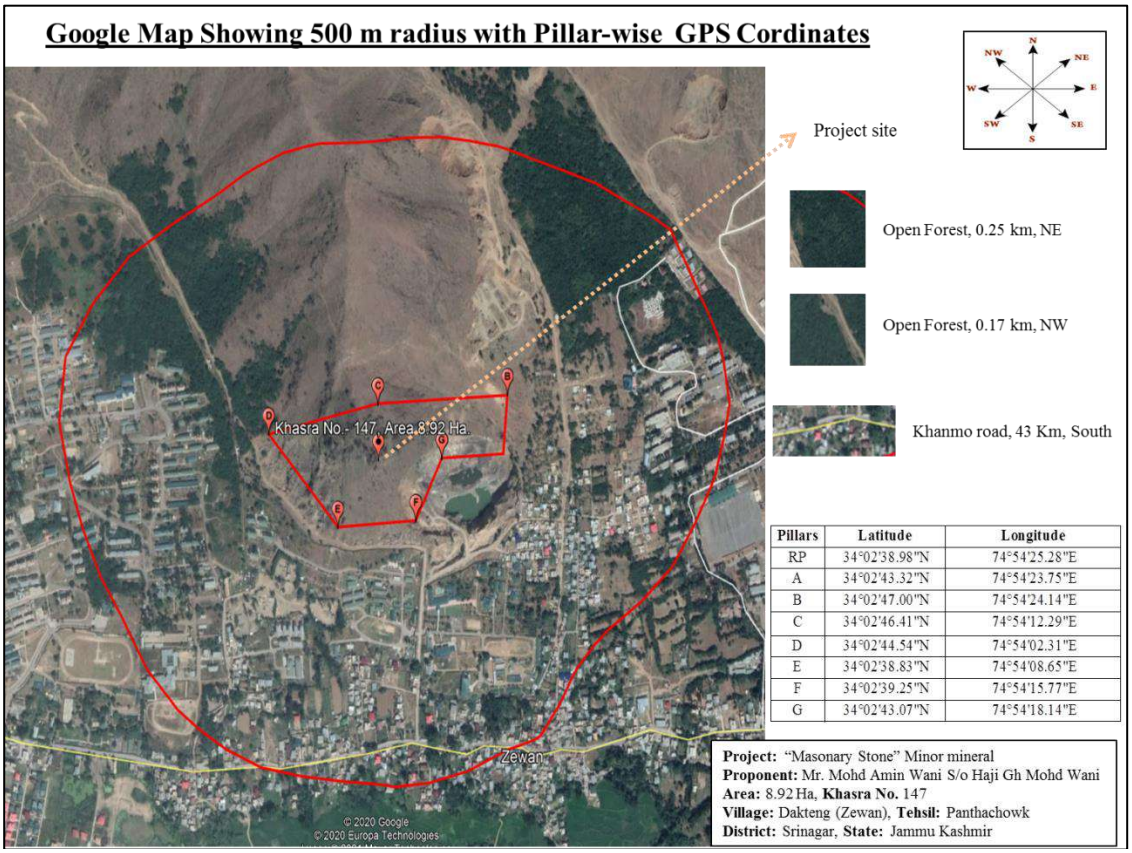


Figure 2.1: Location Map of the project site.

Proponent's Signature……



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F	34°02'39.25"N	74°54'15.77"E
G	34°02'43.07"N	74°54'18.14"E

Figure 2.2: Google Map showing 500m radius of core Zone.

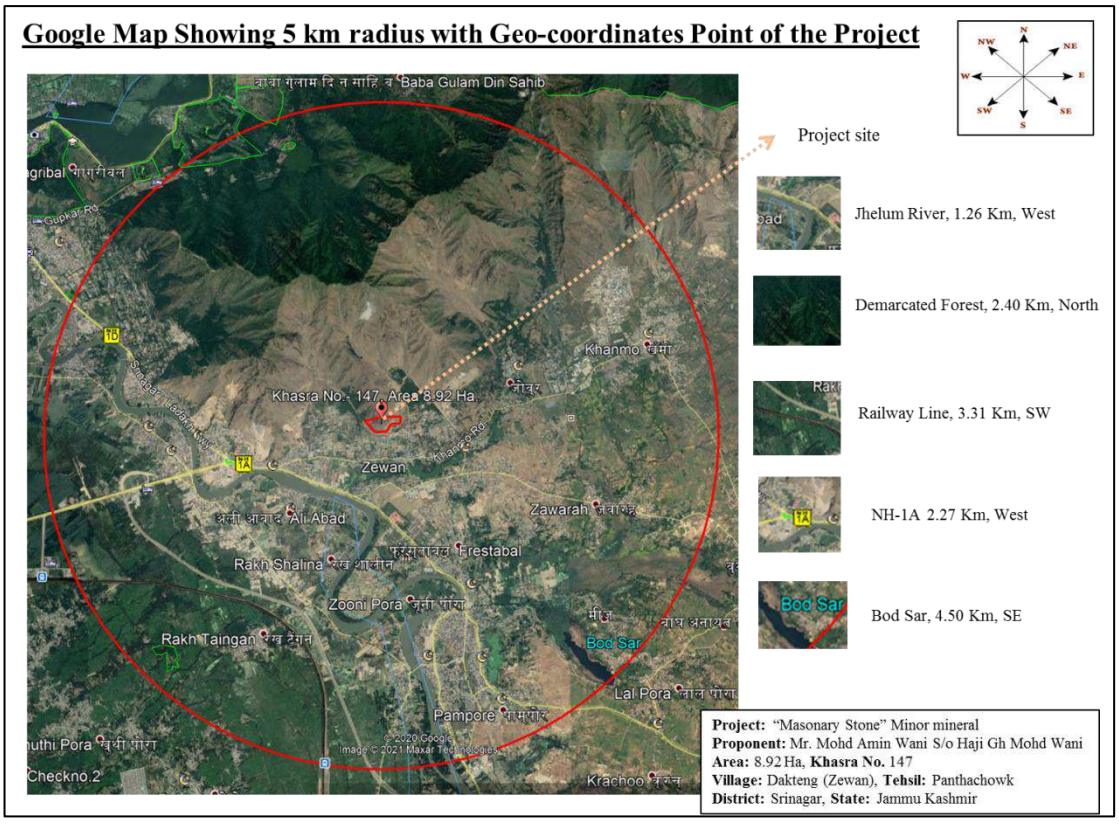


Figure 2.3: Google Map showing 5 km radius of Buffer Zone.

Proponent's Signature……

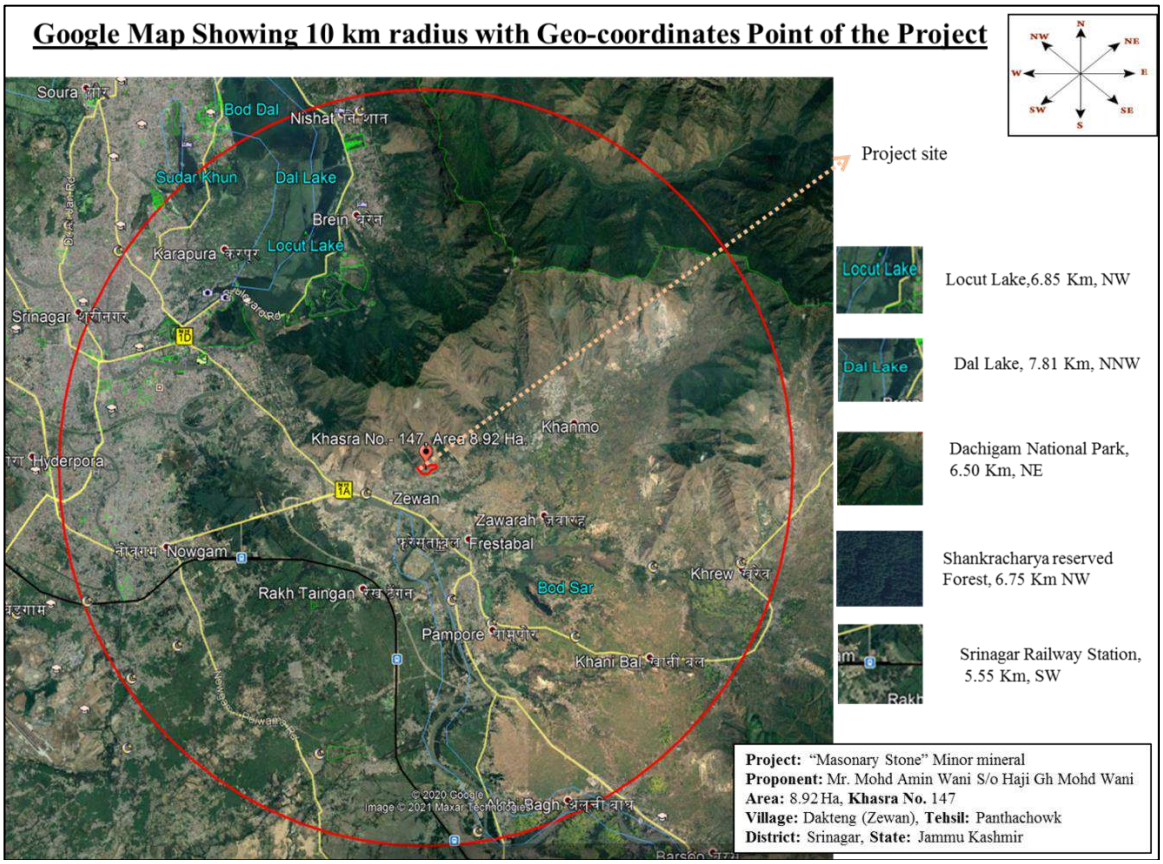


Figure 2.4: Google Map showing 10 km radius of Buffer Zone.

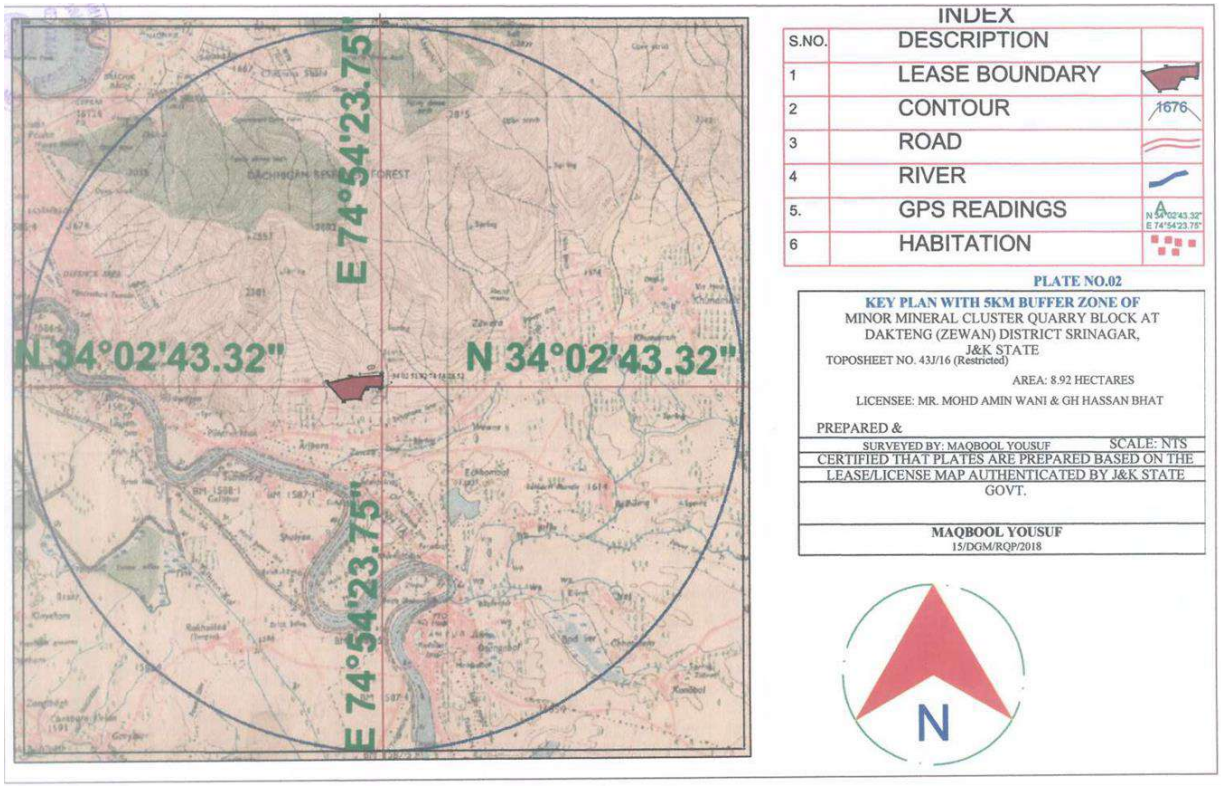


Figure 2.5: Key Plan (Topo map) with 5km Buffer zone

Proponent's Signature……

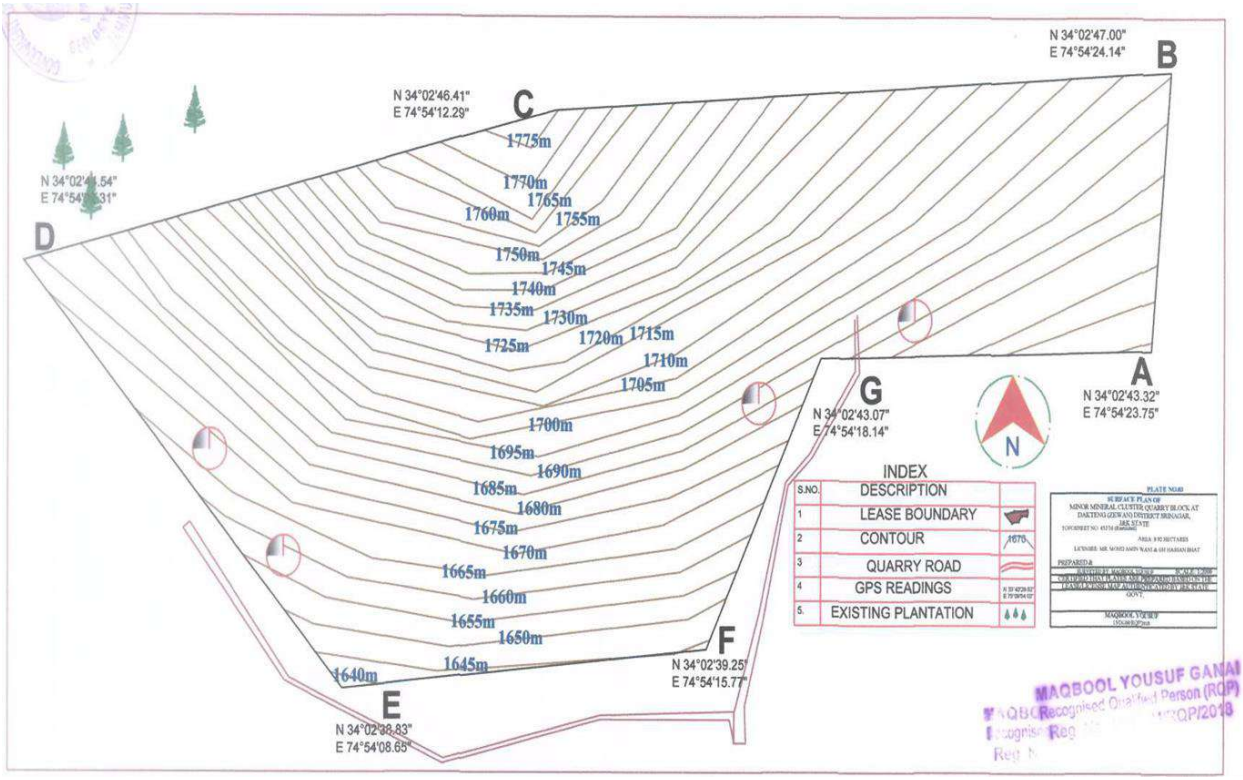
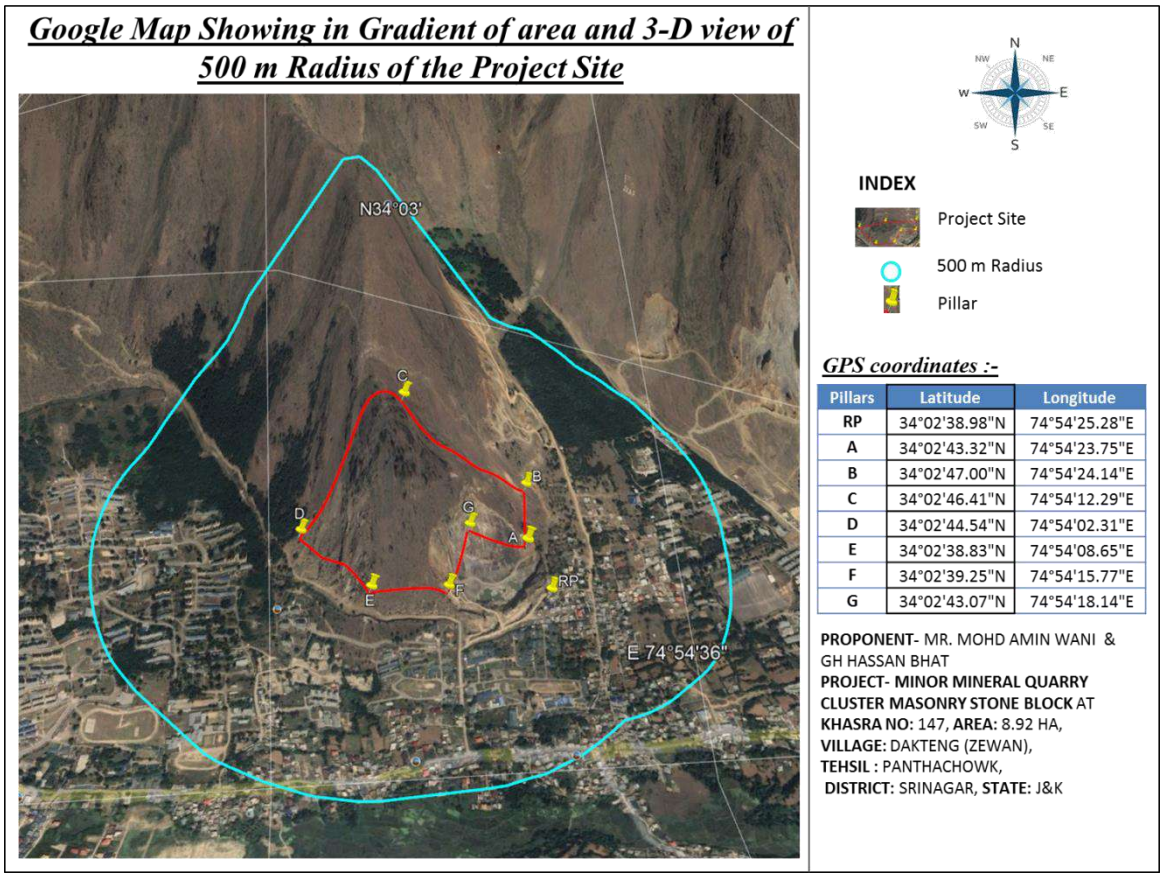


Figure 2.6: Surface Plan



Pillars	Latitude	Longitude
RP	34°02'38.98"N	74°54'25.28"E
A	34°02'43.32"N	74°54'23.75"E
B	34°02'47.00"N	74°54'24.14"E
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F	34°02'39.25"N	74°54'15.77"E
G	34°02'43.07"N	74°54'18.14"E

Figure 2.7: Google Map Showing in Gradient of area and 3-D view of 500 m Radius of the Project Site

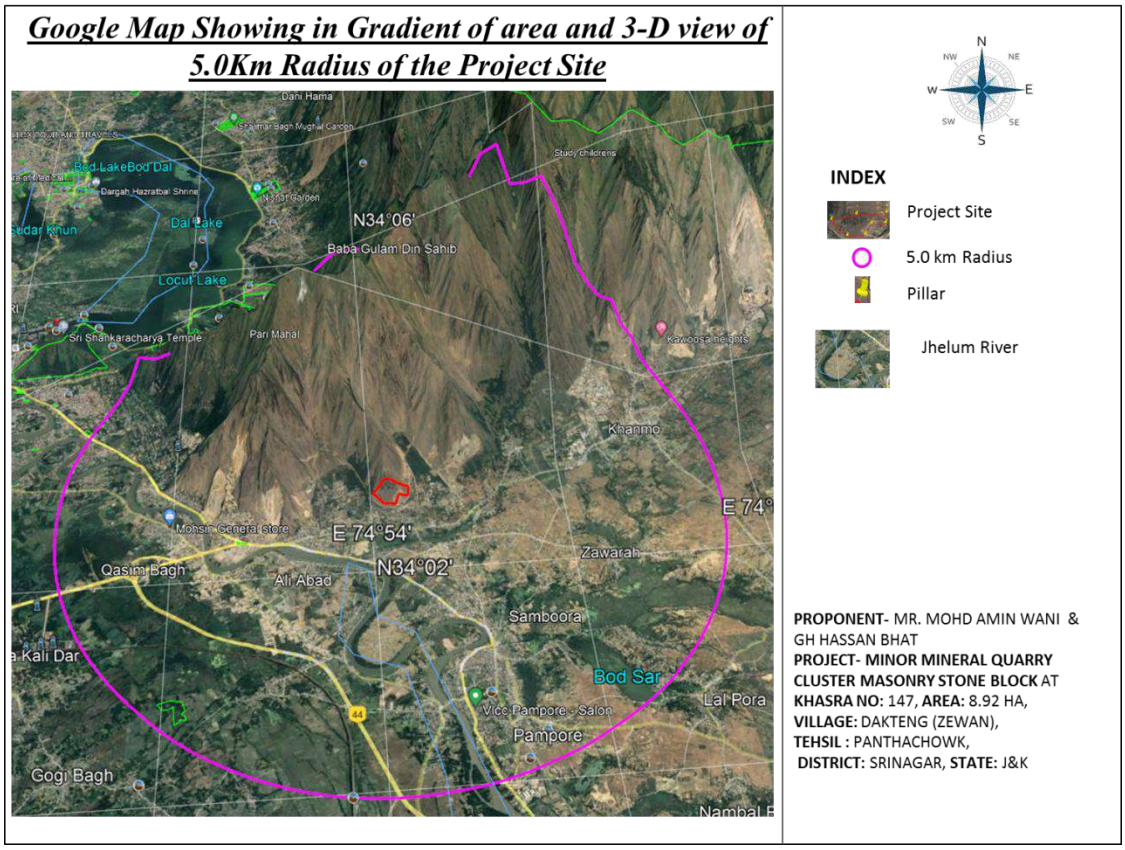


Figure 2.8: Google Map Showing in Gradient of area and 3-D view of 5.0 km Radius of the Project Site

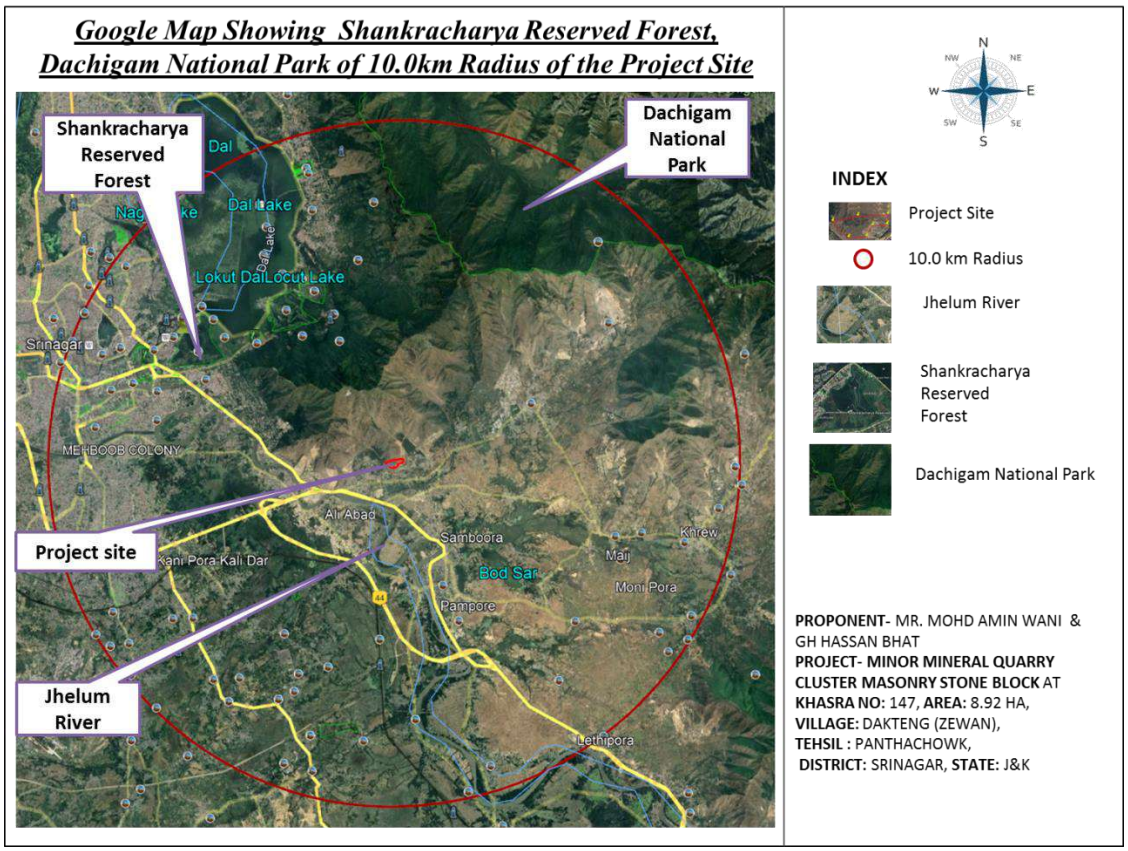


Figure 2.9: Google Map Showing Dachigam National Park of 10.0km Radius of the Project Site

Table 2.2: Environmental Sensitivity

S.N.	Particulars	Details	
1.	Nearest Village	**Village**	**Distance and Direction**
		Zewan	523 Km, S
		Zowur	1.84 km, E
		Zaffron colony	1.56 Km, SE
		Pampore	4.56 Km, ESE
		Panthan Chowk	1.38Km, WSW
		Khanmoh	4.06 Km, ENE
		Badami Bagh Cantonment	4.35 Km, NE
2.	Nearest city/ town	Panthachowk, 1.33 Km, SW	
3.	Nearest Railway Station	Pampore, 5.23 Km, South	
4.	Nearest National /State Highway	NH-1A, 2.27 Km, West	
5.	State/International Boundary	None, within 10 km radius area of mine site.	
5.	Nearest Airport	None, within 10 km radius area of mine site.	
6.	Archaeological Important Place	Pari Mahal, 4.55 Km, NNW	
7.	Ecological Sensitive Areas (National Park, Wildlife Sanctuary, Biosphere Reserve etc.)	Dachigam National Park, 6.50 Km, NE	
8.	Reserved/Protected Forest within 10 km radius	• Shankracharya Reserved Forest, 6.75 Km, NW • Demarcated Forest, 2.40 Km, North	
9.	Nearest River / water body	**River:** Jhelum River, 1.26 Km, South **Water body:** • Lokut Dal, 6.85 Km, NW • Dal Lake, 7.81 Km, NNW • Nagin Lake, 9.84 Km, NW	
10.	Nearest Hospital	• Govt. Sub District Hospital, Pampore, 3.78Km, South, • Govt. Primary Health Centre, Khanmoh, 4.25km, East	
11.	Nearest Education Center	• Delhi Public School Srinagar, 2.10 Km, West • Kendriya Vidyalaya No.3 Srinagar, 0.15km, West	
12.	Nearest Post Office	Batwara, 5.29 Km NW	
13	Nearest Worship Place	Jamia Masjid Zewan, 0.57 Km, South	
14.	Seismic Zone	Seismic Zone-V (Very Severe Intensity Zone)	
15.	Nearest Bridge within 500m core Zone	None, within 500m core Zone.	

2.4 GEOLOGY

General Geology:

The Geology of the area has been studied in detail by pioneering workers like Middlemiss, wadia etc. a geological succession of Rock formation is given in the table below:

Table:- Regional geology of the Area

S. No	Formation	Lithology	Age
1	**Alluvial, Scree, Talus deposits**	Recent alluvium, in the low-lying areas adjoining the Jhelum river and its tributaries consist of finely compacted detrital sediments such as loam, clay, silt and sand with occasional gravel.	Recent
2	**Karewas**	Lacustrine deposits of alternate bands of loose sand, clays & silt	Pleistocene to Recent
3	**Triassic** **a. Upper** **b. Middle** **c. Lower**	Limestone (high grade) with minor shale & siliceous limestone bands. Calcareous & argillaceous material. Shale with siliceous Limestone	Triassic
4	**Panjal Traps**	Basaltic Lava	Upper Carboniferous
5	**Nishatbagh Beds**	The Formation comprises a 220m thick sequence of tuffaceous shale/slate with plant fossils in the basal part, 60m thick shale and sandstone in the upper part.	Lower Permian age
6	**Agglomeratic slate**	The Agglomeratic slate consists of pyroclastic slates, conglomerates and Agglomeratic/ pyroclastic products and forms the lower part of the Panjal Volcanic series.	Permian

Use of Mineral:

The ROM will be fed to the consumers and to the crushers outside the quarry cluster area where it will be crushed to desired sizes. Different grades of output from the crusher will be primarily used in the construction of National Highway and District road and also the material will be sold in the market for various civil works in and around Srinagar District.

(Source: Approved Mining Plan)

Soil:

The soils of the Kashmir Valley are broadly divided into two types viz, Hapludalfs & Ochraqualfs and the same is true for the Srinagar district also. These soils are described below:-

i) Hapludalfs

These soils are found on Karewa tops & uplands with a slope variation of 1-3%, These are very deep soils, well drained with moderate permeability. These soils are severely eroded resulted in the formation of gullies and ravines.

These are medium to fine textural soils and the surface texture varies from clay loam to silty clay loam. The colour of the soils varies from Yellowish Brown to dark Brown. These soils are mostly used for cultivation of Wheat, Maize & pulses.

ii) Ochraqualfs

These soils are found in plain to mid upland topography. These soils are moderately fine textured with clay loam as the predominant surface texture. The extent of erosion on such soils is much less. These are dark brown to dark yellowish Brown in colour. These soils are mostly used because of their low permeability for the cultivation of Paddy, Mustard & at places Wheat

(Source:- https://cgwb.gov.in/District_Profile/JandK/srinagar.pdf)

2.5 RESERVES

i. Mining Method, Recovery Factor, Mining Losses, and Processing Loss etc:

Road Metal and Building Stone will be quarried by open cast other than fully mechanized method with drilling. The recovery factor is considered as 95% with 5% intercalated waste. There will not be any quarrying losses except handling loss, which will be recovered during next loading.

ii. Cut-off Grade, Ultimate Pit Depth proposed:

There is no cut- off grade as the ROM will be put to use for road metal and building stone as aggregates. The ultimate Pit average depth is 12 mts.

iii. Mineral/ Ore Blocked Due to Benches, Barriers, Pillars, Road, railway, River, Nala, Reservoir, Electric Line and Other Statutory Barriers etc.:

The mineral will be blocked in 7.5 m safety barrier zone, roads and benches which is computed separately and tabulated below in the succeeding sections.

iv. Total mineral Reserves:

The reserves are estimated basing on filed traverses and the information gathered during the field visit of the area and cross section drawn. The reserves are calculated on the basis of established width, thickness and strike influence of the minimized formation in the area. A barrier of 7.5 m width has been left from the lease boundary as a statutory area. Based on the field traverses, the estimated reserves considered as Proved reserves, two cross- section AA', BB', is considered for computation of reserves. The depleted reserves have been accounted by cross section and reserves are computed.

Table a: Reserves Estimation:

Section	Category	Sectional area (M^2)	Volume (M^3)	Specific gravity	Geological Reserves (MT)	Mineable Reserves @ 95% (MT)	Waste @ 5% (MT)
AA'	Proved	52579	630948	2.5	211380	200811	10569
BB'		26079	312948	2,5	104850	99607.5	5242.5
	Total				3,16,230	3,00,418,5	15,811.5

Table b: Reserves Blocked in 7.5 m Buffer Zone

Section	Category	Sectional area (M^2)	Volum (M^3)	Specific gravity	Geological Reserves (MT)	Mineable Reserves @ 95% (MT	Waste @ 5% (MT)
AA'	Proved	7046	84552	2.5	211380	200811	10569
BB'		3495	41940	2.5	104850	99607.5	5242.5
	Total				316230	300418.5	15,811.5

(A) Total Mineable Reserves = 23,59,740 tons
(B) Reserves blocked in 7.5 m buffer zone = 3,16,230 tons
Net Mineable Reserves A- B

= 2359740 ‒ 316,230 = 20, 43, 510 tons

v. Mineable reserves and life of the quarry:
Initially the total quantity of mineable reserves is considered as (economic) marketable reserves. In this way a total mineable reserves available in this Quarry license area= **20,43,510 MT.**
The average production is proposed to obtain per annum= **150,000 MT** and as such the life of mine is almost fourteen years.

2.6 MINING
2.6.1 Propose Method of mining:
Mining will be carried out by open cast semi mechanized bench method. It is proposed to produce 1,50,000 tonnes per year. Considering 300 working days daily production comes to 500 tons/ day of Masonry Stone mining.

2.6.2 Open cast Mining:- The mode of working will be semi mechanized with the help of JCB, Hywa, Excavator, Dumper Tripper etc. sorting sizing and dressing will be done by labours by hands tools like hammers, chisels, gaity fabda.

2.6.3 Mining Machineries:- For production of 1,50,000 Tons per year, its transport etc. the following machineries are likely to be deployed.

2.6.4 Briefly Describe the existing as well as proposed method for excavation with all design parameters indicating plate nos of plans/ sections
The applied area belongs to hilly terrain with RL ranges from 1640m to 1775m above msl. Most of the area is covered by the limestone deposits at higher levels with less over burden. The mining activity is proposed to be carried out by open cast bench forming method with the help of drilling and using excavator. The rock is hard in nature as such the blasting is required for excavation. Hence the licensee is advised to get the explosive license, since it is a time taking process, the blasting will be allocated to put sourcing blasting licensed agencies which has an explosive license in starting of the lease period. The blasted ROM will be loaded into trippers of 7 tons capacity by using excavator/ loader or even manually. The loaded ROM will be transported to the crushing plant or directly to the consumers. The ROM will crushed in the crusher plant to different sizes of 60mm, 40mm, 20mm, 12mm, 6mm, and carried out by benches of 5.0 m height from higher levels to lower levels. It is proposed to raise about 7,50,000 tons ROM during the five years plan.

2.6.5 Year- Wise Tentative Excavation in Metric Tonnes Indicating development , ROM, PIT Wise:

It is proposed to raise the insitu ROM of 1, 50,000 tons on an average per year from this quarry. The limestone/shale (R) deposit is exposed as a hillock, so no separate development is required in the beginning of the mining activity to get the target production from this quarry. The quarry working will be carried out by open cast method with the help of drilling and blasting from the top of the hill. Since the applicant does not have blasting license, the blasting part will be allocated to private licensed agency in the initial stage in which the licensee has get an blasting license. The blasted ROM will be

loaded into trippers of 7 tons capacity by excavator/ loader or even manually. The loaded Rom will be transported to the crushing unit or the consumers. The ROM will be crushed at the crushing unit to various sizes and sorted to 60mm, 40mm, 20mm, 12mm, 6mm, and sand and supplied to different construction works, road works and railway ballast. The tentative excavation proposed to be carried out for the five years plan is estimated at 7,50,000 tons of road Metal and building Stone will be mined out by open cast mechanized method by forming benches of 5.0m each and 7.5m buffer zone. The year- wise details are presented below in table.

(*Source: approved mining plan)*

YEAR WISE PROPOSED PRODUCTION OF FIVE YEARS

Year	Bench		Section	Ulti mate pit (m)	Volume (M)	Specific Gravity	Geological Reserves	Mineable Reserves @ 95 % (MT)	waste@5 % (MT)
	From	To							
2018-19	1775	1750	21080	12	252960	2.5	632400	600780	31620
2019-20	1750	1730	15418	12	185016	2.5	462540	439413	23127
2020-21	1730	1710	11500	12	138000	2.5	345000	327750	17250
2021-22	1710	1690	10063	12	120756	2.5	301890	286795.5	15094.5
2022-23	1690	1650	20599	12	247188	2.5	617970	587071.5	30898.5
Total							**2359800**	**2241810**	**117990**

Layout of Mine Working, Pits, Roads etc:

The quarrying operation is going on, previous working one pit is observed in the cluster quarry area. At the mine of quarrying operation the overburden will be used for existing haulage roads and strengthened for better navigation. Dump will be positioned at southern portion of the cluster quarry area. The Licensee intends to extract Road Metal and Building Stone production to the tune of 7,50,000 Mts of Road Metal and Building stone of saleable mineral during this Plan. During this Plan period, it is proposed to exploit the road metal from the total area of 7658 M2 to an average depth of 8-12 m over the lease area maximum RL 1640 m to RL 1775 m as depicted.

2.6.6 Drilling: 54mm diameter hammer drilling will be employed. Holes will be drilled vertically to a depth of 3.35 for a bench height of 3.0 m with a spacing and burden of 3.0 m and 2.5 m respectively.

2.6.7 Planning Concept

Mining lease area will be worked in five segments for ease of operation. However as the digging depth will be restricted to 6 m only material will be available below. Block will be worked systematically as the width is limited as compared to length of the lease area. As the lease period is only 5 years.

2.6.8 Rehabilitation and resettlement (R & R) Plan

It is entirely a government traverse land, sanctioned the Mine Lease to the project proponent. No human settlements are existing in the ML area. The proposed project does not involve any rehabilitation and resettlement.

- There is no human settlement within the mine lease area.
- No human settlement will be disturbed due to the mining activity. Hence, no Rehabilitation and Resettlement issues are present.

2.6.9 Waste Disposal:

a) Solid waste Management:

There is no overburden or soil cover. All the quantity of ROM produced will be used as raw material source for aggregate. So there will be no waste handling. No toxic and hazardous elements are present in the inter-burden material.

b) Municipal Waste:

All the labors engaged in activity will be from nearby villages. Thus the municipal waste generated is negligible. Mobile toilet will be provided if required.

c) Hazardous Waste Management:

Not Applicable

2.6.11 Transportation

Transport: The transport of ROM etc. to stock yards within mines will be by Trippers. There will be no dumps for future maintenance as there is no waste and all the material is saleable.

2.6.12 Haul Road Construction Plan & Connectivity

The Proposed Project Site located at Khasra- 147, Area-8.92 Ha. Village- Dakteng (Zewan), Tehsil- Panthachowk, Distrct- Srinagar, State- J&K, which is about 10.51 km NW away from Srinagar, District & 523 m away from Zewan village. Masonry Stone Mining area is 0.44 km away from Khanmo Road. The nearest populated town Panthachowk is about 1.33 Km in West direction. The Nearest Railway Station is Pampore, 1.33 Km towards W from the lease area

Figure 2.10: Detailed Map of Haulage Road.

Table 2.7: Budget distribution for construction of proposed Haul Road

S. No.	Description	Unit	Quantity	Rate	Amount
1.	Haulage Road Repair & Maintenance (Annual)	Nos.	7 m width x 810 m length	100/sqm	3,78,000
TOTAL					**5,67,000**

2.6.13 Topography3,78,000

Srinagar district is located in the center of Kashmir valley. Etymologically, 'Srinagar' is composed of two Sanskrit words, namely, Sri – meaning abundance and wealth, and Nagar – which means a city. It is the most pivotal center of economy of the Kashmir Valley and the city of Srinagar has remained a center of tourist attraction for centuries. It is situated on the bank of Jhelum River. District Baramulla occupies the Northern and Western boundary whereas Badgam district forms the Western and South – Western limits. In the south, Srinagar district is bounded by Pulwama district. The district lies between 34° 01'00" to 34° 29'10" North latitudes and 74o 33'30" to 75o 30'00" East longitudes.

Srinagar city is located about 300 km from Jammu and National Highway NH-IA connects Srinagar with Jammu. All the major carrier operate regular daily flights to Srinagar from Delhi, Mumbai and Jammu.

(Source: http://cgwb.gov.in/District_Profile/JK/Srinagar.pdf)

The topography of the area is rugged mountainous with peaks rising to 2510m above msl and lowest point is 1600m above msl. The topography of the area is barren stony without any overburden and is devoid of vegetation.

The general slope of the area is from north to south. The precipitation naturally follows the natural slope to river Jhelum about 2 km from the proposed area. The proposed quarry licensed area lies towards north of the Zewan village. In the surroundings areas of the villages one spring exists which is one of the source of water for the villagers.

Area fall in Survey of India top sheet No. 43J/16 and lies between Latitudes 34°02'38.83"N to 34°02'47.00"N & Longitudes 74°54'02.31"E to 74°54'24.14"E located at Khasra No. 147 village-Dakteng Zewan, Tehsil- Panthachowk, District- Srinagar, J.K. The mining site is 270 m away from the Link Road and National highway (NH-1A) is located at 2.27 km, W direction. Railway station Pampur is 5.23 km from the project site.

Table 2.8: Details of Site Elevation

Mining Bench Level	Highest Bench Level : 1775 m Lowest Bench Level : 1640 m
Average Working Depth in meters	8-12 m

(i) Township

Since this mining is intermittent and labour employed would be mostly from adjoining areas, no colony is proposed.

(ii) Power, Water Supply and other Infrastructure requirement Power

The operation will be done during day light; hence there is no power requirement for the project at site.

(iii) Infrastructure:

The site services like rest room shelter, first aid box and drinking water facilities will be provided to Workers at the mine site.

2.7 VEHICULAR TRAFFIC STUDY

Traffic study measurements were performed at Metalled Road and NH-1A Highway to assess impact. On local transport infrastructure due to this mining project.

The Proposed Project Site located at Khasra- 147, Area-8.92 Ha. Village- Dakteng (Zewan), Tehsil- Panthachowck, Distrct- Srinagar, State- J&K, which is about 10.51 km NW away from Srinagar, District & 523 m away from Zewan village. Masonry Stone Mining area is 0.44 km away from Khanmo Road. The nearest populated town Panthachowk is about 1.33 Km in West direction. The Nearest Railway Station is Pampore, 1.33 Km towards W from the lease area. Details of the traffic study have been incorporated in Chapter 4 section 4.10.

2.8 WATER REQUIREMENT

The water requirement for various activities will be as calculated below:

Table 2.9: Water requirement

Source	**Purpose**	**Detail**	**Avg. Demand/ Day**
Portable Tanker	Drinking @15lpcd/worker	34 workers x 15 lpcd = 510 lpcd	0.510 KLD
	Land reclamation / plantation @5 Lit/Tree (@ 100 trees/ Ha)	446 Trees x 5 l/day = 2230 lpcd	2.35 KLD
	Mine Operation	-	1.0 KLD
	Dust suppression @1 Lit/Sq.m	Approach Road Area = (570 m Length x 7m Width = 3990 m^2 lpcd	3.99 KLD
Total			**7.73 KLD**

2.9 MANPOWER REQUIREMENTS

The proposed mining activity will provide employment to about 34 workers. The workers will be hired mostly from the nearby villages.

Following are the infrastructural facilities which will be provided to the workers:

1. Rest Shelter, drinking water facilities, Mobile bio toilets, & first- aid facilities, etc.
2. Personal protective equipment such as ear muffs, gloves, helmets, shoes, goggles, Safety belt etc. will be provided to the workers to ensure their safety.
3. Hanging of loose boulders will be removed from mining faces.
4. The mining area will be properly fenced to avoid any inadvertent entry into mining pits.
5. Working hours will be displaced at conspicuous places.

Table 2.10: Manpower Requirements

S. No.	Particulars	Nos. Required
1.	Highly skilled- Mines manager (part time)	1
2.	Mine Supervisor	1
3.	Skilled& Semi- skilled- Bore Compressor Operators	2
4.	Bore Compressor Assistants	2
5.	JCB Backhoe Operator	2
6.	JCB Backhoe Assistants	2
7.	Skilled labours	10
8.	Pick-up Drivers	2
9.	Security Guard	2
10.	Tripper Drivers	10
Total		**34**

CHAPTER 3

DESCRIPTION OF ENVIRONMENT

3.0 INTRODUCTION

This Chapter contains the description of baseline studies of the area within 10 Km radius surrounding the Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- Khasra No.- 147, Area- 8.92 Ha. Village- Dakteng (Zewan), Tehsil- Panthachowck, District- Srinagar, State- J&.K. The study was undertaken for prevailing environment in respect of land, air, water (both ground and surface), soil, noise, biological (both flora and fauna). The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the proposed project can be assessed.

The EIA study is being done for the Mine Lease (core zone) and area within 10 Km distance from mine lease boundary (buffer zone), both of which together comprise the study area. The following data, through field survey and other sources, has been collected by Globus Environment Engineering Services, for preparing the EIA/EMP for the proposed mining area with related facilities.

- Baseline data related to physical environment viz. Air, Water, Soil and Noise.
- Meteorological data,
- Land use pattern within core zone and buffer zone (10 Km distance around the core zone) based on Survey of India secondary data and satellite image.
- Identification of water bodies, hills, roads etc. within 10 Km radius of the mine lease area.
- Eco-sensitive places, sanctuaries, biosphere reserves within 10 Km radius.
- Detail of fauna and flora within a radial distance of 10 Km from the project site.
- Environment protection and mitigation measures of the project.

Methodology

Appropriate methodologies are followed in developing the EIA-EMP report. The methodology adopted for the study is outlined below:

- Conducting reconnaissance of the study area
- Selecting sampling locations for conducting various environment baseline studies

The sampling locations were selected on the basis of the following:

- Predominant wind directions recorded by the Indian Meteorological Department (IMD)
- Existing topography
- Drainage pattern and location of existing surface water bodies like lakes, rivers and streams
- Location of villages/towns/ sensitive areas, and areas, which represent baseline conditions

The field observations were made to:

- Assess the positive and negative impacts due to the proposed project
- Suggest appropriate mitigation measures for negating the adverse environmental impacts, if any, and
- Suggest post-project monitoring

3.1 LAND ENVIRONMENT

Area statistics of land use pattern has been generated within 10 Km radius of mine lease area (Core zone and Buffer zone) as given in. Object of this study is to provide a baseline status of the study area covering

10 Km radius around the proposed Mine site so that temporal changes due to the mining activities on the surroundings can be assessed.

3.1.1 Land Use/ Land Cover of the study area

The present Land use/Land cover map for the proposed project activity is prepared by latest satellite image. This report thus will enable assessing the impact on land use pattern in the study area due to the proposed project activity.

3.1.2 Data Used

Current vintage data of satellite data downloaded from Bhuvan has been used for preparation of Land use/ Land cover thematic map of study area. The downloaded satellite data is already geo referenced and terrain corrected. A total number of four bands have been stacked and resampled at 10 m resolution. Google earth was used as reference for the preparation of base layer data like road, rail network, rivers and canals.

Technical Details

- Satellite Image - LULC, 50K, UTTAR PRADESH , NRSC, ISRO, Thematic Services, Bhuvan
- Satellite Data Source - LULC Vector data of 2005-06, Multi-temporal satellite data of 2011-12 from Resourcesat-2 LISS III

3.1.3 Methodology

Land use/Land cover map preparation, base map creation; Layer Stacking of satellite image has been processed using Bhuvan -Thematic Services. The methodology used for present LU/LC study area is given below:-

Landuse of a region reflects the manipulation of land cover for sustenance and economic development, which may directly or indirectly influence the local environment. FAO defines landuse as arrangements, activities and inputs people undertake in a certain land cover type to produce, change or maintain it. The economic prosperity of a region is dictated by the available natural resources in that area such as agriculture, water resources and forest including mining activities. But these resources are mainly controlled by the terrain parameters such as geology, landforms, slope, drainage pattern and above all climate. All these parameters influence the landuse condition of a terrain individually as well as in various levels of combination. In short, landuse of a region is the macroscopic expression of microscopic elements which may have local or regional impact on the environment over a period of time and sometimes even after these activities have ceased.

Any sort of imbalance in such microscopic elements may have dire impact on the environment, which could be perceived by undertaking periodical study of landuse. Thus, landuse study has gained rapid attention due to its impact legacies on major ecological and environmental parameters and attained prominence in environmental impact studies. It is also known that landuse is dynamic in nature controlled intrinsic terrain factors and climate. Hence, it requires a systematic knowledge on changes in landuse pattern of a region of interest (ROI) requiring updated landuse information.

Landuse information provides the nature of activities undertaken in an area, geographical location and extent of such activities, time period or duration of these activities and eventually the method of implementation of landuse activities. The information could significantly attribute the nature of human

interface, mechanization involved over a period of time which in turn, would imply on the degree of impact on the adjacent area. Such information is vital in any economical or developmental activities since they could assist in assessing the impact due to such landuse activities. This requires a periodical monitoring of landuse and land cover pattern and such an arduous task could be carried out using multitemporal remote sensing satellite data.

Landuse information using satellite data is more powerful since it could provide a synoptic view of the landuse pattern from regional to local perspective that could be periodically updated to observe landuse changes over a period of time.

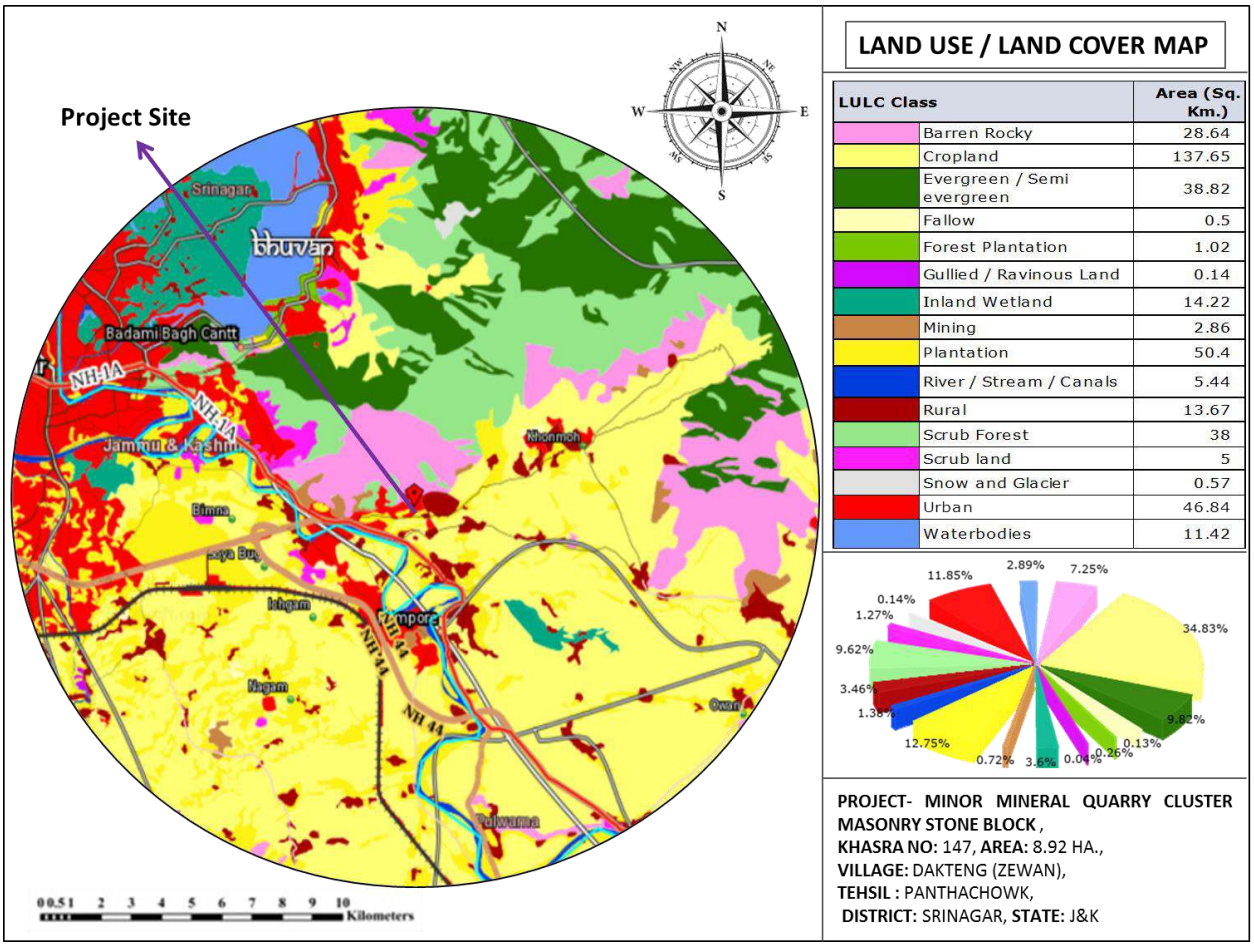


Figure 3.1: Land Use/ Land Cover Map of the study area

Table 3.1: Land Use/Land Cover of the Study Area

LULC Class		Area (Sq. Km.)	% Share
	Barren Rocky	28.64	7.25
	Cropland	137.65	34.83
	Evergreen / Semi evergreen	38.82	9.82
	Fallow	0.5	0.13

	Forest Plantation	1.02	0.26
	Gullied / Ravinous Land	0.14	0.04
	Inland Wetland	14.22	3.6
	Mining	2.86	0.72
	Plantation	50.4	12.75
	River / Stream / Canals	5.44	1.38
	Rural	13.67	3.46
	Scrub Forest	38	9.62
	Scrub land	5	1.27
	Snow and Glacier	0.57	0.14
	Urban	46.84	11.85
	Waterbodies	11.42	2.89
	Total	**395.19**	**100**

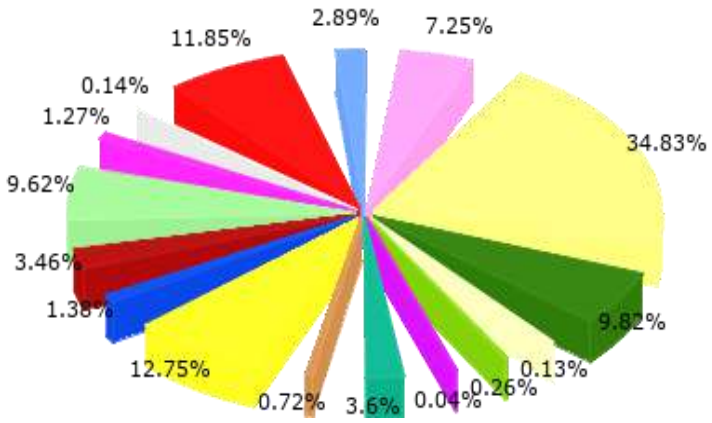


Figure 3.2: Graphical Representation of Land Use/Land Cover of the Study Area

3.1.4 Cropping Pattern

Cropping pattern means the production of area under different crops at a point of time. The crop statistics published by the government are used to denote the cropping patterns. Cropping pattern is however, dynamic concept as it changes in space and time. As stated at the outset, cropping structure of a region is the direct outcome of the physical, socio-cultural and historical factors. Characterized with mountainous and undulating terrain and micro-level variations in temperature, precipitation and soils, the state of Jammu and Kashmir has a high degree of variation in its cropping patterns, crop combination and crop diversification. In general, the Jammu plain has a high concentration of wheat, rice, maize, pulses, fodder and oilseeds, while the Valley of Kashmir is well known for its paddy, maize, orchards (apples, almond, walnut, peach, cherry, etc.) and saffron cultivation. In Ladakh, barley, wheat, maize, vegetables, barseem and fodder are the main crops. The area of the total cropped area in Srinagar district have been given in Table.

Table: Area under High Yielding Variety Programme Area "000" Hectares

Year	Paddy	Maize	Wheat	Oil Seeds	Pulses	Fodder	Vegetables	Other Species	Total
2001-02	13.00	4.60	0.02	5.125	1.70	5.80	1.80	-	32.045
2002-03	12.500	4.60	00.02	2.910	1.70	5.80	2.70	17.530	47.760
2003-04	13.00	4.60	2.605	2.910	1.70	5.005	2.70	16.420	48.940
2004-05	13.00	4.60	0.02	3.00	1.70	5.00	2.70	2.180	32.200
2005-06	13.00	4.60	0.02	3.00	3.00	7.7	4.8	-	36.12
2006-07	13.00	4.60	0.03	3.00	1.70	6.200	2.8	0.13	31.46
2007-08	3.393	0.45	0.01	0.319	Nil	1.40	4.98	1.485	12.037
2008-09	3.400	1.966	Nil	1.500	0.250	1.40	5.1	Nil	13.616
2009-10	2.633	0.572	Nil	1.500	0.074	0.055	1.565	0.144	6.543
2010-11	2.633	0.572	Nil	1.500	0.074	0.38	1.565	0.220	6.944
2011-12	2.633	0.572	-	1.500	0.281	0.94	2.84	0.06	8.826
2012-13	2.633	0.572	-	1.500	0.074	0.38	1.57	0.302	5.531
2013-14	2.633	0.572	Nil	1.500	0.281	0.94	2.89	0.31	9.126
Net	**97.458**	**32.876**	**2.725**	**29.264**	**12.534**	**41**	**38.01**	**38.781**	**291.148**

Source: Chief Agricultural Officer, Srinagar

(Source:http://deanbs.uok.edu.in/Files/6d8be055-fc07-4110-8b8a-48477e9b960a/Journal/c32826a0-4220-4cf9-ace5-5cee4dcc9c56.pdf)

3.1.5 Topography

Srinagar district is located in the center of Kashmir valley. Etymologically, 'Srinagar' is composed of two Sanskrit words, namely, Sri – meaning abundance and wealth, and Nagar – which means a city. It is the most pivotal center of economy of the Kashmir Valley and the city of Srinagar has remained a center of tourist attraction for centuries. It is situated on the bank of Jhelum River. District Baramulla occupies the Northern and Western boundary whereas Badgam district forms the Western and South – Western limits. In the south, Srinagar district is bounded by Pulwama district. The district lies between 34o 01'00" to 34o 29'10" North latitudes and 74o 33'30" to 75o 30'00" East longitudes. (Plate-I).

Srinagar city is located about 300 km from Jammu and National Highway NH-IA connects Srinagar with Jammu. All the major carrier operate regular daily flights to Srinagar from Delhi, Mumbai and Jammu.
Source: http://cgwb.gov.in/District_Profile/JK/Srinagar.pdf

The Topography of the area is rugged mountainous with peaks rising to 2710 m above msl and lowest point is 1737m above msl. The topography of the area is barren stony without any overburden and is there is no vegetation in the area. The area is devoid of any regular water sources.

The general slope of the area is from southwest and south east. The rain water flows as per natural slope to river Jhelum about 12 km from the proposed area. The surrounding area have two springs, with low discharge and are only source of water for the villagers.

Area fall in Survey of India top sheet No. 43J/16 and lies between Latitudes 34°04'11.98"N to 34°04'19.22"N & Longitudes 74°57'26.38"E to 74°57'44.07"E located at NE of village- Khanmoh, Tehsil- Panthachowk, Khasra No. 2610 Min District- Srinagar, J.K. The mining site is 807 m away from the Link Road and National highway (NH-1A) is located at 6.52 km, SW direction. Railway station Srinagar is 11.45 km SW from the project site**.**

3.2 Drainage System.

The total drainage area of Indus Basin is 11,78,440 km^2 out of which an area of 4,53,250 km^2 falls in high Himalayan mountains and the remaining 7,25,190 km2 falls in the plains of the drainage area in plains. A

total of 3,21,290 km^2 area of Indus basin falls in India whereas only 1,31,960 km^2 area falls in Pakistan.

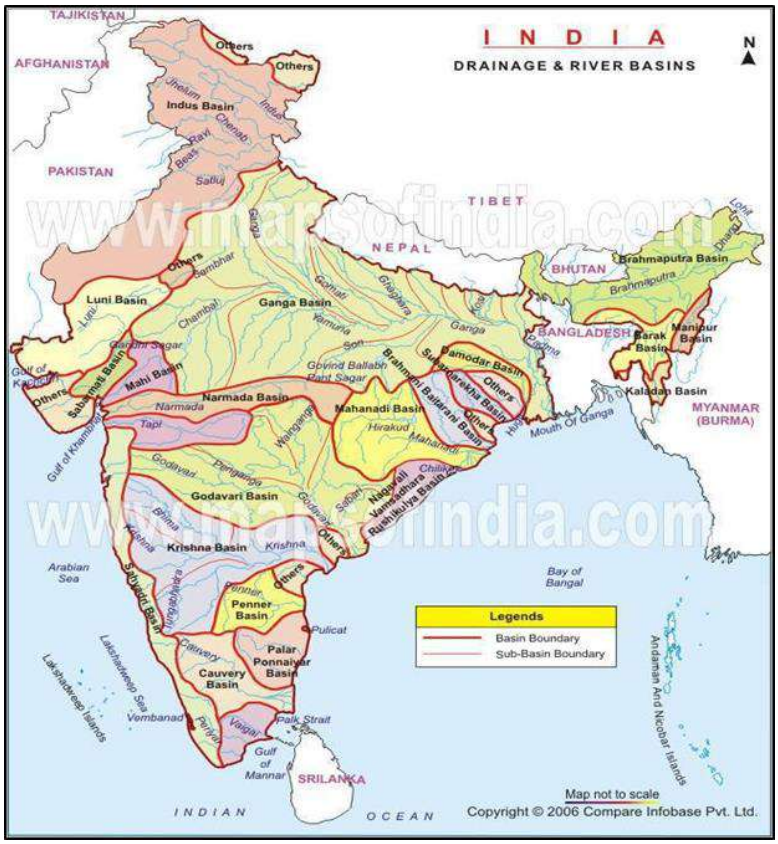


Figure 3.3: Drainage Map of the study area.

Floods: Low-lying areas of the Kashmir Valley, especially Sonawari, Awantipora, Srinagar, alongwith parts of Jammu are prone to floods. Upper catchments of all the tributaries of the Jhelum, Indus, Chenab and Tawi rivers are prone to flash floods. An enormous amount of water flows into the valley and the only outlet for the water from the valley is the narrow gorge at Baramulla. Floods generally occur in the summer when heavy rain is followed by a bright sun, which melts the snows. If an embankment is breached or topped, a district which is dry a few hours back becomes a lake after a few hours. On the intervening night of August 5 - 6, 2010, Leh witnessed a devastative cloudburst followed by flashfloods.

3.3. Seismicity Zonation of Area

The lease area falls under Seismic Zone- V (very Severe Intensity Zone), which indicates very high possibility of earthquake. The state of Jammu & Kashmir is the western most extension of the Himalayan mountain range in India. Here it comprises of the Pir Panjal, Zaskar, Karakoram and Ladakh ranges. The Main Boundary Thrust (MBT) underlies the Pir Panjal Range and is known as the Panjal Thrust in the region. The Zaskar ranges which are part of the Great Himalayan range are underlain by the Zaskar Thrust. The Kashmir Valley lies between the Pir Panjal and the Zaskar thrusts, making it very vulnerable to earthquakes. Other northern parts of Jammu & Kashmir are heavily faulted. Along the Zaskar and the Ladakh ranges runs a NW-SE trending strike-slip fault, the longest in the Jammu & Kashmir area. Apart from the routine small tremors moderate to large earthquakes hit nearly all parts of the state. Other major damages are caused by earthquakeas the J & K lies on seismic zone IV in the seismic zone map of India.

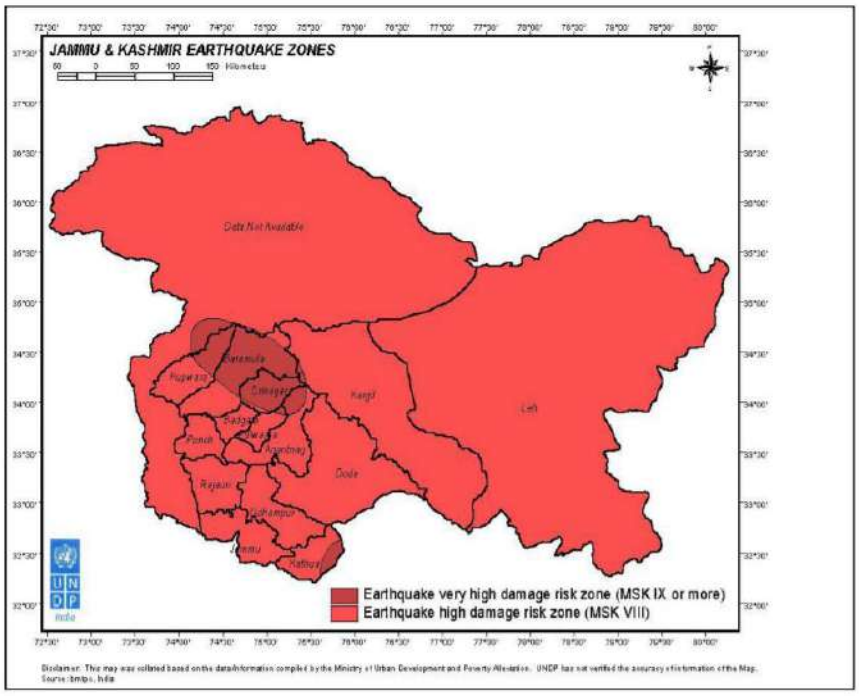


Figure 3.4: Seismic Zone Map of Jammu & Kashmir.

3.3.1: Climate and Rainfall

Srinagar district falls under the Temperate to Mediterranean type of climate and is characterized by mild summers and chilling winters. Due to latitudinal variation from 1,600 meters to 5,000 meters above mean sea level there is a wide variation in climatic conditions in different parts of the district experiencing a typical temperate climate in high altitude which experience snowfall and severe cold in the winter and tropical climate at low altitude. The winter commences from early November and lasts till end of March.

Most of the precipitation received during this period is in the form of snow & the temperature, at times falls as low as –13°C. In December-January the minimum temperature is generally below freezing point. The period from March to June constitutes warm summers with temperature rising upto 33°C.

Precipitation takes place in the form of rainfall as well as snow with occasional hailstorms. The average rainfall in the district is about 680 mm. About 60 to 70% of the precipitation is received in the form of snow during December to February. March to April are the months of heavy rainfall. May to September are relatively dry months.

(Source:https://cgwb.gov.in/District_Profile/JandK/srinagar.pdf)

3.3.2 Geology

The main geological formation in the district are Karewas & Paleozoic Sedimentaries and Volcanics. These formations are overlain by a thin mantle of Recent alluvium. The Karewas are overlying the folded Zeewan formation & Panjal volcanics. In the northern extremity of the valley portion Karewa formations rests over the Cambrio-Silurians.

3.4 AIR ENVIRONMENT

Ambient air quality monitoring stations were selected primarily on the basis of surface influence, demographic influence and meteorological influence. 24 hourly monitoring was carried out for PM_{10},

SO_2, NO_2, & $PM_{2.5}$ twice a week at each station. This study was done during pre-monsoon season for a period of 3 months (March – May 2023).

The ambient air quality with respect to the study zone of 10 km radius around the mine site forms the baseline information. The various sources of air pollution in the region are dust rising from unmetalled roads, domestic fuel burning, vehicular traffic, agricultural activities, other industries, etc.

The prime objective of baseline air quality monitoring is to assess existing air quality of the area. This will also be useful in assessing the conformity to standards of the ambient air quality as per standards during the mine operations.

The baseline status of the ambient air quality has been assessed through scientifically designed ambient air quality network.

3.4.2 Meteorological Data

Meteorology is a sub-discipline of the atmospheric sciences, a term that covers all studies of the atmosphere. A sub-discipline is a specialized field of study within a broader subject or discipline. Climatology and aeronomy are also sub-disciplines of the atmospheric sciences. Climatology focuses on how atmospheric changes define and alter the world's climates. Aeronomy is the study of the upper parts of the atmosphere, where unique chemical and physical processes occur. Meteorology focuses on the lower parts of the atmosphere, primarily the troposphere, where most weather takes place.

Table 3.2 Site-Specific Meteorological Data
(6:00 AM to 6:00 P.M.)

Month	Wind Speed (mph)		Temperature (^{0}C)		Rainfall (mm)	Relative Humidity (%)	
	Max.	Min.	Highest	Lowest	-	Highest	Lowest
March	6	2	27	5	0.00	95	22
April	9	2	27	4	0.00	100	20
May	11	2	29	7	0.0	96	20

3.4.3 Wind Rose Diagram

Wind rose is the diagrammatic representation of wind speed and frequency in a specified direction with its arms representing sixteen directions. Each arm gives a clear frequency distribution of wind speed in a particular direction for a given period of time. Wind-rose have been plotted with the aid of software WR PLOT and following results have been obtained.

Wind speed and wind direction data is useful in identifying the influence of meteorology on the air quality of the area. Based on the collected meteorological data, relative percentage frequencies of different wind directions are calculated and plotted as wind roses of Sixteen directions viz., N, NNE, NE, ENE, E, ESE, SE, SSE, S, SSW, SW, WSW, W, WNW, NW and NNW directions for twelve hours and twenty four hour duration respectively. The observed wind pattern during the study period is described below and is plotted for the study period. The predominant over all wind patterns for the study period is from South West to North East direction.

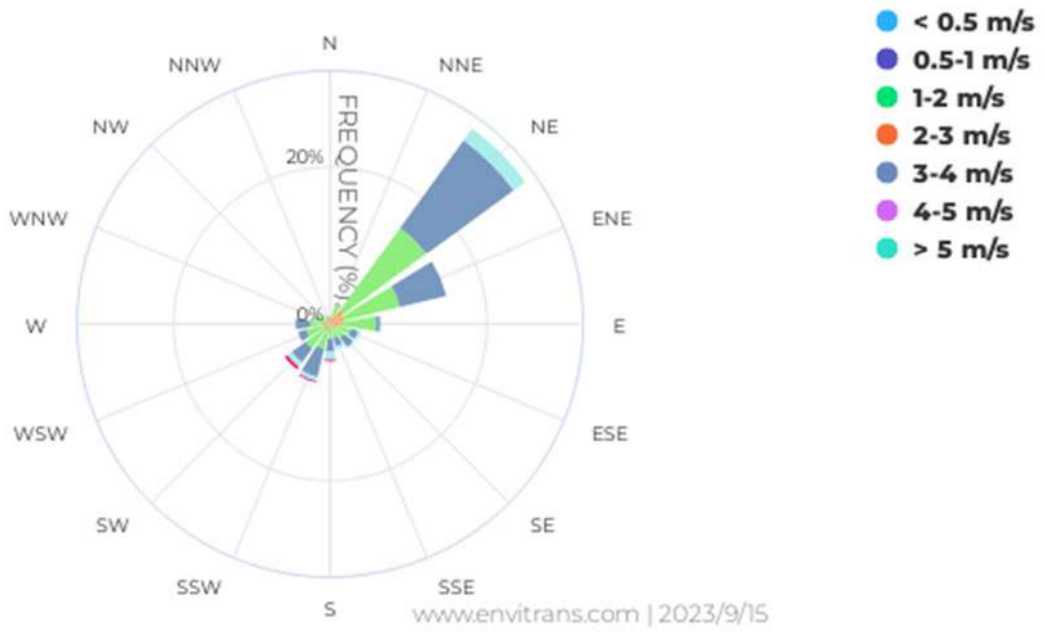


Figure 3.5: Wind Rose Diagram (Dominant Wind is Blowing from NE)

3.4.4 AMBIENT AIR MONITORING

Ambient air quality monitoring stations were selected primarily on the basis of surface influence, demographic influence and meteorological influence. 24 hourly monitoring was carried out twice a week at each station for major air pollutants viz PM_{10}, SO_2, NO_2, & $PM_{2.5}$ identified for ambient air quality monitoring (AAQM). This study was done during Summer season for a period of 3 months (March- May 2023). This will also be useful in assessing the conformity to standards of the ambient air quality as per standards during the mine operations.

The various sources of air pollution in the region are dust rising from unmetalled roads, domestic fuel burning, vehicular traffic, agricultural activities, other industries, etc.

The design of monitoring network in the air quality surveillance program has been Ambient air monitoring was carried out on monthly basis in the surrounding areas of the mine site to assess the ambient air quality at the source. To know the ambient air quality at a larger distance i.e. in the study area of 5 km radius, air quality survey has been conducted at 08 locations over a period of three months of March-May 2023. The ambient air quality monitoring stations were set up at the following locations. The prime objective of the baseline air monitoring was to evaluate the existing air quality of the area. This will also be useful for assessing the conformity to standards of the ambient air quality during the operation of the proposed mine. This section describes the selection of sampling locations, methodology adopted for sampling, analytical techniques and frequency of sampling.

3.4.5 Air Quality Survey

The baseline status of the air quality in the study area has been assessed through a scientifically designed ambient air quality monitoring network. The design of monitoring network in the air quality surveillance program has been based on the following considerations:

a) Representation of Mine leases area.

b) Representation of the down wind direction and up wind direction.

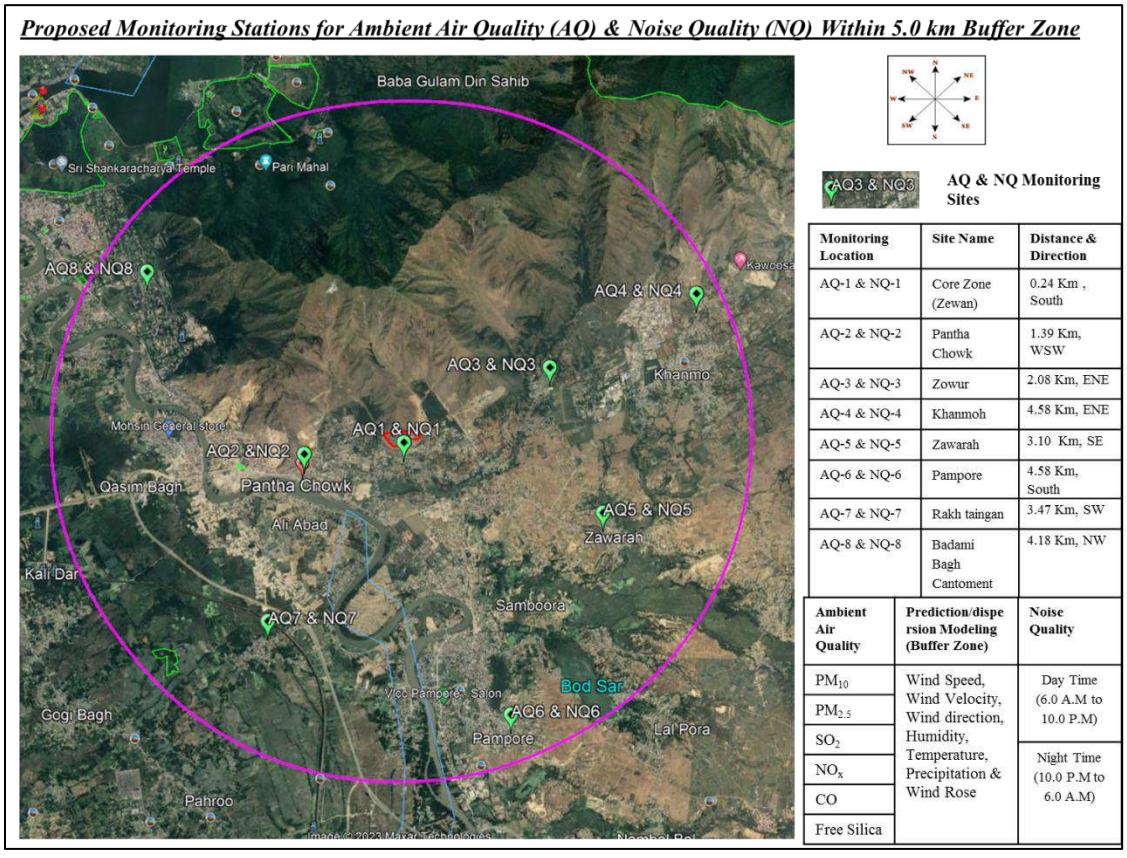
c) Representation of residential areas.

d) Representation of regional background levels.
e) Meteorological conditions (predominant wind direction and wind speed).
f) Topography of the study area.

Ambient Air Quality Monitoring (AAQM) stations were set up at Eight locations with due consideration to the above mentioned points. **Table No.** 3.3 gives the details of environmental setting around each monitoring station and their distances with reference to the proposed mine. Villages/locations have been selected in downwind direction as well as in the upwind direction for AAQ monitoring from the proposed activity site.

Table 3.3: Ambient Air Quality Monitoring Stations

Station Code	Name of the village	Distance & Direction
AQ-1	Core Zone (Zewan)	0.24 Km , South
AQ-2	Pantha Chowk	1.39 Km, WSW
AQ-3	Zowur	2.08 Km, ENE
AQ-4	Khanmoh	4.58 Km, ENE
AQ-5	Zawarah	3.10 Km, SE
AQ-6	Pampore	4.58 Km, South
AQ-7	Rakh taingan	3.47 Km, SW
AQ-8	Badami Bagh Cantoment	4.18 Km, NW



Monitoring Location	Site Name	Distance & Direction
AQ-1 & NQ-1	Core Zone (Zewan)	0.24 Km , South
AQ-2 & NQ-2	Pantha Chowk	1.39 Km, WSW
AQ-3 & NQ-3	Zowur	2.08 Km, ENE
AQ-4 & NQ-4	Khanmoh	4.58 Km, ENE
AQ-5 & NQ-5	Zawarah	3.10 Km, SE
AQ-6 & NQ-6	Pampore	4.58 Km, South
AQ-7 & NQ-7	Rakh taingan	3.47 Km, SW
AQ-8 & NQ-8	Badami Bagh Cantoment	4.18 Km, NW

Ambient Air Quality	Prediction/dispersion Modeling (Buffer Zone)	Noise Quality
PM_{10}	Wind Speed, Wind Velocity, Wind direction, Humidity, Temperature, Precipitation & Wind Rose	Day Time (6.0 A.M to 10.0 P.M)
$PM_{2.5}$		
SO_2		Night Time (10.0 P.M to 6.0 A.M)
NO_x		
CO		
Free Silica		

Figure 3.6: Google Map Showing Ambient Air Monitoring Locations

3.4.6 Method of Air Monitoring

Ambient air quality monitoring has been carried out with a frequency of two days per week at Seven locations covering one complete season except monsoon (CPCB guidelines). The ambient air quality parameters along with their frequency of sampling are given in Table- 3.4

Table 3.4: Methods adopted for PM_{10}, $PM_{2.5}$, SO_2 and NO_2

Parameters	Technique	Technical Protocol
$PM_{2.5}$	Gravimetric method	**CPCB Guideline Vol. I May' 2011**
PM_{10}	Gravimetric method	**IS 5182 (Part-XXIII)**
Sulphur Dioxide	Improved West and Gaeke	**IS-5182 (Part-II)**
Nitrogen Dioxide	Modified Jacob & Hochheiser	**IS-5182 (Part-VI)**

3.4.7 Ambient air quality Interpretations

The ambient air quality Interpretation is given in Table 3.5 for each location. Detailed Air Monitoring Lab report is attached as Annexure. The standards of Ambient Air Quality in India are available online at *http://cpcb.nic.in/National_Ambient_Air_Quality_Standards.php*

Table 3.5: Ambient Air Quality Status

Site	Particulars	PM_{10} ($\mu g/m^3$)	$PM_{2.5}$ ($\mu g/m^3$)	SO_2 ($\mu g/m^3$)	NOx ($\mu g/m^3$)	CO (mg/m^3)
AQ-1	Minimum	61.92	32.10	6.61	16.41	<0.5
	Maximum	65.98	36.53	9.66	19.85	<0.5
	Average	64.02	34.09	7.93	17.89	<0.5
	98th Percentile	65.90	36.47	9.64	19.72	<0.5
AQ-2	Minimum	64.61	34.42	7.57	17.58	<0.5
	Maximum	69.56	39.71	10.83	20.78	<0.5
	Average	66.99	37.01	9.31	19.33	<0.5
	98th Percentile	69.51	39.65	10.78	20.76	<0.5
AQ-3	Minimum	60.93	31.38	5.73	15.57	<0.5
	Maximum	66.62	36.64	8.86	18.88	<0.5
	Average	64.10	34.19	7.34	17.26	<0.5
	98th Percentile	66.45	36.55	8.80	18.87	<0.5
AQ-4	Minimum	62.30	31.87	6.65	16.24	<0.5
	Maximum	68.15	37.93	10.81	20.78	<0.5
	Average	64.87	34.78	8.59	18.38	<0.5
	98th Percentile	67.69	37.68	10.80	20.77	<0.5
AQ-5	Minimum	61.92	32.12	7.60	17.47	<0.5
	Maximum	64.95	35.14	11.53	21.46	<0.5
	Average	63.37	33.54	9.42	19.31	<0.5
	98th Percentile	64.73	35.02	11.42	21.36	<0.5

AQ-6	Minimum	65.24	35.12	8.45	18.42	<0.5
	Maximum	70.51	40.52	12.37	21.75	<0.5
	Average	67.41	37.41	10.41	20.22	<0.5
	98th Percentile	70.04	40.10	12.30	21.73	<0.5
AQ-7	Minimum	63.83	33.62	7.61	17.51	<0.5
	Maximum	69.54	39.52	10.84	20.64	<0.5
	Average	66.72	36.74	9.29	19.24	<0.5
	98th Percentile	69.42	39.37	10.82	20.60	<0.5
AQ-8	Minimum	67.32	37.26	10.68	20.46	<0.5
	Maximum	73.54	43.53	13.50	23.59	<0.5
	Average	70.31	40.33	11.97	21.91	<0.5
	98th Percentile	73.24	43.18	13.47	23.51	<0.5
CPCB Standards:	**-**	**100**	**60**	**80**	**80**	**4.0**

3.4.8 Observations:

- PM_{10}– 60.93 (Min.) at AQ-3 to 73.54µg/m^3 (Max.) at AQ-8
- $PM_{2.5}$ – 31.38 (Min.) at AQ-3 to 38.6 µg/m^3 (Max.) at AQ-8
- SO_2 – 5.73 (Min.) at AQ-3 to 13.5 µg/m^3 (Max.) at AQ-8
- NOx – 15.57 (Min.) at AQ-3 to 23.59 µg/m^3 (Max.) at AQ-8
- CO -<0.5 (Min.) to <0.5 µg/m^3 (Max.)

3.5 WATER ENVIRONMENT

The purpose of the study is to:-

- Assess the water quality characteristics for critical parameters;
- Evaluate the impacts on agriculture productivity, habitat conditions, recreational resources and
- aesthetics of the vicinity; and
- Predict the likely impacts on water quality due to the mining and other related activities.

3.5.1 Selection of Sampling Stations:

The sampling was done both for surface water and underground water. The samples were taken from the identified monitoring locations within the 5 Km radius of the study area. Six ground water sampling locations and One Surface water sampling locations were chosen as shown in the figure given below:

3.5.2 Methodology Adopted

Parameters for analysis of water quality were selected based on the utility of the particular source of water as per MoEF & CC guidance. Hence quality of ground water was compared with IS: 10500: 2012 for drinking purposes. Surface water quality was analyzed for parameters as mentioned in the 'Methods of Monitoring & Analysis published by CPCB (in CPCB guidelines)' and it was rated according to the CPCB Water Quality Criteria (Designated Best Use). Grab water samples were collected from sampling locations in a 5 liter plastic jerry can and 500 ml sterilized clean glass bottles for complete physico-chemical and bacteriological tests respectively.

3.5.3 Ground Water

The sources of potable water are the hand pumps situated nearby villages in the study area. Samples were collected from the available water resources around the applied mine lease area. Eight monitoring location were selected for ground water sampling. The detail of Monitoring site and its station Code is given in the table below:

Table 3.6: Ground Water Sampling Locations.

Station Code	Name of the village	Distance & Direction
GW-1	Core Zone (Zewan)	0.24 Km , South
GW-2	Pantha Chowk	1.39 Km, WSW
GW-3	Zowur	2.08 Km, ENE
GW-4	Khanmoh	4.58 Km, ENE
GW-5	Zawarah	3.10 Km, SE
GW-6	Pampore	4.58 Km, South
GW-7	Rakh taingan	3.47 Km, SW
GW-8	Badami Bagh Cantoment	4.18 Km, NW

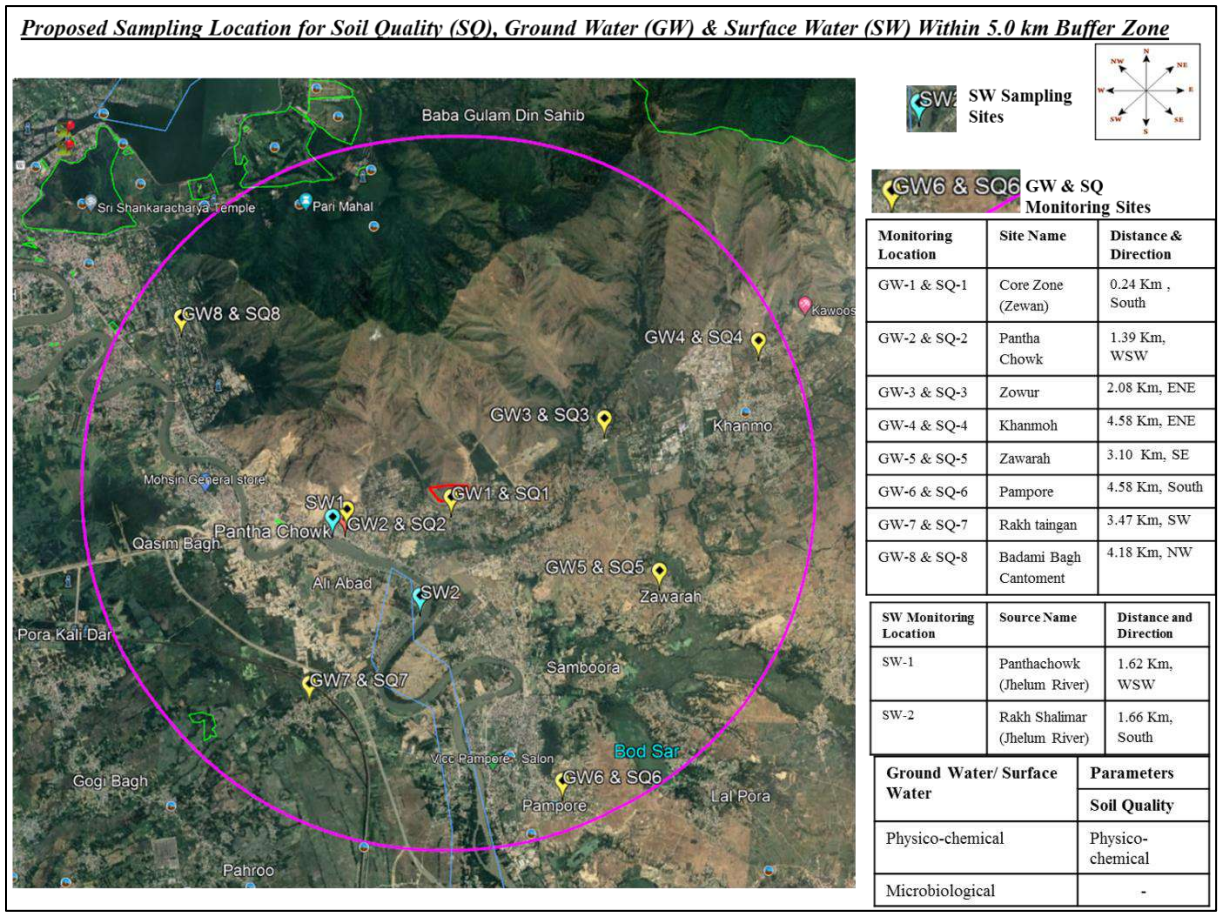


Figure 3.7: Monitoring Locations for Water and Soil and Surface Water Quality

Table 3.7: Results of Ground Water Quality

S.No	Parameter	Test Method	GW1	GW2	GW3	GW4	GW5	GW6	GW7	GW8	Units	Acceptable Limit	Permissible Limit in the Absence of Alternate
1	pH	IS:3025(Part-11):2022	7.21	7.32	7.43	7.25	7.27	7.15	7.41	7.56	-	6.5-8.5	-
2	Colour	IS:3025(Part-04):2021	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	Hazen	5	15
3	Odour	IS-3025(Part-05):2018	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable	Agreeable
4	Taste	IS:3025(Part-07):2017	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	-	Agreeable	Agreeable
5	Turbidity	IS-3025(Part-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NTU	1	5
6	Total Hardness (as $CaCO_3$)	IS:3025(Part-21):2009	184	128	172	192	140	116	156	184	mg/l	200	600
7	Calcium(as Ca)	IS:3025(Part-40):1991	44.16	23.04	41.28	34.56	33.60	20.88	37.44	33.12	mg/l	75	200
8	Magnesium (as Mg)	IS:3025(Part-46):1994	17.88	17.11	16.72	25.66	13.61	15.50	15.16	24.59	mg/l	30	100
9	Chloride(as Cl)	IS:3025(Part-32):1988	25.44	19.57	21.53	23.48	15.65	14.09	21.53	21.53	mg/l	250	1000
10	Iron(as Fe)	IS:3025(Part-53):2003	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/l	1	No Relaxation
11	Fluoride(as F)	APHA 4500 F(D) 23rd Ed.: 2017	0.29	0.22	0.20	0.17	0.16	0.25	0.25	0.21	mg/l	1	1.5
12	Free Residual chlorine	IS:3025(Part-26):2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/l	0.2	1
13	Total Dissolved Solid	IS:3025(Part-16):1984	303	219	272	295	216	179	249	277	mg/l	500	2000
14	Phenolic Compound (as	IS: 3025 (Part-43):2022	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	mg/l	0.001max	0.002 Max
15	Anionic Detergents (as MBAS)	APHA 5540 (B)/(C) 23rd Ed.: 2017	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/l	0.2	1.0
16	Sulphate (as SO_4)	IS:3025(Part-24):2022	23.25	12.28	18.52	14.74	12.66	9.83	14.36	11.72	mg/l	200	400

17	**Nitrate (as NO_3)**	IS:3025(Part-34):1988	2.71	2.03	2.84	2.66	1.57	1.71	1.85	1.83	mg/l	45	No Relaxation
18	**Alkalinity(as CaCO3)**	IS:3025(Part-23):1986	168	128	152	172	124	104	140	164	mg/l	200	600
19	**Nickel (as Ni)**	IS 3025 (Part-54):2003	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	mg/l	0.02	No Relaxation
20	**Cadmium (as Cd)**	IS-3025(Part-41):1992	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	mg/l	0.003	No Relaxation
21	**Lead (as Pb)**	IS:3025(Part-47):1994	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	mg/l	0.01	No Relaxation
22	**Total Chromium (asCr)**	IS:3025(Part-52):2021	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.05	No Relaxation
23	**Copper (as Cu)**	IS:3025(Part-42):2004	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.05	1.5
24	**Total Ammonia**	IS:3025(Part-34):1988	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/l	0.5	No Relaxation
25	**Sulphide (as H2S)**	IS:3025(Part-29):1986	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/l	0.05	No Relaxation
26	**Zinc (as Zn)**	IS:3025(Part-49):1944	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/l	5	15
27	**Manganese (as Mn)**	IS:3025(Part-59):2006	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/l	0.1	0.3
28	**Boron (as B)**	IS:3025(Part-57):2021	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/l	0.5	1
29	**Selenium (Se)**	IS:3025(Part-56):2003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	No Relaxation
30	**Arsenic (as As)**	IS:3025(Part-37):2022	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	mg/l	0.01	No Relaxation

RESULTS As per IS 10500:2012												
S.No	**Parameter**	**Test Method**	**GW-1**	**GW-2**	**GW3**	**GW4**	**GW5**	**GW6**	**GW7**	**GW8**	**Units**	**Requirements**
1	E.coli	IS-1622	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	E.Coli/ 100ml	Shall not be detectable in100 ml sample
2	Total Coliform	IS-1622	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent	MPN/100ml	Shall not be detectable in100 ml sample

3.5.4. Observation

Analysis results of ground water in the study area reveal the following: -

- pH 7.15 (Min.) at GW-6 to 7.56 (Max.) at GW-8,

- Total Hardness 116 (Min.) mg/l at GW-6 to 192 mg/l (Max.) at GW-4,
- TDS 179 (Min) mg/l at GW -6 to 303 mg/l (Max) at GW -1,
- Sulphate 3.67 (Min.) mg/l at GW-6 to 13.31 mg/l (Max.) at GW- 4,
- Chloride 14.09 (Min.) at GW-6 to 25.44 mg/l (Max.) at GW-1

The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards promulgated by Indian Standards IS: 10500-2012. Fluoride is found within the permissible limit. Most of the parameters of ground water are found within the permissible limits as per Drinking Water IS: 10500-2012.

3.5.5 SURFACE WATER

Three surface water samples were collected from the study area. The locations of surface Water samples are given in Table 3.8. The physio-chemical analysis of the these samples are given in the Table 3.9

Table 3.8: Surface Water Sampling Locations

Surface Water Monitoring Locations		
SW-1	Panthachowk(Jhelum River)	1.62 Km, WSW
SW-2	Rakh Shalimar(Jhelum River)	1.66 Km, South

Table 3.9: Results of Surface Water Quality

Result					
S.No	**Parameter**	**Test Method**	**Unit**	**SW1**	**SW2**
1	pH	IS:3025(Part-11):2022	-	7.18	7.27
2	Temperature	IS:3025(Part-09):1984	°C	24.1	23.8
3	Turbidity	IS:3025(Part-10):1984	NTU	3.8	4.1
4	Conductivity @25°C	IS:3025(Part-14):2013	µs/cm.	196.9	186.5
5	Total Suspended Solid	IS:3025(Part-17):2022	mg/l	9	13
6	Total Alkalinity (As $CaCO_3$)	IS:3025(Part-23):1986	mg/l	52	48
7	Biological Oxygen Demand (Max.)	IS:3025(Part-44):1993	mg/l	3.5	3.0
8	Dissolved Oxygen (as O_3) Min.	IS:3025(Part-38):1989	mg/l	8.2	8.3
9	Calcium(as Ca)	IS:3025(Part-40):1991	mg/l	12.80	14.40
10	Magnesium(as Mg)	APHA 3500-Mg-B 23rd Ed 2017	mg/l	9.72	6.80
11	Chloride(as Cl),Max	IS:3025(Part-32):1988	mg/l	23.65	21.68
12	Iron(as Fe),Max	IS:3025(Part-53):2003	mg/l	<0.05	<0.05
13	Fluoride(as F),Max	APHA 4500 F(D) 23rd Ed. 2017	mg/l	0.26	0.22
14	Total Dissolved Solid	IS:3025(Part-16):1984	mg/l	128	121
15	Total Hardness (as	IS:3025(Part-21):2009	mg/l	72.00	64.00

	$CaCO_3$)				
16	Sulphate (as SO_4)Max	IS:3025(Part-24):2022	mg/l	10.62	12.32
17	Phosphate (as P)	IS:3025(Part-31):2022	mg/l	0.36	0.32
18	Sodium (as Na)	IS:3025(Part-45):1993	mg/l	8.98	8.98
19	Manganese (as Mn)	APHA 3500- Mn-B 23rd Ed 2017	mg/l	<0.1	<0.1
20	Total Chromiun (as Cr)	IS:3025(Part-52):2021	mg/l	<0.05	<0.05
21	Zinc (as Zn)	IS:3025(Part-49):1994	mg/l	<0.1	<0.1
22	Potassium (as K)	IS:3025(Part-45):1993	mg/l	2.56	2.56
23	Nitrate (as NO_3),Max	APHA 4500-NO3-B 23rd Ed 2017	mg/l	3.10	2.59
24	Cadmium (as Cd)	IS-3025(Part-41):1992	mg/l	<0.01	<0.01
25	Lead (as Pb)	IS:3025(Part-47):1994	mg/l	<0.01	<0.01
26	Copper (as Cu)	IS:3025(Part-42):2004	mg/l	<0.01	<0.01
27	Chemical Oxygen Demand	IS-3025(Part-58):2006	mg/l	14.40	12.80
28	Arsenic (as As)	IS:3025(Part-37):2022	mg/l	<0.01	<0.01

3.5.6 Observation:

The parameters results are as follows:

- pH value is 7.18 to 7.27
- TDS was observed as 121 mg/l to 128 mg/l
- Chlorides were found as 21.68 to 23.65 mg/l
- Sulphates were found as 10.62 to 12.32 mg/l
- Total hardness was observed 64 to 72 mg/l.

3.6 SOIL ENVIRONMENT

Soil of the proposed site is influenced by the physiographic features of the area. There is dominance of sub-mountain soil and mountain soil as J & K is home of hills and mountains. Sand is dominated in the soil texture in all the locations. It is observed that sub-mountain soil is dominated in soil map of the area. Sub-mountain and mountain soils are the types of alluvial soils, which are loamy with little clay content and contain small quantity of lime with high magnesium content. There are three parallel belts widely apart from Forest and Hill soils, one stretching from Poonch to Kathua in Jammu province second North West of Jhelum valley in Kashmir province and the third belt stretching from south eastern part of Ladakh range.The soil survey and soil samples were carried out / collected to assess the soil characteristics of the study area. Soil samples were collected from 6 locations & analyzed as per CPCB norms.

3.6.1 Methodology

Soil samples were collected from different depths below the surface. The samples were homogenized and the quantity was reduced using the coning and quartering method to provide a representative sample for analysis. They were stored in air tight Polythene Bags and analyzed at the laboratory. The samples were Analyzed as per standard procedure/ method given in IS: 2720 (Revised Parts), and Soil Chemical Analysis by M. L. Jackson. Soil samples were collected from 8 locations as shown in Table 3.10 and analyzed as per CPCB norms.

Table 3.10: Soil Sampling Locations

Station Code	Name of the village	Distance & Direction
SQ-1	Core Zone (Zewan)	0.24 Km , South
SQ -2	Pantha Chowk	1.39 Km, WSW
SQ -3	Zowur	2.08 Km, ENE
SQ -4	Khanmoh	4.58 Km, ENE
SQ -5	Zawarah	3.10 Km, SE
SQ -6	Pampore	4.58 Km, South
SQ -7	Rakh taingan	3.47 Km, SW
SQ -8	Badami Bagh Cantoment	4.18 Km, NW

Table 3.11: Results of Soil Quality

S.No	Parameter	Units	SQ-1	SQ-2	SQ-3	SQ-4	SQ-5	SQ-6	SQ-7	SQ-8	Test Method
1	Texture	-	Sandy Clay Loam	Clay Loam	Sandy Clay Loam	Sandy Clay Loam	Clay Loam	Sandy Clay Loam	Sandy Clay Loam	Clay Loam	UTRL/LAB/SOIL/SOP/05
2	Sand	%	50.83	41.83	45.95	53.13	40.41	43.00	50.83	43.19	UTRL/LAB/SOIL/SOP/05
3	Clay	%	30.52	37.23	30.02	29.09	37.91	30.57	29.24	38.28	UTRL/LAB/SOIL/SOP/05
4	Silt	%	18.65	20.94	24.03	17.78	21.68	26.43	19.93	18.53	UTRL/LAB/SOIL/SOP/05
5	pH(1:2.5 Suspension)	-	6.87	7.34	7.08	7.24	6.84	7.46	6.56	7.45	IS: 2720 (Part-26),1987
6	Electrical Conductivity	µmhos/cm	453.7	513.7	354.6	537.8	473.6	463.7	427.6	525.4	IS: 14767:2000
7	Potassium	mg/kg	191.83	180.53	178.39	200.49	186.40	180.45	179.21	204.13	UTRL/LAB/SOIL/SOP/07
8	Sodium	mg/kg	253.62	248.32	265.30	318.71	251.72	260.91	284.90	306.39	UTRL/LAB/SOIL/SOP/06
9	Calcium	mg/kg	4233.56	3966.22	4358.17	4424.52	3725.07	4045.76	4125.16	3965.03	UTRL/LAB/SOIL/SOP/08
10	Magnesium	mg/kg	774.85	518.27	422.36	896.56	571.41	516.84	749.72	741.65	UTRL/LAB/SOIL/SOP/08
11	Sodium Absorption Ratio	-	0.94	0.98	1.03	1.14	1.01	1.03	1.07	1.17	UTRL/LAB/SOIL/SOP/14
12	Water Holding Capacity	%	30.10	31.43	33.51	28.10	32.17	32.68	30.10	28.49	UTRL/LAB/SOIL/SOP/11
13	Total Kjeldahl Nitrogen	%	0.063	0.069	0.073	0.051	0.064	0.063	0.061	0.075	UTRL/LAB/SOIL/SOP/15
14	Phosphorous	mg/kg	71.43	65.34	66.25	74.24	68.09	70.97	58.87	61.73	UTRL/LAB/SOIL/SOP/09
15	Bulk Density	gm/cc	1.30	1.28	1.29	1.32	1.32	1.33	1.34	1.31	UTRL/LAB/SOIL/SOP/10
16	Organic	%	0.61	0.64	0.68	0.62	0.69	0.60	0.52	0.64	IS: 2720 (Part-22):1972

	Carbon										
17	Organic Matter	%	1.09	1.15	1.21	1.10	1.24	1.07	0.92	1.15	IS: 2720 (Part-22):1972
18	Porosity	%	46.33	42.55	43.24	47.71	43.15	46.19	45.50	42.40	UTRL/LAB/SOIL/SOP/17

3.6.2 Observations:

- **pH** – 6.56 to 7.46.
- **Organic matter** 0.92 to 1.24 %
- **Total Kjeldahl Nitrogen** 0.051 to 0.075%.
- **Phosphorous** 58.87 to 74.24 mg/kg.
- **Potassium** 178.39 to 204.13 mg/kg

3.7 NOISE ENVIRONNENT

The noise levels within the study area were recorded using Sound Level Meter and noise monitoring results were compared with the Ambient Noise Quality Standard notified under Environment Protection Act, 1986. The most common and universally accepted scale is the A weighted scale, which is measured as dB (A). This is more suitable for audible range of 20 to 20,000 Hz. The scale has been designed to weigh various components of noise according to the response of human ear. The environmental impact of noise can have several effects varying from Noise Induced Hearing Loss (NIHL) to annoyance depending on loudness of noise.

3.7.1 Methodology

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

Sound Pressure Levels (SPL) measurements were recorded at four locations. The readings were taken for every hour for 24-hrs. The day noise levels have been monitored during 6 am to 10 pm and night noise levels during 10 pm to 6 am at all the locations.

Measured noise level displayed as a function of time provides a useful scheme for describing the acoustical climate of a community. 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. The equivalent noise level is defined as mathematically.

$10\text{Log}1/T\sum (10^{Ln}/^{10})$

Where L = sound pressure level a function of time dB (A)

T = Time interval of observations

Noise levels during the night time generally drop, therefore to compute Equivalent noise levels for the night time, noise levels are increased by 10 dB (A) as the night time high noise levels are judged more annoying compared to the day time.

T

Table 3.12: Noise Quality Monitoring Stations

S.No.	Station Code	Location (Village)	Distance & Direction
1	**NQ-1**	Core Zone (Zewan)	0.24 Km , South
2	**NQ -2**	Pantha Chowk	1.39 Km, WSW
3	**NQ -3**	Zowur	2.08 Km, ENE
4	**NQ -4**	Khanmoh	4.58 Km, ENE
5	**NQ-5**	Zawarah	3.10 Km, SE
6	**NQ-6**	Pampore	4.58 Km, South
7	**NQ-7**	Rakh taingan	3.47 Km, SW
8	**NQ-8**	Badami Bagh Cantoment	4.18 Km, NW

Table 3.13: Results of Ambient Noise Quality Monitoring

S.No.	PROJECT SITE	ZONE	LIMIT as per CPCB Guidelines Leq, dB(A)		Observed value Leq, dB(A)		
			DAY*	NIGHT*	DAY*	NIGHT*	Day/Night
1	Core Zone (Zewan)	Commercial Area	65.0	70.0	60.8	44.3	59.5
2	Pantha Chowk	Residential Area	55.0	45.0	52.2	43.7	52.8
3	Zowur	Residential Area	55.0	45.0	51.1	42.4	51.6
4	Khanmoh	Residential Area	55.0	45.0	51.8	40.1	51.3
5	Zawarah	Residential Area	55.0	45.0	52.3	42.8	52.5
6	Pampore	Residential Area	55.0	45.0	51.5	42.2	51.7
7	Rakh taingan	Residential Area	55.0	45.0	51.2	41.7	51.4
8	Badami Bagh Cantoment	Residential Area	55.0	45.0	52.7	43.7	53.1
*	Day time	Leq(6.00AM TO 10.00PM)					
*	Night time	Leq(10.00PM TO 6.00AM)					

1. *Day Time is from 6.00 AM to 10.00 PM.*
2. *Night Time is reckoned between 10.00 PM to 6.00 AM*
3. *Silence Zone is defined as an area up to 100m around premises of Hospitals, Educational Institutions and Courts. Use of vehicle horn, loudspeaker and bursting of crackers is banned in these zones.*
4. ***Note:*** *Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply*

Source: Central Pollution Control Board Norms

3.7.2 Results

❖ Noise level during day time – 51.1 dB (A) (Min.) at AQ-3 to 60.8 dB (A) (Max.) at AQ-1
❖ Noise Levels during night time – 40.1 dB (A) (Min.) at AQ-4 to 44.3 dB (A) (Max.) at AQ-1.

There are several other sources in the 5 km radius of study area, which contributes to the local noise level of the area. Traffic activities as well as activities in nearby villages and agricultural fields add to the ambient noise level of the area.

3.8 BIOLOGICAL ENVIRONMENT

Introduction

The biodiversity we see today is the fruit of billions of years of evolution, shaped by natural processes. The vast array of interactions among the various components of biodiversity makes the planet habitable for all species, including humans. There is a growing recognition that, biological diversity is a global asset of tremendous value to present and future generations. At the same time, the threat to species and ecosystems has never been as great as it is today. Species extinction caused by human activities continues at an alarming rate. Protecting biodiversity is in our self-interest.

The biological study was under taken by Ecology & Biodiversity Expert, as a part of the EIA study report to understand the present status of ecosystem prevailing in the study area, to compare it with past condition with the help of available data, to predict changes in the biological environment as a result of present activities and to suggested measures for maintaining its health.

The state of J & K has been regarded as heaven on earth, and is also called the biomass of state of India. The biodiversity of the rich area of J&K happens to be one of the 26 hotspots in India with high endemicity. The whole Himalayan belt is one hotspot mega ventre having 8 critical areas which includes two regions from the state viz Ladakh and Kashmir. The environments, social and economic value of plants are very well known. On the other hand, the faunal component of biodiversity of the state is rich with interesting and unique forms both in the forest zone and above forest line. The variety of animal forms ranges from higher groups like vertebrates, including mammals, birds, reptiles, amphibians and lower groups like invertebrates including insects and even unicellular micro organisms.

A survey was conducted to study the flora around 5 km radius. Some of the information was gathered from the local habitants. All the collected data were classified to interpret the impact of pollution on the flora and fauna of that region. Survey of the mild plants as well as cultivated crop plants was made and all the available information was recorded. The primary data collected was compared with the Secondary data collected from Forest Department, Jammu & Kashmir and Forest Division in the District.

Physical Environment of the Study Area

The district is surrounded by Srinagar district, ganderbal and Anantnag in North and East, Budgam in the South-West and Pulwama in the South.

Objectives and Purpose of Study:

The basic objectives of the study are to evaluate the status of the flora and fauna of the core area and the buffer areas with specific reference to the rare or endangered or endemic or threatened (REET) species. The study is also designed to evaluate the adverse impacts of the proposed activity, if any and to suggest remedial / mitigation measures in accordance with the objectives as desired by the IAIA and the Ministry of Environment , Forests & Climate Change (MoEF&CC), Government of India (GoI).

Forest Division of District

The Main tree species are Bamboo, Chir, Khair and other broad leaved species. According to survey, the Forests are rich with 178 plant species, 10 species of wild animals, 71 bird species and a large No. of speices of snakes and lizards.

Survey Methodology

Detailed survey was conducted to evaluate floral and faunal composition of the study area. Primary data on floral and faunal composition was recorded during site visit and secondary data was collected.

Field study period: The ecological survey has been conducted for one season. The details are given below:
Core zone: At the project site.
Buffer zone: Around the project site in 10 km radius.

Proposed Methodology for Terrestrial Ecology: The primary objective of survey was to describe the floral and faunal communities within the study area. The sampling plots for floral inventory were selected randomly in the suitable habitats (Anderson, 1867; Jain and Rao, 1983). The methodology adopted for faunal survey involve random survey, opportunistic observations, diurnal bird observation, active search for reptiles, faunal habitat assessment, active search for scats and foot prints, animal call, and review of previous studies. The aim was to set baselines in order to monitor and identify trends after the commissioning of the mining activity. Emphasis has been placed on presence of endemic species, threatened species if any present in the study area.

Proposed Methodology for Inland water sampling: The samples for qualitative and quantitative analysis of planktons were collected from the sub surface layer at knee depth. Water samples were filtered through plankton net of 20µ mesh size (APHA, 1971). The filtered samples were concentrated by using the centrifuge. By using Lackey's drops method and light microscope (Lackey, 1938), the quantitative analysis was carried out for phytoplankton and zooplankton. The standard flora and other literature were followed for the qualitative evaluation of Plankton (Welch 1948; Vollenweider, 1969; Edmondson, 1974).

Table 3.13: Proposed Mode of data collection & parameters considered during the survey

Aspect	Data	Mode Of Data Collection	Parameters Monitored
Terrestrial Ecology	Primary data collection	By field survey	Floral and Faunal diversity
	Secondary data collection	From authentic sources like Forests/Wild Life department of Jammu Kashmir , available published literatures like – Biodiversity and Environment Management and available publishes papers of scholars	Floral and Faunal diversity and study of vegetation, forest type, importance etc.

Aquatic Ecology	Primary data collection	By field survey	Floral and Faunal diversity
	Secondary data collection	From authentic sources like Forests/Wild Life department of Jammu Kashmir , available Published literatures like – Biodiversity and Environment Management and available publishes papers of scholars.	Floral and Faunal diversity and study of vegetation, forest type, importance etc.

3.11.1 Floral Diversity of the Study area

The climatic, edaphic and biotic variations with their complex interrelationship and composition of species, which are adapted to these variations, have resulted in different vegetation cover, characteristic of each region (Ohasi, 1975). The tree species, herbs, shrubs, climbers and major crops, were documented during this base line study.

Trees: The dominant trees in the study area are Albizia lebbeck, Benth., Bauhinia variegata, Linn., Celtis tetrandra, Roxb., Salix alba, L. Total 27 species of trees belong to 27 families are enumerated from the study area.

Table 3.14: Trees in the study area

S.No.	***Botanical Name***	***Family***	***Vernacular***
1	*Albizia lebbeck, Benth.*	*Mimosaceae*	*Siris*
2	*Albizia chinensis, (Osbeck) Merr.*	*Mimosaceae*	*Sanura, Ola,*
3	*Acacia nilotica, L.*	*Mimosaceae;*	*Kikar*
4	*Acacia catechu, Willd.*	*Mimosaceae*	*Khair*
5	*Bauhinia variegata, Linn.*	*Caesalpinniaceae*	*Krael*
6	*Bauhinia vahlii, Wight and Arn.*	*Caesalpiniaceae*	*Blungad*
7	*Butea monosperma, (Lam.) Kuntze.*	*Papilionaceae*	*Palah*
8	*Celtis tetrandra, Roxb.*	*Urticaceae*	*Kharak*
9	*Cordia dichotoma, Forst.*	*Boraginaceae*	*Lasura*
10	*Dendrocalamus strictus, Nees.*	*Poaceae*	*Chuanthi*
11	*Dalbergia sissoo, Roxb.*	*Papilionaceae*	*Tahli*
12	*Erythrina subrosa, Roxb.*	*Papilionaceae*	*Thubb*
13	*Ehertia laevis,*	*Boraginaceae*	*Chamrod*
14	*Ficus hispida, Linn*	*Moraceae*	*Lana*
15	*Grewia serrulata, DC.*	*Tiliaceae*	*Dhamani*
16	*Leucaena leucocephala, (Lam.) de Wit.*	*Mimosaceae*	*Laseeni*
17	*Moringa oleifera, Lamk.*	*Moringaceae;*	*Suhanjana*
18	*Mitragyna parviflora, Korth.*	*Rubiaceae*	*Sangla*
19	*Pistacia chinensis*	*Anacardiaceae*	*Kakarsinghi;*
20	*Pyrus pashia, Ham.*	*Rosaceae*	*Kainth*
21	*Quercus semecarpifolia, Smith.*	*Fagaceae*	*Khrew*

22	*Quercus dilatata, Lindl.*	*Fagaceae*	*Maru*
23	*Salix alba, L.*	*Salicaceae*	*Badhaa*
24	*Sapindus mukorossi, Gaertn*	*Sapindaceae*	*Ritha*
25	*Terminalia bellirica, Roxb*	*Combretaceae*	*Bahera*
26	*Zizyphus mauritiana, Lamk.*	*Rhamnaceae*	*Ber*
27	*Zizyphus nummularia, W. et A., Prodr*	*Rhamnaceae*	*Fuadi*

Shrubs: Total 14 shrubs species belong to 14 families are enumerated from the study area. The shrubs observed in the study area are given in the table.

Table 3.15: Shrubs in the study area

S.No.	Botanical Name	Family	Vernacular	Common Name
1	*Achyranthus aspera Linn.*	*Amaranth aceae*	*Puthkanda*	*Prickly chaff Flower*
2	*Barleria cristata Linn.*	*Acanthaceae*	*Kali Barenker*	*Philippine violet*
3	*Berberis lyceum Royle*	*Berberida ceae*	*Kaverlli*	*Barberry*
4	*Calotropis proceraR.Br.*	*Asclepid aceae*	*Desi akk.*	*Sodom apple*
5	*Camabis sativa Linn.*	*Cannabaceae*	*Bhan*	*Marijuana*
6	*Carrisa opaca Stapf.*	*Apocyanaceae*	*Garn*	**-**
7	*Clematis buchananiana DC.*	*Ranunculaceae*	*Berkella*	-
8	*Colebrookea appositifolia Smith*	*Lamiaceae*	*Chitti Suali Duss*	*Indian Squirrel Tail*
9	*Cotoneaster microphyllous*	*Rosaceae*	*Rej.Brithal*	*Littleleaf*
10	*Dodonaea viscose Jacq.*	*Sapindaceae*	*Santha*	*Hopbush*
11	*Flacourtia indica Merr.*	*Salicaceae*	*Kakkoya*	*Indian Plum*
12	*Lantana camara*	*Verbenaceae*	*Panjfulli Jarri*	*Spanish Flag*
13	*Prinsepia utilis Royale.*	*Rosaceae*	*Bhikal Bekkra*	*Himalayan*
14	*Wooffordia fruticosa*	*Lythraceae*	*Dhai*	*Fire flame bush*

Source:http://www.openaccessscience.com

Medicinal Plants in the Study Area

Table 3.16: Medicinal Plants in the study area.

S.No	Botanical Name	Local Name	Families	Plant Part	Medicinal Uses
1.	*Acacia catechu (Linn.) Wild.*	Khair	*Mimosaceae*	*Stem*	Source of kattha, which is astringent, digestive and useful in ailments of throat, mouth, gums, cough and diarrhoea.

2.	*Acacia nilotica (Linn.) Del.*	Kikar	*Mimosa ceae*	*Pods, bark, flowers, gum, leaves and roots.*	1. Pods are effective in urinogenital disorders. 2. Gum is used along with Calotropis procera latex to cure asthma, stop bleeding and urinary & vaginal discharges. 3. It is also useful in diabetes, cure skin diseases and bleeding piles. 4. Flowers are used as tonic in diarrhoea and dysentery.
3.	*Achyranthes aspera Linn.*	Parkand a	*Amara nthacea e*	*Leaves and Seeds*	1. The roasted seed powder mixed with honey is given during cough & throat irritations. 2. Leaf juice is given to cure diarrhea.
4.	*Adhatoda vasica Nees.*	Brenkar	*Acanth aceae*	*Flower and Leaves*	Flower ash with honey is given to cure whooping cough.
5.	*Aegle marmelos Corr.*	Bel, Bill	*Rutace ae*	*Leaf, Fruit and Root.*	1. The unripe or half-ripe fruits improve appetite and digestion. 2. The antibiotic activity of the leaf, fruit and root has been confirmed.
					3. The tribal take an infusion of root bark in fever.
6.	*Asparagus racemosus Wild.*	Sanspod	*Liliacea e*	*Roots*	The fresh juice of roots along with equal amount of Til oil is applied on the head to remove pain and improvement of milk in lactating mothers.
7.	*Bauhinia variegata Linn.*	Kaemblu	*Berberi daceae*	*Root bark, Roots and Lower stems*	1. Root bark, roots and lower stems are boiled in water, strained and evaporated till a semi-solid mass is obtained; this is called Rasaut, soluble in
8.	*Bombax ceiba Linn.*	Simbal	*Bomba caceae*	*Root, Bark and Young fruits*	1.Roots are used in the treatment of diarrhoea. 2.Bark is mucilaginous, which is used for healing wounds and to stop bleeding.

9	*Butea monosperma (Lamak.) Tubert.*	Pala, Palash	*Fabaceae*	*Gum, Seeds and root bark*	1. The gum is valuable for treatment of diarrhoea. 2. Seeds are useful against ringworms, roundworms and tapeworms.
10	*Cannabis sativa Linn.*	Bhang	*Cannabinaceae*	*Leaves*	1.The main use of hemp is for easing pain and inducing sleep. 2.The tincture helps parturition and all painful urinary infections.
11	*Cedrus deodara Loud.*	Deodar	*Pinacea e*	*Stem*	Decoction of the wood is used in the treatment of urinary disorder, piles, kidney stones and diabetes.
12	*Cordia dichotoma G. Forst*	Lusade	*Boraginaceae*	*Fruits*	The fruits are used against cholera, dropsy and dysentery
13	*Curcuma aromatica Salisb.*	Ban haldi	*Zingiberaceae*	*Rhizome*	The rhizome powder is very effective to stop bleeding from the wounds.
14	*Dalbergia sissoo Roxb. Ex DC.*	Talli	*Fabaceae*	*Leaves*	The fresh juice of leaves mixed with honey dropped into the eyes for the improvement of
					eyesight
15	*Datura metel Linn.*	Datura	*Solanaceae*	*Leaf, twigs and fruits*	The juice of the fruits is useful to check dandruff and falling of the hair.
16	*Emblica officinalis Gaertn.*	Amla	*Euphorbiaceae*	*Fruit*	The fruits are very effective against jaundice. Dried fruits are good blood purifier. It is also used in vomiting and

17	*Ficus benghalensis Linn.*	*Bado*	*Moraceae*	*Latex*	Its latex is used to expel out the thorns which are broken down inside the body.
18	*Mallotus philippinensis Muell.-Arg*	*Kamla*	*Euphorbiaceae*	*Powder of the seeds*	The powder of the fruits is highly beneficial for expelling out intestinal worms.
19	*Mimosa pudica Linn.*	*Chui-mui*	*Fabaceae*	*Leaves*	Paste of leaves arrests bleeding and fasten the wound healing process.
20	*Oroxylum indicum (Linn.) Vent.*	*Tantu*	*Begnoniaceae*	*Stem bark, Leaf and Fruit*	1.Leaf decoction is given in stomachache. 2.Mature fruits are used in treating cough, piles and cardiac disorders
21	*Pinus roxburghii Sar.*	*Chir*	*Pinacea e*	*Resin*	The oleo-resin is useful dressing for ulcers.
22	*Punica granatum L.*	*Daduni*	*Punicaceae*	*Bark, Roots, Seeds and Leaves*	1. The fruit is very useful against the cough and jaundice. 2. Leaves, seeds, roots and bark are effective in anthelmintic activity.
23	*Terminalia chebula Roxb.*	*Harad*	*Combretaceae*	*Fruit*	1. The powder of the fruit is used as dentifrice for the strength of gums. 2.The fruit is very effective against cough.
24	*Terminalia bellirica Roxb.*	*Bahera*	*Combretaceae*	*Fruits*	1. The fruits are useful in digestion and diarrhoea. 2. It is also useful in piles and leprosy, dropsy and fever.
25	*Toona hexandra (Wall Ex. Roxb.)*	*Tooni*	*Meliaceae*	*Leaves*	Leaves are tonic, useful in chronic dysentery.
26	*Vitex negundo Linn.*	*Bana*	*Verbenaceae*	*Flowers and Leaves*	1.The extract of the leaves is used to expel out worms in children. 2.Fresh flowers extract cures diarrhoea

Agriculture/Crop Pattern:

Agriculture land use includes two distant concepts: first is the functional use of land to meet human needs (e.g. agricultural, recreational, and residential) and second is the form of ground cover (e.g. crops, trees, houses). Agriculture regions may be categorized on the basis of land use. District Kathua is also having three crop in combination with rice, wheat and barley as major crops. This part of Jammu division for a part of Great Plains of India and have good climatic condition, irrigation facilities accompanied by rich alluvial soil. Agriculturally this is rich belt of the province.

Jammu districts ranks first in production of wheat i.e. 48.67% area followed by rice, maize, bajara and pulses which occupies area of 28.87%, 9.9% , 5.91% and4.06% of total cropped area of the district respectively .In Udampur district maize is first ranking crop followed by wheat with 47.37% and 33.26% of the total area in hectare respectively .In districts of Rajouri, Poonch and Doda wheat is the first ranking crop with total of 46.41%,54.92% and 61.81% area under production of maize crop respectively. The reason being climatic conditions and irregular terrain. Reason of rice cultivation being sub tropical type of climatic conditions and plain topography

Table 3.17: Variety of Crops Recommend for District

Crop name	**Details**
Paddy (Dhan)	Gobhi
Wheat (Gehon)	Oat
Maize (Makka)	Sudan Grass
Pearl Millet (Bajra/Bulrush Millet/Spiked Millet)	Onion
Sorghum (Jowar/Great Millet)	Cabbage
Black Gram (Urd Bean)	Cauliflower
Bengal Gram (Gram/Chick Pea/Kabuli/Chana)	Knol-Khol
Green Gram (Moong Bean/ Moong)	Bitter Gourd
Lentil (Masur)	Bottle Gourd
Peas (Field Peas/ Garden Peas/Matar)	Cucumber
Groundnut (Pea Nut/Mung Phalli)	Indian Squash (Tinda/Round Melon)
Indian Rapeseed And Mustard (Yellow Sarson)	Brinjal
Raya (Indian Mustard)	Chillies
Sesame (Gingelly/Til)	Bhendi
Sunflower (Suryamukhi)	Tomato
Berseem (Egyptian Clover)	Fenugreek
Rajmash Bean	Spinach
Pea (Vegetable)	Radish
Coriander	Turnip (Saljam)

(Source: http://www.gdckathua.com/pdffolder/currentjournal/AgricultrelandusSingh.pdf)

3.11.2 Faunal Biodiversity of Study area

The fauna of Jammu and Kashmir is diverse due to its unique location and climatic condition. About 16% of the Indian mammals, birds, reptiles, amphibians and butterflies are presented in the state. Birds contribute much to the chordate diversity following by mammals, reptiles, fishes and amphibians. The state is home to about 75 species of mammals, besides several sub-species, belonging to 54 genera, 21

families and 8 orders. Carnivores represent 32% of the total mammalian fauna in the state. Of the 19 species of the ungulates reported from the state, 13 have been listed as globally threatened.

The avian diversity of the state varies seasonally and available data suggests the existence of as many as 358 species of birds belonging to 179 genera, 51 families under 16 orders. The state is home to 14 species of amphibians belonging to 6 genera, 5 families and 1 order, and 68 species of reptiles belonging to 43 genera, 12 families and 2 orders. The available data suggests that 44 species of fishes belonging to 14 genera under 5 families occur in the state. The available data also reveals that as many as 225 species of insects, besides several sub-species, belonging to 136 genera, 35 families and 4 orders occur in the state

Birds: Some of them even breed in the state. List of species given below:

S.No	Family	Scientific Name
1	Podicipedidae	Little Grebe
2	Ardeidae	Indian Pond Heron
3	Accipitridae	Pariah Kite
		Black winged Kite
		Indian Shikra
		Indian White Backed Vulture
		Himalayan Griffon Vulture
4	Charadriidae	Red wattled lapwing
		Black Winged Stilt
5	Scolopacidae	Common Sandpiper
6	Galliformes	Grey Partridge
7	Columbiforms	Little Brown Dove
8	Psittaciformes	Large Indian Parakeet
9	Strigidae	Great Horned Owl
10	Coraciidae	Blue Jay
11	Alcedinidae	Small Blue Kingfisher
12	Meropidae	Indian small green beer eater
13	Capitonidae	Large Green Barbet
14	Picidae	Lesser Golden Backed Woodpecker
15	Lanidae	Rufous-backed shrike
16	Oriolidae	Indian Golden Oriole
17	Dicruridae	Black Drongo
18	Strurnidae	Bank Myna
		Indian Myna
		Starling
19	Corvidae	House Crow
		Himalayan Jungle Crow
		Western spotter forktail
		Blue Throat
20	Motacillidae	India White Wagtail
21	Zosteropidae	Indian White Eye

22	Passeridae	Indian House Sparrow
23	Fringillidae	Himalayan Rock Bunting
24	Alaudidae	Crested Lark
25	Certhidae	Himalayan Tree Creeper
26	Bucerotidae	Common Grey Hornbill
27	Phasianidae	Pavo cristatus

Source: Biodiversity and Environment Management.

Buterflies : Butterflies oberserved in the study area during study period. List of Buterflies are given below.

Table: 3.18: List of Butterflies in the Study Area.

Scientific Name	**Family**	**Common Name**
Pieris brassicae	Pieridae	The Large Cabbage White butterfly
Pieris canidia	Sparrman	The Indian Cabbage White butterfly
Ceporia nerissa	Pieridae	The Common Gull butterfly
Colias fieldii	Pieridae	The Dark Clouded yellow butterfly
Colias phiolodice	Pieridae	The Common or Clouded Sulphur butterfly
Pontia daplidice	Pieridae	The Bath White butterfly
Anaphaeis aurota	Fabricius	The Pioneer White or African Caper White butterfly
Aporia leucodice	Eversmann	The Himalayan Blackvein butterfly.
Catopsilia pomana	Fabricius	Lemon Emigrant butterfly
Ixias Marianne	Cramer	The White orange tip butterfly
Ixias pyrene	Linnaeus	The Yellow Orange Tip butterfly.
Eurema hecabe	Linnaeus	The Large Grass Yellow or Common Grass Yellow butterfly
Gonepteryx ramni	Linnaeus	The Common Brimstone butterfly
Zizeeria karsandra	Lycaenidae	The dark grass blue
Everres lacturnus	Lycaenidae	The Indian Cupid
Chilades pandava	Lycaenidae	The Plains Cupid
Talicada nyseus	Lycaenidae	The red Pierrot
Libythea lepita	Nymphalidae	The Common Beak
Libythea myrrha	Nymphalidae	Club beak
Danaus genutia	Nymphalidae	Striped Tiger
Danaus chrysippus	Nymphalidae	Plain Tiger

Table: 3.19: Fauna found in Study area

S.No	Name	Global IUCN Status	Indian Wildlife protection Act
1	Rhesus Monkey	LR-lc	II
2	Asiatic Jackal	LR-lc	II
3	Indian Fox	LR-nt	II
5	Small Indian Civet	LR-nt	II
6	Common Grey Mongoose	LR-lc	IV
7	Spotted Deer	LR-lc	III
8	Barking Deer	LR-lc	III
9	Wild Boar	LR-lc	III
10	Rufous-Tailed Hare	LR-lc	IV
11	Grey Musk Shrew	LR-lc	V
12	Five Stripped Squirrel	LR-lc	IV
13	Indian Crested Porcupine	LR-lc	IV
14	House Mouse	LR-lc	V
15	House Rat	LR-lc	V
16	Indian Mole Rat	LR-lc	V

3.9 Socio-Economic Environment

An essential part of environmental study is socio-economic environment incorporating various facts related to socio-economic conditions in the area, which deals with the total environment. Socio economic study includes demographic structure of the area, provision of basic amenities viz., housing, education, health and medical services, occupation, water supply, sanitation, communication, transportation, prevailing diseases pattern as well as feature of aesthetic significance such as temples, historical monuments etc. at the baseline level. This would help in visualizing and predicting the possible impact depending upon the nature and magnitude of the project.

Socio-economic study of an area provides a good opportunity to assess the socioeconomic conditions of an area. This study will possibly make a change in living and social standards of the particular area benefitted due to the Project. The gross economic production of the area will be increased substantially due to the existence of this project. It can undoubtedly be said that this project will provide direct and indirect employment and improve the infrastructural facilities and standards of living of the area.

Objectives of the Study

The objectives of this socio-economic report consist of:

- To conduct socio-economic assessment study in Project Area.
- To know the current socio-economic situation in the region to cover the sub sectors of education, health, sanitation, and water and food security.
- To recommend practical strategic interventions in the sector.
- To help in providing better living standards.

Scope of Work

- To study the Socio-economic Environmental of area from the secondary sources,
- To conduct socio-economic survey for primary data collection and to know the current socio-economic situation in the region to cover the sub sectors of education, health, sanitation, and water and food security,
- Developing a questionnaire for survey,
- Prediction of project impact and mitigation measures,
- To recommend practical strategic interventions in the sector.

CHAPTER-4

ANTICIPATED ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

CHAPTER-4

ANTICIPATED ENVIRONMENTAL IMPACT AND MITIGATION MEASURES

4.0 GENERAL

The environmental parameters likely to be affected by mining are related to many factors, i.e. physical, social, economic, agriculture and aesthetic. Opencast mining involves drilling, loading and transport of minor mineral. The excavated stone will be transported via trucks/tippers. The operations may disturb environment of the area in various ways, such as removal of mass, change of landscape, flora and fauna of the area, surface drainage, and change in air, water and soil quality. While for the purpose of development and economic upliftment of people, there is need for establishment of mining industries, but these should be environment friendly. Therefore, it is essential to assess the impacts of mining on different environmental parameters, before starting the mining operations, so that abatement measures could be planned in advance for eco-friendly mining in the area. The likely impacts on different environmental parameters due to this mining project are discussed below. The environmental components that are likely to be influenced or modified by the continuation of project activities are:

- Land use
- Air Environment
- Noise Environment
- Water Environment
- Flora and fauna
- Socio-economic status of the area

4.1 IMPACTS ON LAND USE AND MITIGATION MEASURES

4.1.1 Source

The project area does not consist of any forest land. It does not consist of any habitations. Land use plan of the mining lease area during pre-operational, operational and post operational is incorporated in the Chapter 2.

Table 4.1: Impact Prediction & Mitigation Measures

Impact	Mitigation
The mine site will be converted into the pit due to the mining activity which may cause soil erosion, soil degradation etc. Reclamation of land affected by mining activities during and at the end of mining lease period. Mining in the lease area may change complete land use pattern including topography, elevation, sediment transportation capacity etc	It is proposed to plant native species. Plantation during 1st year with consultation of Forest department with some fruit bearing and having medicinal importance, along the haul roads or outer periphery within the mining area which enhances the binding property of the soil. It is proposed to improve the effected land wherever possible for better land use, so as to support forestry and creation of water reservoir etc. Accordingly, the land reclamation portion will be done by plantation along the roads surroundings the office building on the waste barren land and in the open pits when they reach their ultimate stage. The regular health checkup camp will be organized.

4.1.2 CONCLUSION

The entire excavated land will be ultimately mined out area will be converted into water reservoir which can be further use for pisciculture.

4.2 WATER ENVIRONMENT

Table 4.2 Impact Prediction & Mitigation Measures for water Pollution

Impact	Mitigation Measures
The mining in the lease area may cause the ground water Contamination due to intersection of the water table. The domestic waste water disposed from the mining activity may cause contamination of surface water.	Mining will be done above the water table therefore much impact on water regime is not accepted. Proper analysis/Monitoring will be done to check the ground water. No waste water will be generated.

4.3 AIR ENVIRONMENT

4.3.1 Source:

Air pollution from this project mainly occurs due to transportation of mineral after drilling. Vehicular exhaust from dumpers ferrying is another reason for air pollution. These exhausts contain PM10, PM2.5, CO, SO_X, NO_X and small quantities of un-burnt fuel apart from some heavy metals like lead, nickel and arsenic. Air pollution due to mineral transportation can be controlled to a great extent by regular sprinkling on roads by mobile water sprinklers. Dumpers employed for transportation require will be in good condition. Several such provisions have been made in the report to contain the air pollution within the stipulated standards.

4.3.2 Anticipated Impacts

Stone mining is carried out by opencast semi-mechanized method. The air borne particulate matter mainly generated by loading and transportation operations. Prediction of impacts on air environment has been carried out taking into consideration proposed production and net increase in emissions.
Transportation of mineral from mining benches to tipper platform, movement of trippers on the haul road is considered as line sources. Water tankers with sprinkling arrangement will be used for regular water sprinkling on the haul roads to ensure effective dust suppression. The tippers are well maintained so that exhaust smoke does not contribute abnormal values of noxious gases and un-burnt hydrocarbons in order to assess the impact due to Stone production 1,50,000 MT per annum.

4.3.2.1 Emissions Details

Loading and transportation of Minor Mineral Quarry Cluster Masonry Stone Block and wind erosion of the exposed area and movement of light vehicles will be the main polluting source in the proposed mining activities releasing Particulate Matter (PM_{10}) affecting ambient air of the area. Emission during Loading was calculated by the area sources. Transportation of the Stone by number of trucks operated per day on the haul road was calculated by the area source which was combination of line sources with each truck loaded with mineral and transported over the haul road of the mining area. The carrying capacity of truck will be 10 T of mineral. Details of emission during loading and transportation on the haul road, wind erosion of the exposed area and road maintenance were discussed and combined impact was predicted in the worst case scenario under worst meteorological condition given as follows:

a) Loading - US EPA, 2008, revision of emission factor for AP- 42 was used to calculate emission of particulate matter released into the atmosphere during loading. Average wind speed was 2.75 m/s as observed with site data as shown in wind rose and discussion of local meteorology of the area.
Emission of PM_{10} during stone loading was calculated and found to be 1.6 x 10-7g/s/m^2.

b) Haul Road - US EPA, 2006, revision of emission factor for AP-42 was used to calculate emission of particulate matter released into the atmosphere during transportation of Masonry Stone and over burden by 7 trucks operated per hour on haul road. Emission of PM10 due to transportation of ores on haul road was 0.54 x 10-6 g/s/m^2 based on assumption that silt content spread on road surface was 6%, and efficiency of PM_{10} emission control 90%. Truck will be fully covered with tarpaulin material and emission of PM_{10} during on the haul road will be insignificant. Based on the above consideration that there was low emission of PM_{10} during transportation, emission of PM_{10} of the exposed area due to wind erosion and movement of light vehicles on the road were not considered and combined with mining activities. US EPA based Dispersion ISCST-3 model was used for prediction of impact with 1-h meteorological data of the study period for the assessment of GLC. Emission value in each case was discussed as above is given in Table given below**.**

Table 4.3: Emission Factors

Source type	**Pollutants Emission (**g/s/m^2**)**
Mineral Loading	1.6 x 10-7
Haul Road	0.54 x 10-6

4.3.2.2 Meteorological Data

The meteorological data recorded at hourly interval during the month of March 2023 to May 2023 on wind speed 2.75 m/s, wind direction, dry & wet bulb temperature, humidity, cloud cover and rainfall was processed to extract hourly mean meteorological data as per the guidelines of CPCB/MoEF for prediction of impacts from the area source. Stability was computed by Turner's method and mixing height was obtained from publication of IMD "Atlas of Hourly Mixing Height in India, 2008.

Data recorded from authorized source/Govt. agency were used as meteorological input for Dispersion Model which was stored in the computer for further analysis and interpretation to study the local meteorology of the study area. It was observed that SW to NE was pre-dominant wind during summer with low wind speed was observed during study period at the site. Average wind speed was 2.75 m/s. Impact of the pollutants was anticipated in east sector under influence of westerly & north westerly winds. Ambient air quality locations were selected based on the long term wind rose pattern of the area. Ambient air quality sampling locations were finalized to study the baseline status around the proposed site and to study impact at various locations. 24-h maximum impact of PM_{10} was envisaged in east direction at very short distance from the site due to moderate to low wind speed.

Pollutants were dispersed from the proposed source under influence of local meteorology and dispersed on the ground in downwind direction close (~100 m) to the source under influence of moderate to low wind speed. High temperature and low humidity were observed at site with high temperature in day hours and low during night.

4.3.3 Mitigation measures

The air pollution sources are loading of Minor Mineral Quarry Cluster Masonry Stone Block and road transport network of the trucks/dumpers. The dust suppression measures like the following will be resorted:

- Water sprinkling will be done on the roads regularly to reduce the dust generation.
- Dust mask will be provided to the workers engaged at dust generation points like excavations and loading points.
- Fortnightly scraping of road in order to keep the roads almost leveled. This will ensure smooth flow of vehicles and also prevent spillage.

- Proper maintenance of vehicles to keep the gas emissions under check.
- Plantation of trees along the roads to help reduce the impact of dust.

4.4 NOISE ENVIRONMENT

4.4.1 Source:

4.4.2 Anticipated Impacts

- Mental disturbance, stress & impaired hearing.
- Decrease in speech reception & communication.
- Distraction and diminished concentration affecting job performance efficiency.

4.4.3 Mitigation Measures

i. On-site

- Well maintained vehicle will be used which will reduced the noise level.
- **Plantation:** Plantation of trees along the road will be done to dampen the noise, if possible.
- **Hearing Protection:** ear plugs will be used as hearing protection if it needed.

ii. Off-site

a) The vehicles will be maintained in good running condition so that noise will be reduced to minimum possible level.

b) Awareness will be imparted prior to mining operations that smoke silencers remain in a good conditions not to generate noise.

c) In addition, truck drivers will be instructed to make minimum use of horns at the village area.

d) Where ever space is made available by the authorities' plantation will be done and also post plantation care will be provided.

4.5 BIOLOGICAL ENVIRONMENT

Impact Prediction & Mitigation Measures: Biological Environment

Impact on terrestrial Flora

Dust deposition on leaf Pendulous observed on nearby local plant species which may results in decline the rate of photosynthesis and retards the plant growth.

Measures for Minimizing Impact on Flora

- ❖ Dust issue is mainly because of the unpaved road, cumulative fugitive dust emissions by various crushers and stone quarrying activities. To mitigate the impact regular water sprinkling will be carried out within the mine lease area as well as approach road.
- ❖ Stabilization of soil/waste dumps by grass cover will be done.

Impact on Wildlife

- ❖ There is no National Park, Wildlife Sanctuary and Biosphere Reserve within 10 km radius of the project site.
- ❖ No rare, endemic & endangered species are reported in the buffer zone. However, during the course of mining, the management will practice scientific method of mining with proper Environmental Management Plan including pollution control measures especially for air and noise, to avoid any adverse impact on the surrounding wildlife.
- ❖ Fencing around the mine lease area to restrict the entry of stray animals
- ❖ Green belt development will be carried out which will help in minimizing adverse impact on the flora found in the area.

Measures for Minimizing Impact on Fauna

Following measures will be adopted to minimize the impact of mining on faunal environment of the area.

- Measures will be taken to curb pollution due to mining activities on air, water, soil & noise environment. Plantation at places marked by gram sabha or DFO will help in creating habitats for small faunal species and to create better environment for various fauna. Creating and developing awareness for nature and wildlife in the adjoining villages.

Study of Impact on Aquatic Ecology

- Mining activities will not disturb the existing aquatic ecology as there is no effluent discharge proposed from the stone quarry.

Mitigation Measures

- Periodic maintenance of road for mineral transportation
- Regular sprinkling of water through mobile tanker on mineral transport road.
- Development of thick plantation around mine lease area
- Monitoring of dust fall on agriculture land located nearby the mining area

Green Belt Development

The basic approach towards the development of green belt /plantation is with a view to provide an aesthetic look, eliminating fugitive emissions and for controlling the impact of noise, etc. A Green Belt will be developed based on the following principles:

- Plants that grow fast will be preferred.
- Preference for high canopy covers plants with local varieties
- Perennial and evergreen plants will be preferred.
- Plants having a high Air Pollution Tolerance Index (APTI) will be preferred.
- The development of green belt is an important aspect for any project because
- It improves the ambient air quality by controlling Suspended Particulate Matter in air.
- It helps in noise attenuation for the surrounding area.
- It helps in attracting new birds and insects as their habitation.
- It maintains the ecological balance.
- It increases the aesthetic value of site

4.6 OCCUPATIONAL HEALTH AND SAFETY:

Identification of Work Related Health Hazards

Details of the principle environmental and occupational risks that are likely to be created are given in

WORK RELATED HEALTH HAZARDS

S. No.	Hazardous Activities	Type of Hazards	Severity of Injury
1	Drilling	Exposed to high level of Noise	Hearing impairment
		Exposed to dusty environment	Respiratory diseases

2	Loading	Struck by rolling big boulders	Serious injury, and equipment damage
		Struck by fall of objects	Serious Physical injury
3	Transportation	Accidental runaway of vehicle	Serious injury, and equipment damage
		Fall of vehicle from height while reversing	
		Exposed to high level noise	Hearing impairment
		Fire in engine due to over heating	Serious Physical injury
4	Welding, gas cutting	Emission of gases & fumes	Asphyxiation
		Release of radiation & light	Eye injury
		Fire	Burns
		Release of heat	Skin problem, Burns
5	Storage of oil, lubricant	Leaks and spills	Fire & vigorous chemical reaction
6	Battery maintenance handling	Acid spillage	Acid burns
7	Use/repair of hydraulic jacks & pumps	High pressure operation	Physical injury
		Oil spillage	
		Rupture of hydraulic hoses	

Medical Surveillance and Examinations

In order to evaluate the impacts from stone mining project activities on health of workers, baseline health studies will be conducted on every worker before joining their duties.

- Identifying workers with conditions that may be aggravated by exposure to dust & noise and establishing baseline status for determining changes in health
- Evaluating the effect of dust and noise on workers
- Enabling corrective action to be taken when necessary
- providing health education and awareness
- The medical surveillance program will consist of the following:
    - Pre-employment medical examinations
    - Periodic medical examinations
    - Health & Safety awareness and training
    - Record keeping

Awareness and Training Program

All workers will be subjected to pre-employment and periodic awareness program on health and safety issues of stone mining and related activities. They would also be imparted with proper training and would be made to understand the health impacts of inhaling high concentration of dust laden air. All the workers will also be provided training in first aid.

- Holders of first aid certificate will be given refresher training once in two years
- Rescue trained person will acquire highest standards of proficiency in first aid
- Ambulance van will be provided fully equipped with lifesaving drugs, medicines and appliances needed in emergency

Record keeping

A Registered Medical Practitioner (Doctor) will be appointed for examining the workers. All the health records of the workers will be maintained in separate file in site office and the records will be regularly updated.

Pandemic Situation

Under COVID-19 following precaution will be done:

- Temperature of employees will be checked by Thermometer Gun twice a day and log book for the same will be maintained.
- Face protection shields along with masks and PPFs and along with sanitizer will be provided.
- Gloves, masks and hand sanitizers will be provided.
- Social distance will be maintained & awareness will be given by Tool box talks etc.
- It is ensured by PP that the updated guidelines or MHA in content of COVID-19 will he followed during Mining operation at Mining site.

Public Health Implications of the Project

There is no village habitation in or adjacent to the Stone Quarry. As observed from the modeling results, the dust emissions and noise from the stone mining project will not cause any significant impact on the ambient air quality and ambient noise levels in the surrounding villages. The mine will be operated during day time only. Thus, there will not be any disturbance to the nearby habitations during night. Mining area is 0.43 Km away from village link road, which is well connected to Khanmoh Road and NH-1A. Thus, there will not be any disturbance to the normal traffic of the area. Also, the mine management will conduct periodic medical camps in the nearby villages to provide medical facilities to the villagers. Thus, no significant impact is envisaged on the public health due to the project.

4.7 TRAFFIC ENVIRONMENT

Impact	Mitigation Measure
No. of vehicles will increase due to mining in existing traffic scenario lead to air pollution which can cause adverse effect on human health of neighboring villagers like effect on breathing and respiratory system, damage to lung tissue, cancer and premature death, influenza or asthma. Vehicle collation may occur unwanted sound and can also cause impact on human health.	Vehicles with PUC Certificate will be hired. Regular maintenance of vehicles will be done to ensure smooth running of vehicle. It is proposed to plant number of native species per year with consultation of Forest Department with some fruit bearing and medicinal trees, along the haul roads, outer periphery within the lease area to prevent the impact of dust in the nearby village.
Accidents may be occurring due to fast movement of vehicles.	To avoid accidents the speed of vehicles will be low near habitation areas.

4.8 SOLID WASTE GENERATION & MANAGEMENT

Waste generation in ML area will be mainly in the form municipal solid waste generated by day workers. Waste will be generated during the mine life. The soil will be temporarily stacked within the mine lease area and will be used for spreading on the safety barrier for plantation (if any).

There is no overburden in the mine lease area. All the mined out rock is saleable. Hence, there is no stacking or disposal of overburden/waste rock is required. Damaged/worn out parts of the machinery

deployed in mine will be sold to the authorized recycling vendors. No other solid waste is envisaged to be generated from the stone mining activities.

The waste/reject generated during mining will be initially stacked in corner of the lease and will be stabilized by planting grasses & leguminous plants. A retention wall and garland drain will be constructed around the toe of the dumps to arrest silt wash off during rains. The garland drains will be connected to settling tank. The waste/reject will be used for spreading on safety barrier and top benches of mined out pit for plantation.

4.9 SOCIOL ENVIRONMENT

Social Impact Assessment is carried out separately but concurrently with Environment Impact Assessment (EIA). It focuses the effect of the project on social and economic wellbeing of the community. It is obvious to assume that the activities of the mining operations will improve the socio-economic levels in the study area. The anticipated impact of this project on various aspects is described in the following sections

4.9.1 Impact on Socio - Economic Aspects

The proposed project will provide employment to the local people. It has been estimated that 51 people will get direct employment in this mining project. It is a positive impact of the project since it is providing employment opportunities to the local people.

Impact on Human Settlement

There is no human settlement in or adjacent to the Stone Quarry. Nearest human settlement is located at 0.56 Km of the mine lease area. Thus there will not be any impact on the human settlement in the area. The operation of the stone mine and associated activities will improve the economic development, civic amenities, and educational facilities in the project vicinity. Overall, due to employment generation and economic progress, there will be small scale positive changes in the socio-economic condition of the people residing in the vicinity of the project site.

Impact on Population Growth

This is a stone mining project. There will be employment of approximately 34 labours in the proposed project. Mostly local persons will be employed in the mine. Additional manpower requirement in the mine will be employed from the nearby villages. Thus, there will not be any population growth in the area due to the stone mining project

Impact on Civic Amenities

The existing infrastructure facilities are sufficient to cater the needs of the stone mine. However, the mine management will take efforts as a part of CER for improvement in civic amenities like sanitation, drinking water facilities, transport road, etc in the nearby villages.

Impact on Health Care Facilities

The Govt. Primary Health sub center Khanmoh -4.25 Km of the proposed mine site, Govt. Hospital Pampore at 3.78 km towards South. Mine management will also conduct periodic medical camps in the nearby villages.

Impact on Economic Aspects

There will be 34 persons employed in the mine. Mostly local persons will be employed in the mine. The local population will be given preference in employment. The employment potential will improve

economic conditions of these families directly and provide employment to many other families indirectly who are involved in business and service oriented activities. These will in-turn improves the quality of life in the region.

4.10 Details of Transportation as Per the Indian Road Congress for both the Ways (Loaded as well as unloaded trucks) Load and Its Impact on Environment

Traffic analysis is carried out by understanding the existing carrying capacity of the roads near to the project site. The road is wide enough to facilitate easy and smooth movement of heavy duty trucks.

Then depending on the capacity of the Industry, the number of trucks that will be added to the present scenario will be compared to the carrying capacity. Traffic impact study can be used to help evaluate whether the development is appropriate for a site and what type of transportation improvements may be necessary. It will help:-

- To establish the existing trips/ day without the project activity;
- To understand the increment on the traffic load due to the project activity;
- To know the existing road will sustain or not after the commission of the project.

Vehicle Count

The vehicles passing through the road (in both ways) were counted separately for 24 hours at one location from 06:00 hrs to 06:00 hrs next day continuously. Category-wise vehicle counting has been done continuously and recorded in the traffic volume counton hourly basis under respective categories.

Categorization of Traffic

The engine driven vehicles were categorized into various heads viz. Trucks/Bus, Light Carriage Vehicles (LCV), Car/Jeep, Multi Axle Vehicles, Two/Three Wheelers and Cycles/others.

Indian Road Congress (IRC) Guidelines

Factors for conversion of different type of vehicle into equivalent passenger car unit (PCU) based on their relative interference value as per Indian Road Congress Guidelines i.e. IRC 64: 1990 & IRC 106: 1990 is given below Table No:- 4.1

Table 4.1 Recommended PCU Factors for Various Types of Vehicles on Road

Vehicle Type	Rural Road
	Equivalency factor for PCU
Fast Vehicles	
Two wheelers	0.50
Passenger Car, Pickup Van, Auto Rickshaw	1.00
Agricultural Tractor, Light Commercial Vehicle	1.5
Bus or Trucks	3.0
Truck Trailer, Agricultural Tractor – Trailer	4.50

(Source: - IRC 64-1990 & IRC 106-1990)

Level of Service (LOS)

Capacity standards are fixed normally in relation to the Level of Service (LOS) adopted for design. Five levels of service are recognized commonly designated from A to E. Considering the need for smooth traffic flow; it is recommended that normally LOS-C be adopted for design of urban roads. At this level volume of traffic will be around 0.70 times the maximum capacity. Capacity or Design Service volume is the maximum hourly volume at which vehicle can reasonably be expected to transfers a point or uniform section of a lane or road way during a given time period. As per IRC 64: 1990 guidelines, ratio of existing volume of PCU on roads (V) and its capacity (C) with corresponding level of services (LOS) and their performance is given below **Table No.4.2.**

Table 4.2 LOS and Their Performance

V/C	LOS	Performance
0.0 - 0.2	A	Excellent
0.2 - 0.4	B	Very Good
0.4 - 0.6	C	Good / Average / Fair
0.6 - 0.8	D	Poor
0.8 – 0.9	E	Very Poor
1.0	F	Worst

Highway Capacity Manual (HCM) used travel speed and volume by capacity ratio (v/c ratio) to distinguish between various levels of service. The value of v/c ratio can vary between 0 and 1. Depending upon the travel speed and v/c ratio, HCM has defined six levels of service, level A to level F based on a graph between operating speed and v/c ratio as shown in the table above. Level of service A represents the zone of free flow. Here the traffic volume will be less, traffic will be experiencing free flow also. The effect of minor incidents and point breakdowns are easily aborted at this level. Level of service B represents zone of reasonably free flow. At level of service C, the presence of other vehicles begins to restrict the maneuverability within the traffic stream. At level of service D, the average speeds begin to decline with increasing flows. Level of service E defines operation at capacity. At this level, the stream reaches its maximum density limit. Level of service F represents the region of forced, having low speed, and complete breakdown of the system.

Presentation of Results

The present level of traffic has been converted to Passenger Car Units (PCU) at all the locations as per the conversion factors stipulated by Indian Road Congress (IRC). The traffic volume at each location is summarized below 4.3.

Table 4.3 Traffic Volume Count on NH- 1A and Village Road

Traffic Vehicle category	**PCU Factor**	**No. of vehicle/day Near NH-1A**	**No. of PCU/day**	**No. of vehicles per day near Village Road**	**No. of PCU/day**
2 Wheelers	0.5	222	111	18	9
Mini Bus/ Tractor Trolly	1.5	371	556.5	8	12

Car	1.0	1487	1487	10	10
Tempo/LCV	1.5	54	81	4	6
Truck	3.0	509	1527	40	120
Bus	3.0	133	399	0	0
Total	--	**2776**	**4161.5**	**80**	**157**

Table 4.4 Impacts during Operation Phase of the Area

No. of working days	330
Considering loaded & unloaded truck per day	20
PCU/Day	60
PCU/hr	2.5
Working Hours per day	24
Design Service Volume for Two Lane Roads as per IRC :64:1990	15000 PCU/Day 625 PCU/hr
Recommended Design Service for Intermediate Lane Roads as per IRC :64:1990	6000 PCU/Day 250 PCU/hr

Table 4.5 (A) Incremental Rise at NH-1A near Project Site

Design Service Volume PCU/day	Existing Daily Traffic Data		Envisaged Traffic in Operation Phase		Cumulative Movement at Post Project Scenario		LOS in post project scenario
15000	PCU/ day	PCU/ hr	PCU/ day	PCU/ hr	PCU/ day	PCU/ hr	
	4161.5	173.39	60	2.5	4221.5	175.89	B

4.10 CONCLUSION:

Mining effect environment in various ways including depletion of land cover, vegetation, removal of soil, change of landscape & deposition of the solid waste product thus causing imbalance in the landscape and increasing air, water and soil pollution. Land use in mining areas consists of mainly forestry, pasture and agriculture. The mined out land which will be fully exhausted by virtue of excavation upto full depth of mineralization will be simultaneously/progressively reclaimed by backfilling of OB & waste generated during the course of mining. The level of backfilling will be parallel at lower level to original topography. The reclaimed area will be rehabilitated by way of growing fruit bearing trees or fuel wood.

Air Monitoring*:* The air quality analysis and modeling analysis predicted that the maximum cumulative concentration of parameters selected like PM_{10}, CO etc. are within permissible limit so the impact beyond 300 m distance might be insignificant. The same is confirmed by the low predicted values at other ambient air monitoring stations. The overall impact on air quality due to proposed mining project is expected to be low extending to close vicinity of mining lease area and in proximity of unpaved haul roads only. The proposed mining operations are not anticipated to raise the concentration of the pollutants beyond prescribed limits. However, the measures are suggested to mitigate any harmful impact on the surrounding areas like plantation, water sprinkling etc.

Noise monitoring: It is found that the impact on the present noise levels due to mining operations will be restricted mostly to the work zone areas only. Drilling, excavator and other equipment even

vehicular transport will be applied for limited time. Hence, the noise levels and vibration impact due to the proposed mining operations on community will be minimal.

Water monitoring: In this mining project the activity will not intersect the water table and there will be no impact on the water environment.

Biological environment: The proposed mining will be carried out in a scientific manner and not much significant impact is anticipated to the flora and fauna. Further, in order to avoid any adverse effect, the mining will be restricted during monsoon season. The haul roads and trucks will be sprinkled with water twice in a day to avoid any impact on agricultural activities.

CHAPTER 5
ANALYSIS OF ALTERNATIVES
(TECHNOLOGY & SITE)

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5.1 Analysis of Alternate Site

Consideration of alternatives to a project proposal is a requirement of EIA process. During the process, alternatives to a proposal can be considered or refined, either directly or by reference to the key issues identified. A comparison of alternatives help to determine the best method of achieving the project objectives with minimum environmental impacts or indicates the most environmentally friendly and cost effective options.

It is a proposed mining lease area measuring 8.92 hectares falling under category "B1" located at Khasra No.- 147, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K

The mine is to be located where the mineral exists in sufficient quantity to be economically extracted. The site selected has following advantages:

1. The project site is a Government Wasteland.
2. There are other stone mines in the study area, however, basic infrastructure such as road and electric

   Connections are available.
3. Better availability of experienced labors from nearby villages.
4. No endangered species around the mine site.
5. The mining project site is mineral specific.

This is site specific project and it is allocated by state government through biding so no alternate site will propose.

CHAPTER 6

ENVIRONMENTAL MONITORING PROGRAMME

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6.0. INTRODUCTION

Regular monitoring of the various environmental parameters is necessary to evaluate the effectiveness of the management Programme so that the necessary corrective measures can be taken in case there are some drawbacks in the proposed Programme. Since environmental quality parameters at work zone and surrounding area are important for maintaining sound operating practices of the project in conformity with environmental regulations, the post project monitoring work forms part of Environmental Monitoring Program. Environmental Monitoring Program will be implemented once the project activity commences.

Environmental Monitoring Program includes:

(i) Environmental surveillance
(ii) Analysis and interpretation of data
(iii) Preparation of reports to support environmental management system and
(iv) Organizational set up responsible for the implementation of the Programme.

6.1. ENVIRONMENTAL MONITORING

Environmental Monitoring will be taken up for various environmental components as per conditions stipulated in TOR Letter issued by JKEIAA. and Compliance of same will be submitted to respective authorities on regular basis

In order to maintain the environmental quality within the stipulated standards, regular monitoring of various environmental components is necessary which will complied as per conditions. For this the lessee Mr. Mohd Amin Wani has taken decision to formulate an Environment Policy of the mine and constitute an Environmental Management Cell and committed to operate the proposed mine with the objectives mentioned in approved Environment Policy. The system of reporting of Non-conformances /violation of any Environmental Law/Policy will be as per quality management system. The internal audit will be conducted on periodic basis and any Non-conformances/violation to Environmental Law/Policy will be closed and discussed during Management Review Meetings of board of directors/partners.

6.2. ENVIRONMENT MONITORING CELL: HIERARCHY

Environmental monitoring cell will be established for monitoring of important and crucial environmental parameters which are of immense importance to assess the status of environment during minor mineral mine operation.

In order to have a permanent organizational set up charged with the task of ensuring its effective implementation of mitigation measures and to conduct environmental monitoring. In this effect, Mr. Mohd Amin Wani a will assign responsibilities to officers from various disciplines to co-ordinate the activities concerned with management and implementation of environment control measures. An Organ gram of Environment management system is shown in figure No. 6.1.

6.2.1 The responsibilities of the EMC include the following:

- Environmental Monitoring of the surrounding area
- Developing the green belt/Plantation
- Ensuring minimal use of water
- Proper implementation of pollution control measures
- Access the risk area
- Mounting the proposed attributes benefitting the surrounding habitation taken as a part of corporate responsibility

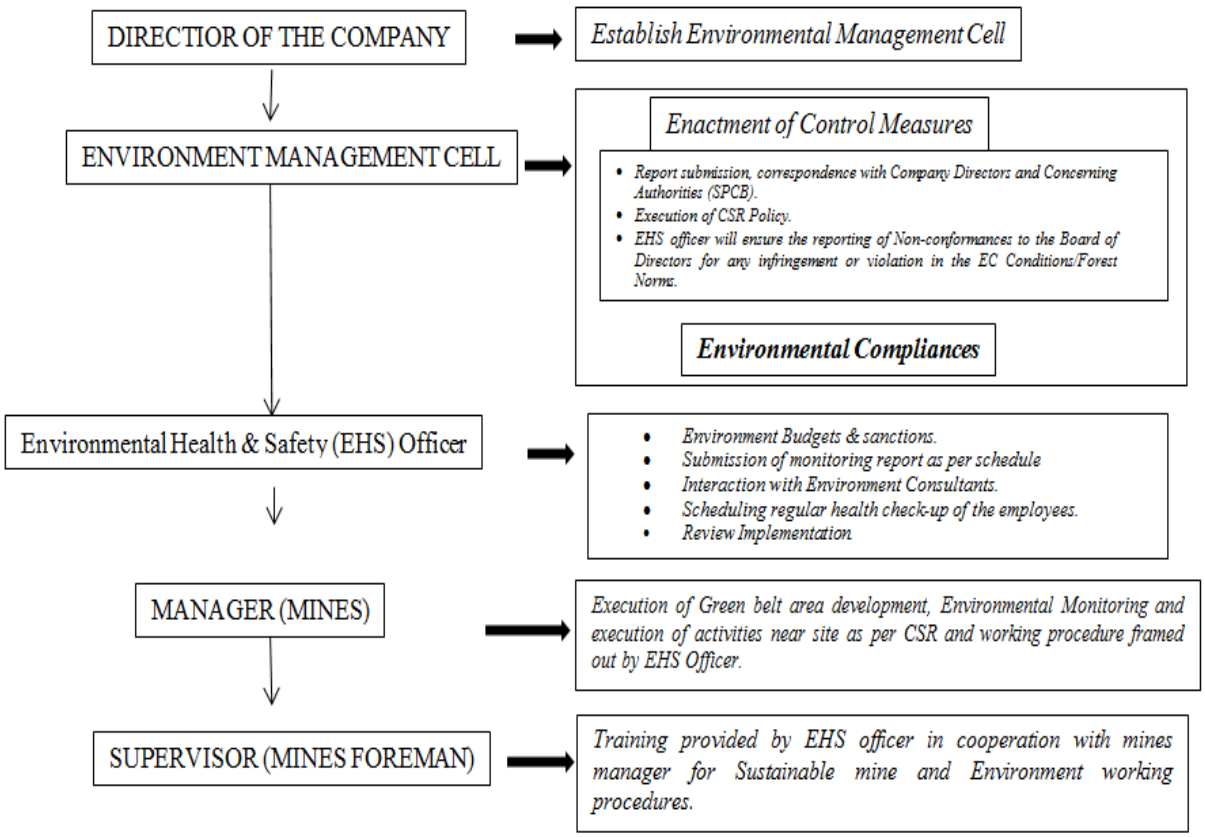


Figure 6.1: Organizational Structure of Environmental Management Cell: With respective roles

6.3. SCOPE OF ENVIRONMENTAL MONITORING PROGRAM

Environmental monitoring program includes periodic analysis of air, soil, noise and water, samples. Environmental monitoring will be conducted on regular basis to assess the pollution level in the mining lease area as well in the surrounding areas. Therefore, regular monitoring program of the environmental parameters is essential to take into account the changes in the environment.

The key aims of environmental monitoring are:

- To ensure that results/ conditions are as forecast during the planning stage, and where they are not, to pinpoint the cause and implement action to remedy the situation.

- To verify the evaluations made during the planning process, in particular with risk and impact assessments and standards and target setting and to measure operational and process efficiency.
- Monitoring will also be required to meet compliance with statutory and corporate requirements. Finally, monitoring results provide the basis for auditing, i.e. to identify unexpected changes.
- To identify the state of pollution within the mining lease area.
- To verify the result of the impact assessment study in particular with regards to new developments.
- Generate data for predictive or corrective purpose in respect of pollution.
- To assess and monitor the environmental impacts
-

6.4. LOCATIONS OF MONITORING STATIONS

The location of the monitoring stations was selected on the basis of prevailing micro meteorological conditions of the area like; wind direction and wind speed, relative humidity, temperature. Locations for the post project monitoring shall be as under.

Table 6.1: Locations of Monitoring Stations

S. No.	Description	Location
1	Ambient Air Quality	Lease area, Villages in downwind direction from the Lease Boundary
2	Noise Level Monitoring	Lease Boundary, High noise generating areas within the lease boundary
3	Water Level and Quality	Nearby Surface and Ground water sources from villages
4	Soil Quality	Lease area and Villages within study area.

6.5. MONITORING SCHEDULE

Regular Monitoring of all the environmental parameters *viz.*, air, water, noise and soil as per the formulated program based on CPCB and MoEF&CC guidelines will be carried out every year in order to detect any changes from the baseline status.

Table 6.2: Monitoring Schedule & Parameters

S.No.	Attributes	Parameters	Source and Frequency
1.	Land use	Present land-use categories to assess receiving environment within study area	Based on latest satellite imagery and ground trothing
2.	Soil Characteristics	Physical and chemical parameters	Grab Sample once at 8 locations once during monitoring period
3.	Meteorology	Wind speed and direction, temperature, relative humidity and rainfall	Near project site continuously for one season with hourly recording and from secondary sources of nearest IMD station.
4.	Ambient Air Quality	Particulate Matters (PM_{10}, $PM_{2.5}$), SO_2, NO_X	24 hourly samples twice a week for one season at 8 locations.

5.	Noise levels	Noise levels in dB(A)	At 8 locations data monitored for 24 hours during study season.
6.	Hydrology	Drainage area and pattern, nature of streams, aquifer characteristics, Recharge and discharge areas.	Based on data collected from secondary sources as well as site study of hydrology.
7.	Water quality	Physical, Chemical and Bacteriological parameters	Grab samples were collected at 8 ground water and 2 surface water locations once.
8.	Traffic Density	Density and type of traffic	2 locations for 24 hours once.
9.	Ecology	Existing terrestrial and aquatic flora and fauna within 10-Km radius circle.	Random survey of terrestrial and freshwater flora and fauna in the study area.
10.	Socio-Economic Aspects	Socio-economic and demographic characteristics, worker characteristics	Based on secondary sources data like primary census abstracts of Census of India 2001 and 2011.
11.	Risk Assessment & DMP	Identify areas where disaster can occur by fires & explosions and release of toxic substances	Based on mine plan and site study

6.6. POST PROJECT MONITORING PLAN

Environmental monitoring and analysis will be carried on air, water and soil testing as per the formulated Programme in order to ensure no severe impact on the surrounding.

6.7 REPORTING SCHEDULES OF THE REPORTING DATA

It is proposed that voluntary reporting of environmental performance with reference to the EMP will be undertaken.

The Environmental Monitoring Cell will co-ordinate all monitoring programs at site and data thus generated will be regularly furnished to the State regulatory agencies. The frequency of reporting will be on six monthly basis/ as per norms to the office of State Pollution Control Board and to the Regional Office of MoEF&CC. The Environmental Audit reports will be prepared for the entire year of operations and will be regularly submitted to regulatory authorities as per EC conditions.

6.8. BUDGET ALLOCATION FOR MONITORING

The cost of the project is 97.33 Lakhs and a budget for monitoring of Air, water, Noise and Soil in EMP will be Rs. 4.87 Lakhs to be incurred by the project proponent for undertaking pollution prevention measures during the mining activity.

Table 8.1: Budget Allocation for Monitoring

S. No.	**Description**	**Unit**	**Capital Cost (in Lakhs)**
B. Break-up of Expenditure on Environment Monitoring Programme (In lakhs) : Annual			
1	Air Quality:	@ 20000 x 8	1,60,000

2	Water Quality	@ 10000 x 10	80,000
3	Ambient Noise Level	@ 10000 x 8	80,000
4	Soil Quality	@10000 x 8	80,000
5	Socio economic condition of local population, Physical Survey	-	80,000
6	Inventory of flora and funna (Biodiversity survey and conservation)	-	80,000
	TOTAL		**5,80,000**

6.9. ENVIRONMENTAL POLICY

Project Proponent is committed to providing a quality service in a manner that ensure a safe and healthy workplace for employees and minimize potential impact i.e air, water, soil, noise on the environment. They will operate in compliance with all relevant environmental legislation and strive to use pollution prevention and environmental best practices. The lessee will:-

- Comply with applicable environmental laws and regulations at all time; at all locations and at all stages of exploration, development, operations and reclamation.
- Incorporate sound environmental management practices in all our activities.
- Conduct our operation in an environmentally responsible manner to comply with applicable legal and other requirement related to its environmental aspect and endeavor to go beyond.
- Strive for continual improvement in our environmental performance by measuring progress, taking corrective actions and communicating all information to concerned authorities under the guidance of NABET Accredited consultants.
- To encourage green belt development for the areas allotted in nearby areas of the mine lease.
- Data analysis from NABL accredited lab for its authentication.
- Ensure that all employees and contractors are aware of their environmental responsibilities and create an environment that adheres to the Company's Policies, procedures and applicable regulations.
- Encourage our business associates to adopt similar approach for environmental protection

6.10 CONCLUSION

Post Environmental monitoring is an essential step in the EIA process if the predicted impacts, the efficiency of mitigation measures and the shortcomings of prediction methods, measures and even regulations are to be verified and EIA practice improved. Environmental indicators could contribute to designing and evaluating monitoring programs, thus improving establishment of the cause effect relationship and the reporting and communication of environmental data.

The Environmental Monitoring Cell will co-ordinate all monitoring programs at site and data thus generated will be furnished as per statutory requirements. The frequency of reporting will be on half yearly basis to the J&K State Pollution Control Board and to Regional Office of MoEF&CC, Jammu and Kashmir. The Environmental audit reports will be prepared for the entire year of operations and will be regularly submitted to regulatory authorities.

CHAPTER-7
ADDITIONAL STUDIES

CHAPTER-7

ADDITIONAL STUDIES

7.1 INTRODUCTION

Public hearing is a mandatory requirement laid down as per Govt. of India, Ministry of Environment and Forests (MoEF& CC) Notification No. SO 1533 dated 14th September, 2006.

7.2 HAZARD IDENTIFICATION

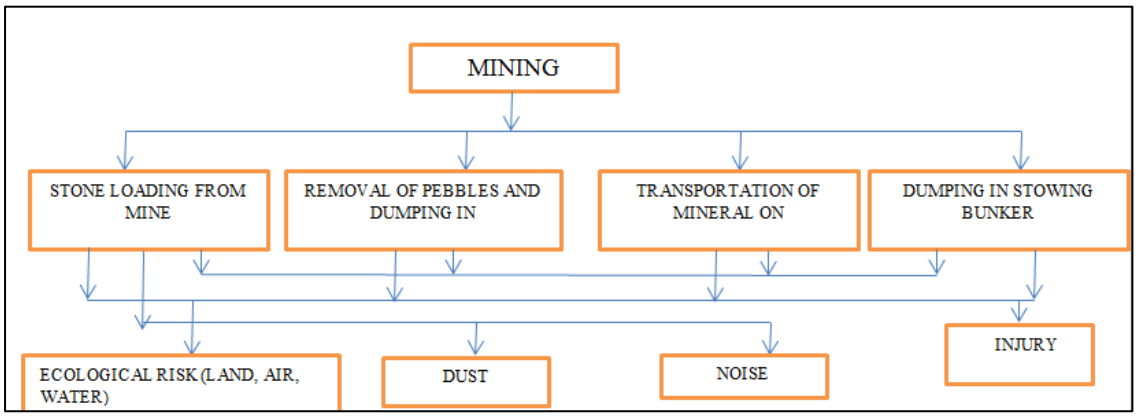


Figure 7.1: Identification of Hazard in Mine

7.2.1 Types of Hazard Identified: There are various factors, which can create disaster in stone mine. The main hazards identified are as follows:

- Slope Failures in open pit.
- Solid waste generations, their disposal and rehabilitation.
- Inundation-Filling of the mine pit due to excessive rains/flooding.
- Slope failures at the mine faces.
- Accident due to fire.

7.3 RISK ASSESSMENT AND DISASTER MANAGEMENT PLAN

Risk assessment is based on the philosophy that "Prevention is better than cure". Mining operations may be carried to the utmost safety but there is always some element of danger or risk in it. No major disaster is envisaged. Only minor accidents may take place. The applied area is plain. No perennial source of surface water is present in the ML area. The mining operations will be carried out under supervision of statutory personnel's as per provisions of MCR 1960, MCDR 2017, Mines Rules 1955, Mines Act 1952 & strictly following safety aspects as per MMR 1961 monitored by Directorate General of Mines safety.

The complete mining operation will be carried out under the management control and direction of a qualified mine manager. The DGMS have been regularly issuing standing orders, model standing orders and circulars to be followed by the mine management in case of disaster, if any. Moreover, mining staff will be sent to refresher courses from time to time to keep them alert. However, following natural/industrial hazards may occur during normal operation.

- Accident due to explosives;
- Accident due to heavy mining equipment; and
- Sabotage in case of magazine.

In order to take care of above hazard/disaster, the following control measures will be adopted:

- All safety precautions and provisions of Mine Act,1952, Metalliferrous Mines Regulation, 1961 and Mines Rules,1955 will be strictly followed during all mining operations;
- Entry of unauthorized persons will be prohibited;
- Fire fighting and first-aid provisions in the mines office complex and mining area;
- Provisions of all the safety appliances such as safety boot, helmets, goggles etc. will be made available to the employees and regular check for their use;
- Training and refresher courses for all the employees working in hazardous premises.

Table 7.1 Risk Assessment and its Management Plan

S.No.	Source	Mitigation
1	**Mining Machinery and Loading operation**	
a.	**Heavy Machinery**	➢ At the time of loading no person will be there within the swing radius of the excavator; ➢ The dumpers/ trucks will stand near the loading equipment and fully braked when the muck is filled in it; ➢ The truck would be brought to a lower level so that the loading operation suits to the ergonomic condition of the workers; ➢ The workers will be provided with helmets, gloves and safety boots; ➢ Operations during daylight only; ➢ All the mining machineries will be regularly maintained and checked to keep in the efficient working order;
b.	**Vehicular Movement**	➢ The mine working will be carried out directly under the supervision and control. The truck will be covered with tarpaulin and maintained to prevent any spillage. ➢ The vehicles must be maintained in good repairs and checked thoroughly at least once in a week. ➢ Overloading should not be permitted and the maximum permissible speed limit should be ensured. ➢ The truck drivers should have proper driving license. ➢ A statutory provision of the fences, constant education, training etc. will go a long way in reducing the incidents of such accidents.
2	**Bench stabilization**	➢ Opencast working will be done as per Regulation 106 of MMR 1961. ➢ Ultimate slope angle will be 45°. ➢ Bench height should not be more than the digging height of the shovel. The width of the bench should not be less than the height. ➢ The loose rock adhering to high wall should be dressed under the guidance of competent person. ➢ Retaining parapet wall on bench edge to prevent fall of man and machinery. ➢ Every entrance from a roadway in the mine temporarily discontinued will be provided with a fence, barrier or gate to prevent any unauthorised entry. ➢ The top of every opencast working shall be kept securely fenced.

		➢ The slope of the sides of the OB dump to the horizontal will not exceed 30^0, and the average height of the OB dumps would be 3m;

7.4 OCCUPATIONAL HEALTH HAZARDS

The working conditions in the mines are governed by the enactments of the Director General of Mines Safety (DGMS). As per the guidelines of the Mines Act, the management will take all necessary precautions.

Table 7.2Work Related Health Hazards

S. No.	Hazardous Activities	Type of Hazards	Severity of Injury
1	Drilling	Exposed to high level of Noise	Hearing impairment
		Exposed to dusty environment	Respiratory diseases
2	Loading	Struck by rolling big boulders	Serious injury, and equipment damage
		Struck by fall of objects	Serious Physical injury
3	Transportation	Accidental runaway of vehicle	Serious injury, and equipment damage
		Fall of vehicle from height while reversing	
		Exposed to high level noise	Hearing impairment
		Fire in engine due to over heating	Serious Physical injury
4	Welding, gas cutting	Emission of gases & fumes	Asphyxiation
		Release of radiation & light	Eye injury
		Fire	Burns
		Release of heat	Skin problem, Burns
5	Storage of oil, lubricant	Leaks and spills	Fire & vigorous chemical reaction
6	Battery maintenance handling	Acid spillage	Acid burns
7	Use/repair of hydraulic jacks & pumps	High pressure operation	Physical injury
		Oil spillage	
		Rupture of hydraulic hoses	

7.4.1 Mitigation:

In order to evaluate the impacts from stone mining project activities on health of workers, baseline health studies will be conducted on every worker before joining their duties.

- ❖ Identifying workers with conditions that may be aggravated by exposure to dust & noise and establishing baseline status for determining changes in health
- ❖ Evaluating the effect of dust and noise on workers
- ❖ Enabling corrective action to be taken when necessary
- ❖ providing health education and awareness
- ❖ The medical surveillance program will consist of the following:
- ❖ Pre-employment medical examinations
- ❖ Periodic medical examinations
- ❖ Health & Safety awareness and training
- ❖ Record keeping

- ❖ All workers will be subjected to pre-employment and periodic awareness program on health and safety issues of stone mining and related activities.

7.5 EMERGENCY PREPAREDNESS PLAN

In order to take care of above hazards/disasters the following measures have been envisaged.

- Checking and regular maintenance of garland drains will be taken to avoid any in flow of surface water into the mine pit.
- Provision of suitable capacity pumps for pumping out water from mining pit.
- Regulation 1961 will be strictly followed during all mine operations.
- Entry to unauthorized persons will be prohibited.
- Provision of all safety appliances such as safety boots, helmets Goggles etc. to the employees and regular check for their use.
- Training and refresher courses for all employees working in hazardous places.
- Working of mine, as per approved plans and regularly updated.
- Cleaning of mine faces will be regularly done.
- Regular maintenance and testing of all mining equipment as per manufacturer's guidelines.
- Suppression of dust on haulage roads.
- Increasing the awareness of safety and disaster through competitions, posters and other similar drives.

As a part of disaster management, a rescue team is formed by imparting specialized training to select mining staff.

7.5.1 TRAINING

The training of mine personnel is conducted regularly with respect to environmental protection. Training facilities are also extended to equipment maintenance and operation also to the operators. Training will cover the following fields.

- ➢ Awareness regarding pollution control and environmental protection.
- ➢ Operation and maintenance of pollution control equipment.
- ➢ Afforestation / plantation and post care of plants.
- ➢ Field monitoring, maintenance and calibration of pollution monitoring instruments.
- ➢ Chemical analysis of various environmental parameters at laboratory.
- ➢ Repair of pollution monitoring instruments.
- ➢ Knowledge of norms, regulations and procedures.
- ➢ Occupational health and safety.
- ➢ Risk assessment and disaster management plan.

7.6 IMPLEMENTATION OF EMP AND MONITORING SYSTEM

Various measures have been proposed to implement for mitigating the adverse impacts due to mining on the environment in the area. A separate wing “Environmental Management Cell (EMC)” will be formed to look after the inspection / monitoring requirements. The mine management will undertake the control measures in coordination with the State Forest Department, Regional UPPCB and Environmental consultant. The management of environment shall be made an integral part of the major activities of mining.

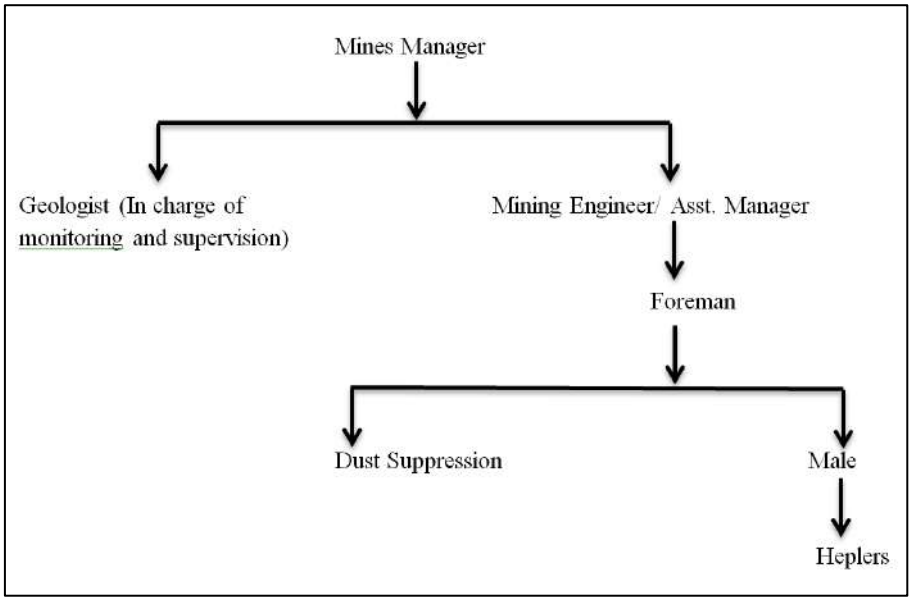


Fig.7.2 Organisational setup of EMC

Important records to be maintained by EMC are:

- Field monitoring results for air, water, meteorology
- Inspection records of slope failure, land erosion, drainage, socio-economic development.
- Format to record / monitor plantation measures.
- Environmental and related standards / norms.
- Records pertaining to statutory consents, approvals
- Code of actions for population control in identified areas.
- Periodic medical examination (PME) records.
- Complaint register (environmental pollution)
- Records on water and electricity consumption
- Periodic progress records
- Environmental audit records
- Records of annual budgetary requirement and allocation for pollution control.

7.7 ACTIVITIES TO BE MONITORED / INSPECTED BY EMC

7.7.1 Slope failure

Regular examination will be carried out to look after for slope failure on open cast mine faces, ore and over burden benches etc. Any abnormal condition, if observed will be brought to the notice of concerned department. Survey team shall also monitor mine face with precision level instruments.

7.7.2 Land erosion

Regular observations during the rainy season for checking land erosion will be made in back filled areas / hill slopes.

7.7.3 Drainage

The effectiveness of drainage system depends upon proper cleaning of all drains and sumps. Any blockage due to silting or accumulation of loose materials will be checked on a regular basis. Stone pitching, brick mounds etc. on drains shall also be monitored.

7.7.4 Green belt development

Planned schedule for green belt development will be checked after every year and improvement required will be implemented. Post plantation status will be regularly checked in every season. Phase wise development in the areas of plantation including rate of growth, survival rate etc. will be recorded systematically.

7.7.5 Air quality monitoring

PM2.5, RPM, NOx and SO_2 will be monitored every month in both core and buffer zones as per the MPPCB directions.

7.7.6 Water quality monitoring

Surface runoff during rainy season will be monitored for pH, TDS, SS and SO_4^{-2} contents. Ground water quality is monitored seasonally for the above parameters also.

7.7.7 Occupational health

Each group of mine workers undergo regular medical check-up at regular intervals by specialist doctors.

7.7.8 Socio-economic development

As a part of the social responsibilities, the project proponent will take up the following peripheral developmental works.

- Encouraging entrepreneurship among locals by vocational training.
- Upgrading one primary school.
- Health camps
- Distribution of school uniforms and books to needy students
- Cultural activities in the villages
- Provision or free Transportation of patients
- Preferential employment to the local people depending upon their qualification and suitability of post.

7.8 SOCIO-ECONOMIC ASSESSMENT OF THE STUDY AREA

7.8.1 Introduction

An essential part of environmental study is socio-economic environment incorporating various facts related to socio-economic conditions in the area, which deals with the total environment. Socio economic study includes demographic structure of the area, provision of basic amenities viz., housing, education, health and medical services, occupation, water supply, sanitation, communication, transportation, prevailing diseases pattern as well as feature of aesthetic significance such as temples, historical monuments etc. at the baseline level. This would help in visualizing and predicting the possible impact depending upon the nature and magnitude of the project.

Socio-economic study of an area provides a good opportunity to assess the socio-economic conditions of an area. This study will possibly make a change in living and social standards of the particular area benefitted due to the Project. The gross economic production of the area will be increased substantially due to the existence of this project. It can undoubtedly be said that this project will provide direct and indirect employment and improve the infrastructural facilities and standards of living of the area.

7.8.2 Objectives of the Study

The objectives of this socio-economic report consist of:

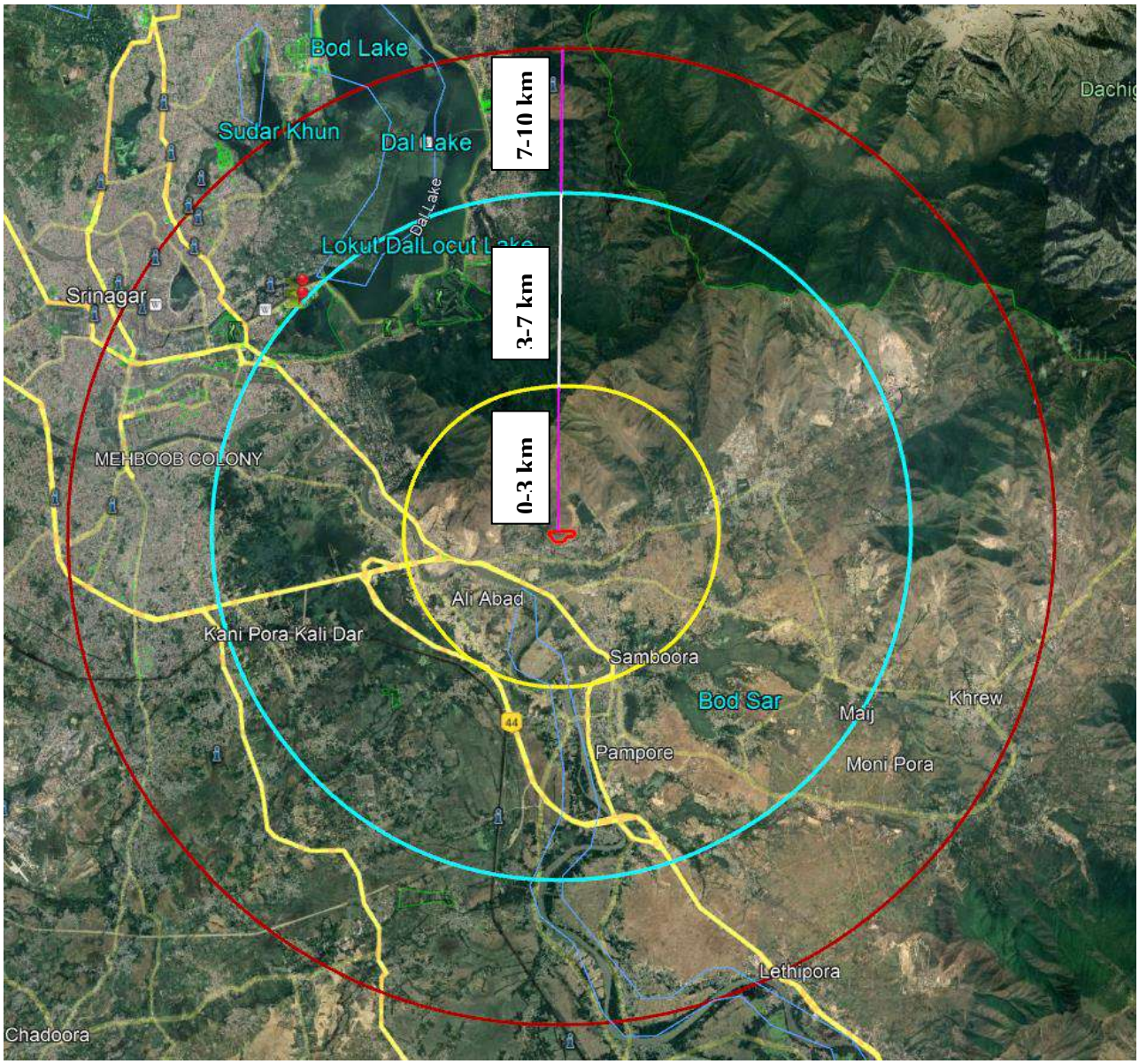
- To conduct socio-economic assessment study in Project Area.
- To know the current socio-economic situation in the region to cover the sub sectors of education, health, sanitation, and water and food security.
- To recommend practical strategic interventions in the sector.
- To help in providing better living standards.

7.8.3 Scope of Work

- To study the Socio-economic Environmental of area from the secondary sources,
- To conduct socio-economic survey for primary data collection and to know the current socio-economic situation in the region to cover the sub sectors of education, health, sanitation, and water and food security,
- Developing a questionnaire for survey,
- Prediction of project impact and mitigation measures,
- To recommend practical strategic interventions in the sector.

7.8.4 Baseline Data & Analysis

The socio economic study includes data collection on Demography, Education, Medical & Health, Occupation, Agriculture & Cropping pattern, Basic Amenities and Religious Rituals details. The primary study was conducted within 10 km radius study area from the project site. The study area was categorized on the basis of the distance of the villages from project site. Primary zone was identified from 0 to 3 km radius area, Secondary zone in 3-7 km and Outer zone in 7-10 km radius area from the project site. Village specific information were collected from the data of census 2011 and the secondary information collected from various government departments like health department, agriculture department, IMD etc.



Google Map Showing 3km , 7Km and 10Km Radius of the Project Site.

7.8.5 Demography

The population as per Census 2011 records is 226882 (for 10 km radius buffer zone). As per Census 2011 records, Sex ratio is 865 (females per 1000 males) observed in study area, Total SC & ST population is 234 & 6846, respectively in the study area. Literacy rate is 55.35% in the study area. Demographic Profile of the area given in Table No 7.3.

Table: 7.3

Demographic Profile of the Area

Name of Village	No of Household	Total Population	Total Male Population	Total Female Population	Sex Ratio	Total Population SC	Total Population ST	Literacy Rate (%)	Male Literacy Rate (%)	Female Literacy Rate (%)	Total Working Population	Total Main Worker Population	Total Non Worker Population
0 -03 km data													
Zewan	475	6705	4991	1714	343	86	171	73.15	61.67	11.48	4162	4108	2543
Sear Bagh	41	313	170	143	841	0	0	49.20	29.07	20.13	64	60	249
Bagh Shokr Shah	47	327	147	180	1224	0	0	53.21	29.66	23.55	73	69	254
Zooni Pora	69	523	258	265	1027	0	0	50.48	26.96	23.52	140	124	383
Rakh Shalina	424	2955	1537	1418	923	0	0	48.97	29.58	19.39	831	400	2124
Sumer Bogh	676	3262	1661	1601	964	0	0	45.55	25.54	20.02	848	791	2414
Sambora	760	4889	2465	2424	983	0	0	56.27	33.83	22.44	1818	1191	3071
Gopal Pora	511	2960	1509	1451	962	0	19	61.79	35.30	26.49	1071	522	1889
Sempora	99	867	464	403	869	0	0	45.56	27.57	17.99	224	222	643
Sub Total	**3102**	**22801**	**13202**	**9599**	**727**	**86**	**190**	**58.79**	**39.95**	**18.84**	**9231**	**7487**	**13570**
03 - 07 km data													
Zawarah	204	1323	662	661	998	0	0	50.26	31.90	18.37	303	300	1020
Soiteng	425	2362	1211	1151	950	0	0	50.89	29.59	21.30	672	655	1690
Lasjan	876	5281	2645	2636	997	0	0	60.31	34.27	26.04	1531	1106	3750
Ganderbal	1316	9654	5617	4037	719	39	427	54.03	37.63	16.40	4156	2891	5498
Kursu Padshahi Bagh (Partly)	248	1411	716	695	971	0	0	64.28	36.78	27.50	415	390	996
Khonmoh	1116	8307	4729	3578	757	0	2	45.19	32.26	12.93	2847	2718	5460
Khonmoh (CT)	216	2664	2017	647	321	39	12	75.56	63.85	11.71	1875	1660	789
Maij	260	1759	917	842	918	0	53	49.80	29.96	19.84	525	297	1234
Bagh Anayat Ullah	21	141	66	75	1136	0	0	57.45	30.50	26.95	41	4	100
Befroo (Drangah Bal)	133	903	448	455	1016	0	0	55.92	31.23	24.70	438	27	465

Lal Pora (Chatdam)	235	1434	731	703	962	0	0	42.54	24.83	17.71	615	145	819
Pampore	9325	60613	31654	28959	915	28	1229	53.95	33.27	20.68	22631	11905	37982
Woyan	932	5874	2933	2941	1003	0	0	55.82	32.65	23.17	1833	1103	4041
Patal Bag	450	2639	1305	1334	1022	0	5	44.52	25.46	19.06	773	484	1866
Gulab Pora (Sathoo Khatr Bagh)	231	1568	792	776	980	0	15	60.78	34.57	26.21	410	252	1158
Kani Pora Kali Dar	134	810	399	411	1030	0	0	57.65	32.47	25.19	251	126	559
Check Pora Kalan	245	1568	791	777	982	0	0	46.11	27.81	18.30	457	298	1111
Gogi Bagh	27	189	90	99	1100	0	0	44.44	23.81	20.63	40	38	149
Gulab Bagh (Zangi Bagh)	78	497	283	214	756	0	0	20.72	13.68	7.04	120	111	377
Wangi Pora	38	298	150	148	987	0	0	60.07	32.89	27.18	93	75	205
Shahzab Pora (Dangar Pora)	138	828	419	409	976	0	0	53.14	33.21	19.93	338	171	490
Chinar Bagh (Puhroo)	759	5248	2687	2561	953	0	0	47.22	27.95	19.26	1412	805	3836
Gund Check Pora	109	621	322	299	929	0	0	54.11	33.66	20.45	197	145	424
Wagora	467	3200	1669	1531	917	0	35	51.50	32.78	18.72	1274	432	1926
Shalina	257	1868	940	928	987	0	0	44.54	26.50	18.04	435	291	1433
Gangi Pora	184	1244	607	637	1049	0	0	48.31	27.97	20.34	296	252	948
Khuthi Pora	133	953	483	470	973	0	0	35.57	20.25	15.32	288	119	665
Goniwar (Magen Wagi)	123	1057	551	506	918	0	0	60.45	34.15	26.30	313	202	744
Check Fati Din	38	297	174	123	707	0	0	60.61	35.69	24.92	64	49	233
Bagati Kani Pora	694	4071	2028	2043	1007	0	0	67.77	37.12	30.66	1336	925	2735
Badami Bagh	3074	18923	11516	7407	643	42	6	75.66	50.91	24.75	8876	8380	10047
Sub Total	**22486**	**147605**	**79552**	**68053**	**855**	**148**	**1784**	**56.40**	**35.59**	**20.81**	**54855**	**36356**	**92750**
07 - 10 km													

Khrew	1078	7166	3661	3505	957	0	0	50.50	31.59	18.91	2126	1775	5040
Sangri	1013	5558	2917	2641	905	0	4608	18.26	12.25	6.01	4543	982	4576
Bagh-i-Mehtab	1169	6297	3152	3145	998	0	5	78.35	41.21	37.14	2219	1774	4078
Zinetrag	117	616	315	301	956	0	0	55.68	37.34	18.34	380	142	236
Moni Pora	137	983	491	492	1002	0	0	47.51	27.77	19.74	345	146	638
Khani Bal	358	2486	1233	1253	1016	0	0	54.83	31.38	23.45	902	641	1584
Androsa	166	1058	517	541	1046	0	0	54.16	30.06	24.10	667	251	391
Gund Bal	89	616	314	302	962	0	0	60.23	34.90	25.32	297	66	319
Ledhu	823	4604	2334	2270	973	0	259	55.86	33.32	22.55	1339	739	3265
Chanda Haro	520	3551	1841	1710	929	0	0	55.96	33.06	22.89	1287	545	2264
Alchi Bagh	95	799	418	381	911	0	0	55.57	32.67	22.90	257	180	542
Ban Gund	121	759	379	380	1003	0	0	34.12	18.18	15.94	159	13	600
Hani Pora Chatina Hama	352	2106	1065	1041	977	0	0	47.91	29.25	18.66	462	269	1644
Wanpora	117	742	371	371	1000	0	0	45.69	26.95	18.73	196	136	546
Nihama	407	2438	1224	1214	992	0	0	55.99	32.90	23.09	549	415	1889
Marhwal	208	1285	655	630	962	0	0	50.19	29.42	20.78	325	191	960
Loli Pora	58	402	217	185	853	0	0	38.31	21.64	16.67	144	59	258
Okhoo	215	1152	593	559	943	0	0	45.14	26.56	18.58	333	64	819
Suthoo Kalan	220	1520	781	739	946	0	0	45.53	28.42	17.11	425	308	1095
Sonzi Pora	226	1468	798	670	840	0	0	51.70	33.31	18.39	538	392	930
Chatar Gam	670	5596	2957	2639	892	0	0	49.80	30.31	19.50	2048	870	3548
Khanda	518	3330	1690	1640	970	0	0	52.22	30.90	21.32	840	434	2490
Check No.2(Badri Nath)	150	886	453	433	956	0	0	41.08	25.51	15.58	227	146	659
Rawal Pora	129	1058	535	523	978	0	0	56.24	33.36	22.87	276	262	782
Sub Total	**8956**	**56476**	**28911**	**27565**	**953**	**0**	**4872**	**51.20**	**30.24**	**20.96**	**20884**	**10800**	**39153**
Grand Total	**34544**	**226882**	**121665**	**105217**	**865**	**234**	**6846**	**55.35**	**34.69**	**20.65**	**84970**	**54643**	**145473**

7.8.6 Vulnerable Group

While developing an Action Plan, it is very important to identify the population who fall under the marginalized and vulnerable groups and special attention has to be given towards these groups while making action plans. Special provisions should be made for them. In the observed villages schedule caste (S.C.) population is 0.10% and Schedule Tribe population 3.02 % in study area. 96.88 % population observed as others.

Table SC, ST Population in observed village

S. No.	Particular	Details of observed Villages
1.	Total Population	226882
2.	Total SC Population	234
3.	% of SC Population	0.10 %
4.	Total ST Population	6846
5.	% of ST Population	3.02 %
6.	Others Population	219802
7.	% of others	96.88 %

7.8.7 Literacy Rate

Literacy Rate is the amount of people in a country with the ability to read and write. The analysis of the literacy levels is done in the study area. The 10 km radius study area demonstrates a literacy rate of 55.35% as per survey data. The male literacy rate in the study area works out to be 34.69% whereas the female literacy rate, which is an important indicator for social change, is observed to be 20.65% in the study area. This indicates that there is a need to focus in sociological aspect in the region and enhance further development.

In the present study, Male and Female literacy rate of villages are varying place to place. Although Female literacy rate in the region is coming out very low as compared to male. Literacy is one of major issue to focus in the study area and also try to reduce the difference between male and female literacy rate.

7.8.8 Economic Activity

The economy of an area is defined by the occupational pattern and income level of the people in the area. The occupational structure of residents in the study area is studied with reference to work category. The population is divided occupation wise into three categories, viz., main workers, marginal workers and non-workers. The main workers include cultivators, agricultural laborers, those engaged in household industry and other services.

The marginal workers are those engaged in some work for a period of less than 180 days during the reference year. The non-workers include those engaged in unpaid household duties like, students, retired persons, dependents, beggars, vagrants etc. besides institutional inmates or all other non-workers who do not fall under the above categories.

The percentage of total working population and non-working population is 37.45% and 64.12% respectively of whole population of observed villages. As per the analysis of all the villages the ratio of non-working population is more than working population.

7.8.9 Various Sources

The Income & Expenditures of an area is defined by the occupational pattern and income level of the people in the area. The occupational structure of residents in the study area is studied with reference to income sources. Most of the people are involved in agriculture and wage labor as occupational

pattern, while some are earning from government services, private business, poultry farming etc. for livelihood in study area.

7.8.10 Agriculture & Cropping Pattern

Most of the villagers are involved in agricultural activities. Apart from agricultural activities they also work as wage labour to earn livelihood. In these areas cropping pattern is based on the two season crops- Rabi and Kharif. But mostly villagers start their agriculture activities in rainy season. Some villagers sow their crops in both seasons. These farmers sow crops like wheat, rice, maize, Vegetables and Saffron etc.

7.8.11 Basic Amenities

A better network of physical infrastructure facilities (well-built roads, rail links, irrigation, power and telecommunication, information technology, market-network and social infrastructure support, viz. health and education, water and sanitation, veterinary services and co-operative) is essential for the development of the rural economic.

A review of infrastructure facilities available in the area has been done based on the information from base line survey of the study area. In this review, the villages which fall within 10 Km radius round the site has been considered. Infrastructure facilities available in the area have been described in the subsequent sections as below:

i) Educational facilities

As per the census of 2011, there is no college in the 10 km zone of study area. In observed villages there are 98 primary schools, 53 Middle Schools, 14 Secondary Schools and 3 Sr. Secondary School. Education facilities are good in the observed area.

ii) Health facilities and services

Health facility refers to any place where health facility is provided. Health facility ranges from small clinics to big hospitals consisting of emergency rooms and trauma centers. The number and standard of health facilities is a measure to validate prosperity and quality of life in that area. Health facilities in study area are tabulated in Table.

Table 7:4 Availability of health centers in study area

Distance	Community Health Centre	Primary Health Centre	Primary Health Sub Center	Mobile Health Clinic	Hospital Alternative Medicine
0-3 km	1	3	2	0	0
3-7 km	0	4	3	0	0
7-10 km	1	3	2	0	0
Total	**2**	**10**	**7**	**0**	**0**

iii) Water facilities

Table 7:5 Water facilities in study area

Distance	Tap Water Untreated	Covered Well	Uncovered Well	Hand Pump	Tube Wells /Borehole	Spring	River/Canal	Tank/Pond/Lake
0-3 km	Available	Available	Available	Available	Available	NA*	Available	NA*
3-7 km	Available	Available	Available	Available	Available	Available	Available	Available

7-10 km	Available	Available	Available	Available	Available	Available	Available	Available

*** NA- Not available**

iv) Communication Facilities

Table 7:6 Communication Facilities in study area

Description	Units
Post Offices	13
Sub Post Offices	6
Telephones (Land lines)	42

v) Transportation facilities

Table 7:7 Transportation facilities in study area

Description	Units
Bus service (Public & Private)	37
Railway stations	2

7.8.11 Mitigation Measures

As the negative impacts on society are insignificant hence no specific mitigation measures are envisaged for demography and socio-economic environment. Health and safety of the workers will be ensured during mining operation by making effective provisions for the basic facilities of sanitation, drinking water, safety of equipment or machinery etc. The following recommendations will be followed:

- Site services have been provided as per the provisions of Mines Act 1952, MMR 1961
- Clean drinking provided to all the workers.
- Adequate number of decentralized latrines and urinals will be provided to mine workers.
- All parts of dangerous machinery will be guarded.
- Protective equipment's like helmets etc. will be provided to the workers.
- A well-laid plan for employment of the local people will be prepared by giving priority to local villagers.
- Social welfare programme like provision of medical facilities educational facilities, water supply, recreational amenities for the employees as well as for nearby villagers.

CHAPTER: 8
PROJECT BENEFITS

8.1 BENEFITS OF MINING

The Company will undertake activities for the up liftmen of the social community through community development in various ways as under:

- **Education**
  - Promotion of education programs
- **Water**
  - Awareness programs on safe drinking water.
  - Facilities for School (Drinking Water)
- **Health**
  - An ambulance at the mine site
  - Periodic medical check-up of employees
  - Preventive medical care for rural population shall be promoted.
  - Awareness to improve health and hygiene standards.
- **Employment Generation**
  - Besides direct employment by the mine, indirect employment will also be generated. Preference will be given to the local population for employment based on their educational qualifications and experience.
- **Others**
  - Supplementing Government efforts in health monitoring camps, social welfare and various awareness programs among the rural population.

8.2 PROJECT SCHEDULE& COST ESTIMATES:

The project cost is about Rs. 97.33 Lakhs as all the Equipments will be required for Mining & hence, will be taken on rent. There is built in profit margin, therefore, proposed project will be economically viable.

Table 8.1: Project Cost along with analysis in terms of Economic Viability of the Project

S. No.	Description	Unit	Capital Cost (in Lakhs)
A. Project Operation Cost			
1.	Manpower Cost:	(Total Man power 34) Assuming 300 days	
	Mine Engineer (Full time) -01	(Full time – 10 Months)	52,50,000
	EHS officer -01	Rs. 25,000/ Month =30,0000	
	Skilled -07	Rs. 35,000/ Month = 42,0000	
	Semiskilled - 09	Rs. 600/day= 1,80,000 x 07 = 12,60,000	
	Unskilled: Laborers - 16	Rs. 500/day=1,50,000 x 09 = 13,50,000	
		Rs. 400 /day= 1,20,000 x 16 = 1,92,0000	

2.	Expenditure on Occupational Health: PPE & First Aid Facility Medical checkup and Medicine	3000/worker (3000 x 34)= 102,000 *Doctor's visit*: 10,000/ month (10 working months) = 10,0000 *Medicines* (Assuming 500/worker) 500 X 34 x 10 = 17,0000	3,72,000
3.	Equipment's/Tools/Machineries	300 days Assuming Rs.5000/day	15,00,000
4.	Drinking and Sanitary Facilities	➢ Rs. 2000/day for drinking/domestic (300 days) = 600000 ➢ Rs. 30,000/ Bio-toilets x 3=90000	5,90,000
	Total Project Operation Cost (A)		**Rs. 77,12,000**
B. Break-up of Expenditure on Environment Monitoring Programme (In lakhs) : Annual			
1	Air Quality:	@20000 x 8	1,60,000
2	Water Quality	@ 10000 x 10	1,00,000
3	Ambient Noise Level	@ 10000 x 8	80,000
4	Soil Quality	@10000 x 8	60,000
5	Socio economic condition of local population, Physical Survey	-	80,000
6	Inventory of flora and funna (Biodiversity survey and conservation)	-	80,000
	TOTAL		**5,80,000**
C. Break-up of Expenditure on Environment Protection & Environment Management			
1.	Haulage Road Repair & Maintenance	Annual (570 m L X 7 m W) @100/sqm.	39,90,00
2.	Water Sprinkling on Haulage Road for Dust Suppression	Assuming Rs. 2000/day for 300 days of working Tanker Cost: Rs. 1000/Tanker (Need of Tanker: Twice in a day) Tanker Capacity: 5000 liter, No. of Tankers required: 1	60,00,00
3.	Plantation along the road side & post plantation care	Plantation@500/sapling (446 sapling)= 223000 Maintenance & Plantation Care@ Rs.600/day(365 days)=2,19,000 *Note: Annual cost will increase with increase in no. of sapling.*	4,42,000
	Total Environment Protection & Management Cost (C)		**Rs. 14,41,000**
	Total Project Cost (A+B+C)		**Rs. 97,33,000 Rs. 97.33 Lakhs)**

Corporate Environment Responsibility (CER)

- Total Cost of the Project = 97.33 Lakhs
- 5 % of the total Project Cost will be expended towards CER i.e. 4.87 Lakhs

As Per The G.O.I Notification, File No. 22-65/2017-I A, III dated on 1st May, 2018

Table 8.2 Budget for Corporate Environment Responsibility

This is the Proposed cost CER Plan, Activities and actual cost will be Finalized as per the Actual need of the area. (ON THE BASIS OF NEED BASE ASSESSMENT SURVEY)				
S. No.	**Activity**	**Cost per Unit (Rs)**	**Quantity**	**Total (Rs)**
1.	Solar street light Installation in rural areas	15,000	15	2,25,000
2.	Toilets for women nearby primary school	60,000	3	1,80,000
3.	Awareness Program on Personal Hygiene (COVID 19) and distribution of Mask and Sanitizers	82,000	-	82,000
	Total Proposed CER Cost			**4,87,000 (4.87 Lakhs)**

CHAPTER- 09

ENVIRONMENTAL COST BENEFIT ANALYSIS

9.0 PROJECT COST:

Project cost for the Proposed Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- 147, Area- 8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K is Rs. 96.93 Lakhs.

Table-9.1: Project Cost and Benefit

Major Heads	Total
Production Activity	1,50,000 MT/Annum

9.1 ENVIRONMENT COST ANALYSIS AND PROJECT IMPLEMENTATION:

The Environment cost for this proposed mining includes Environmental Management Plan, Corporate Environment Responsibility, Occupational Health and Safety. The detailed cost of Environmental Expenses is given below in the Table 9.2.

Table- 9.2: Environmental Cost Analysis

S.No.	Major Heads	Expenses (Rs.)
1	**Corporate environment responsibility**	Rs. 4.84 Lakhs
2	**Occupational Health and Safety**	Rs. 3.72 Lakhs
3	**Ecology and Biodiversity**	Rs. 0.80 Lakhs
4	**Environmental Management Plan**	Rs. 14.41 lakhs

From the above table it is clear that **total cost of project Operation is more than Environment Management Cost so the project is viable and feasible for the current project location.**

CHAPTER 10
ENVIRONMENTAL MANAGEMENT PLAN

10.0 INTRODUCTION

To mitigate the adverse impacts which are likely to be caused due to the mining operation and overall scientific development of local habitat, environmental management plan (EMP) has been formulated and integrated with the mine planning.

The assimilative capacity of the study area is the maximum amount of pollution load that can be discharged in the environment without affecting the designated use and is governed by dilution, dispersion and removal due to physico-chemical and biological processes. The EMP is required to ensure sustainable development in the study area of 10 Km radius of the proposed mining site; hence it needs to be an all encompassive plan for the proposed activity. Government regulating agencies like Pollution Control Board working in the region and more importantly the people living in the study area need to extend their co-operation and contribution.

10.1 POLLUTION CONTROL MEASURES

10.1.1 Air Pollution Control

The proposed mining operations are not anticipated to raise the concentration of the pollutants beyond prescribed limits. However, the following measures would be adopted to mitigate the pollution levels in ambient air.

Air pollution caused as above can be classified into the following categories:

- Gaseous pollutants (Nitrogen Oxides, Sulphur Dioxide and Carbon Monoxides); and
- Particulate Matter

10.1.2 Controlling of NO_2 levels

The source of NO_2 would be due to vehicular emissions. This can be controlled by proper maintenance and servicing of vehicles.

10.1.3 Control Measures of air pollution

- Water will be sprayed over the muck pile and dumps to reduce the dust generation.
- Dust masks will be provided to all workers.
- Regular spraying of water by tanker fitted system over haulage and village roads will be proposed.
- Good plantation has been developed along the mining lease boundary and along the haul roads.
- Periodic maintenance of haulage and village road.
- Regular maintenance of vehicles and machinery's to control emissions.
- Use of wet drilling method to reduce the dust emission

10.1.4 TRAFFIC ENVIRONMENT

Impact	Mitigation Measure
No. of 50 PCU/hr will increase due to mining in existing traffic scenario lead to air pollution which can cause adverse effect on human health of neighboring villagers like effect on	Vehicles with PUC Certificate will be hired. Regular maintenance of vehicles will be done to ensure smooth running of vehicle. It is proposed to plant 446 no. of local

breathing and respiratory system, damage to lung tissue, cancer and premature death, influenza or asthma. Vehicle collation may occur unwanted sound and can also cause impact on human health.	species per year with consultation of Forest Department, with some fruit bearing and medicinal trees, along the haul roads, outer periphery within the lease area to prevent the impact of dust in the nearby village.
Accidents may be occurring due to fast movement of vehicles.	To avoid accidents the speed of vehicles will be low near habitation areas.

10.2 NOISE ENVIRONMENT

There are a number of sources from which high noise level is generated, some continuously and some intermittently. Intermittent noise is also generated during un-loading and loading operations. Ambient Noise level monitoring in and around core zone of the mining lease area reflects that at locations near to mining activity/roads, noise levels are within the standards prescribed. The working environment in the mines satisfies the standards prescribed by OSHA.

10.2.1 The following control measures shall be taken to keep the ambient noise levels well within Limits:

- Use of personal protective devices i.e., earmuffs and earplugs by workers, working in high noise areas.
- The greenbelt with species of rich canopy in the lease area at suitable places and along the roads will further attenuate the noise levels.
- Conducting periodical medical check-up of all workers for any noise related health problems
- Proper training to personnel to create awareness about adverse noise level effects.
- Planned noise monitoring at suitable locations in the mine and outside location for proper effective remedial actions.
- Minimum use of horns and speed limit of 10 km/h
- Timely maintenance of vehicles and their silencers to minimize vibration and Sound.

10.3 WATER ENVIRONMENT

No surface water course exists in the area therefore there will be no effect of mining on the water regime. The area falls in moderate ground water potential zone. The mining Bench Level is proposed Highest Bench Level : 1775 m and Lowest Bench Level : 1640 m from upper hillock or over burden. Thus ground water table is not expected to disturbed due to mining. There will be a pit due to mining activity. Water will be filled into mining pits during rainy season. This water will be pumped back before start of production. The pumped out water will flow on the basis of topography

10.3.1 Surface Water

The major concern is that the silt and the fine suspended particulate matter carried by the surface run-off from the mining area during the monsoon may cause siltation of surface water sources in the buffer zone. The only pollution anticipated in the surface drainage water is the suspended solids, due to wash off from the existing dump and mine workings.

10.3.2 Ground Water Pollution Control Measures:

There will be no adverse impact on ground water condition and quality by mining or any kind of leaching of any substance that shall deteriorate the surface or ground water quality.

10.3.3 Proposed Water Pollution Control Measures:

- Garland drains are constructed around the dumps to arrest silt and sediment flows. The drains are connected to a settling tank and/or mine pits and accumulated water is being used for dust suppression and plantation.
- Cleaning of drains has been observed which help to arrest the siltation.
- The accumulated water is being provided to farmers of the area apart from other uses.
- Toilet facility has been provided near to the office.
- Use of water is observed for dust suppression, wet drilling and green belt development in Open Cast mine Following drain are observed and suggested for management of mine discharge and runoff

10.4 LAND ENVIRONMENT

As the proposed mining operations are open cast & Semi mechanized and the lease area is 4.0 ha. there will be less possibility of and damage to Land Environment. During the proposed mining the top soil shall be used for reclamation purpose for the existing pits, but the quantity of OB shall not be sufficient for reclamation of whole area, as the stripping ratio 1:0.40. After the mining the pits are left open and acts as water reservoir, this will improve the water charging in the adjoining areas.

- Minimal damage to the flora standing around the lease area.
- Operations during daylight only.

10.4.1 Top soil management

The average thickness of top soil is available in the lease area, which will be used for spreading on OB dumps, to establish them. The top soil is kept separately equipped with retaining wall. The top soil is also used for plantation purpose, in consultation with experts.

10.4.2 Green Belt Development

The main objective of the green belt is to provide a barrier between the source of pollution and the surrounding areas. The green belt helps to capture the fugitive emission and to attenuate the noise generated apart from improving the aesthetics

Table 10.1: Greenbelt Programme

Year wise no of saplings to be planted is as below:

Year	Saplings to be Planted	Unit	Total Cost (in Rs.)

Ist	All 446 saplings will be planted in Ist Year,	Plantation 446 sapling (@ Rs.500/ sapling) Maintenance Plantation Care@ Rs.600/day (365 days) **Note: Maintenance Plantation care cost will increase with increase in no. of sapling.** **50 trees per Ha**	2,23,000 2,19,000
Total	**446**		**Rs. 4,42,000**

10.5 BIOLOGICAL ENVIRONMENT

The mining activity will have insignificant effect on the existing flora and fauna. Data have been collected from various Government Departments such as forests, agriculture, fisheries, animal husbandry and various offices to establish the pre project biological environmental conditions.

10.5.1 Mitigation of Impacts on Biological Environment

Since there are no notified endangered species in the area, which will be affected due to the mining activities, therefore the biological environment would not be affected significantly. The Impact due to negligible amount dust generation on the biological environment is minimized by well-developed green belt in and around mining lease area.

- Improvement in mining site stability
- Conservation of biological diversity of plants, birds and animals,
- As dust receptor and dust filter, this is likely to be produced during mining.
- If birds are noticed crossing the core zone, they will not be disturbed at all
- Labors will not be allowed to discards food, plastic etc., which can attract animals/birds near the core site
- Only low polluting vehicles having PUC will be allowed for carrying mining materials.

10.6 SOCIO-ECONOMIC ENVIRONMENT

10.6.1 Management Plan for Socio-Economic Environment

- In general, socio-economic environment will have positive impact due to the mining project in the area.
- The deployed laborers will be from nearby villages only as these people are mainly dependent upon such mining activities.
- In order to further improve the socio-economic conditions of the area, the management will contribute for development works in consultation with local bodies**.**
- The lessee has already allocated budget (As per demand) for Socio-Economic measures.
- Corporate Environment Responsibility

10.7 OCCUPATIONAL HEALTH AND SAFETY MEASURES

Detail of Occupational Health hazard is mentioned in Chapter-07 Section 7.4

10.7.1 Implementation of Occupational Health and Safety Measures

Occupational Health & Safety measures result in improving the conditions under which workers are employed and work. It improves not only their physical efficiency, but also provides protection to their life and limb. Management will consider the following safety measures:

- Except fugitive dust generation there is no source which can show a probability for health related diseases and proper dust suppression will control dust generation and dispersion.
- Dust masks will be provided to the workers working in the dust prone areas as additional personal protective equipment.
- The occupational health hazards have so far not been reported.
- Awareness program will be conducted about likely occupational health hazards so as to have preventive action in place.
- Any workers health related problem will be properly addressed.
- Periodical medical checkup will be conducted.
- Promote occupational health and safety within their organization and develop safer and Heal their ways of working.
- Help supervise the investigation of accidents and unsafe working conditions, study possible causes and recommend remedial action.
- Develop and implement training sessions for management, supervisors and workers on health and safety practices and legislation.
- Coordinate emergency procedures, mine rescues, firefighting and first aid crews.

10.8 ENVIRONMENTAL MONITORING PROGRAMME

Details of the Environmental Monitoring Programme have been incorporated in Chapter 6 (Environmental Monitoring Programme) of this report.

CHAPTER- 11
SUMMARY OF DRAFT EIA

CHAPTER: 11
SUMMARY AND CONCLUSIONS

11.1 PROJECT DESCRIPTION

11.1.1 Introduction of the Project & Proponent

The proposed project is Minor mineral Mining Project which is proposed by Mr. Mohd Amin Wani. The proponent has applied for mining lease of Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- 147, Area- 8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K as per the provisions of EIA Notification 2006. It has been proposed to collect 2,00,000 MT per annum of Minor Mineral Quarry Cluster (Masonry Stone) Block.
Therefore, as per MoEF&CC, GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018 if a cluster or an individual lease exceeds 5.0 Ha the project is classified as Category – B since the project does not attracts the General Condition.

The mining lease area falls under cluster (if periphery of one lease is within 500 meters of the other lease) which is ≥ 5.0 ha therefore as per MoEF&CC GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018. It is applied under Cat-B1 and Cluster Certificate is attached as Annexure.

Table No.11.1: Project Details

On-line Proposal No.	SIA/JK/MIN/54417/2020		
File No. allotted by SEIAA, JK	SEAC/JK/20/384		
Name of Proponent	Mr. Mohd Amin Wani S/o Gh. Mohd Wani,		
Full correspondence address of proponent	R/o: Sempora, Lasjan District- Srinagar, State- J&K		
Name of Project	Minor Mineral Quarry Cluster Masonry Stone Block		
Project location (Plot/Khasra/Gate No.)	Khasra No: 147, Village- Dakteng (Zewan), Tehsil : Panthachowk, District: Srinagar, State: J&K.		
Name of Minor Mineral	Minor Mineral Quarry Cluster Masonry Stone Block		
Type of Land	Khalsa Sarkar		
Land utilization Pattern	The area is barren land.		
Sanctioned Lease Area (in Ha)	8.29 Ha		
Schedule (as per EIA notification 2006)	1(a)i		
Category of Project	B (1)		
Method of Mining	Open Cast, Semi-mechanized		
Sanctioned Period of Mine lease	New Mine, The applicant being the highest bidder was issued with Letter of Intent (LOI) by DGM office vide letter No. 337/MCC/DGM/CQK/16/3520-22 Dated: 22-08-2017 for the exploitation for 5 Years.		
Pillar Coordinates	**Pillar**	**Latitude**	**Longitude**
	RP	34°02'38.98"N	74°54'25.28"E
	A	34°02'43.32"N	74°54'23.75"E
	B	34°02'47.00"N	74°54'24.14"E
	C	34°02'46.41"N	74°54'12.29"E

	D	34°02'44.54"N	74°54'02.31"E
	E	34°02'38.83"N	74°54'08.65"E
	F	34°02'39.25"N	74°54'15.77"E
	G	34°02'43.07"N	74°54'18.14"E

Toposheet No	43 J/16			
Total Geological Reserves	23,59,740 MT			
Total Mineable Reserves	20,43,510 MT			
Proposed Production/year in Mining Plan Approval Letter	1,50,000 MT/Annum (Average Annual Production)			
Production of mine/day	500 MT/day			
No. of Working days	300 Days			
Working hours/day	8 hours/day			
No. of Workers	34 Manpower			
No. of vehicles movement/day	50 Units (Assumed Loading Capacity: 10 Tonnes/Unit)			
Altitude of the Area	The Highest Point : 2510m amsl The Lowest Point : 1600m amsl			
Ultimate Depth of Mining (Bench Level)	8-12 m (average Depth) (1775 mRL – 1640 mRL) *(Source: Approved Mining Plan)*			
Ground Water Level	1.50 – 2.50 mbgl *Source:http://cgwb.gov.in/District_Profile/JandK/srinagar.pdf*			
Nearest metalled road from site	Metalled Road 0.57 km away from the mine site.			
Water Requirement	**Source**	**Purpose**	**Detail**	**Avg. Demand/ Day**
	Portable Tankers	Drinking @15lpcd/worker	34 workers x 15 lpcd = 510 lpcd	0.51 KLD
		Land reclamation / plantation @5 Lit/Tree (@ 100 trees/ Ha)	446 Trees x 5 lpcd) = 2230 lpcd	2.23 KLD
		Mine Operation	-	1.0 KLD
		Dust suppression @1 Lit/Sq.m	Approach Road Area = (570 m Length x 7m Width = 3990 m^2 lpcd	3.99 KLD
	Total			**7.73 KLD**
Name of QCI Accredited Consultant with QCI No. and period of validity.	**GLOBUS Environment Engineering Services** Certificate No. NABET/EIA/2124/RA0245, Valid Till August 24/2024			

Any litigation pending against the project or land in any court	No
Total Proposed Project Cost	Rs. 97.33 Lakhs
Proposed CER cost	Rs. 4.87 Lakhs (5% of the total Project Cost)
Proposed EMP cost	Rs. 14.41 Lakhs (Haulage Road repair, Dust Suppression, Plantation & Environmental Monitoring)
Length and breadth of Haul Road	Haul Road Length 570 m Length & Width 7 m
No. of Trees to be Planted	446 trees will be planted

11.2 DESCRIPTION OF ENVIRONMENT

11.2.1 BASE LINE DATA: This section contains the description of baseline studies of the 10 km radius of the area (Core Zone and Buffer Zone) surrounding the mine lease area located at Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- 147, Area- 8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowck, District- Srinagar, State- J&K. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed.

Environmental data has been collected in relation to proposed mining for:-

(a) Air **(b)** Noise
(c) Water **(d)** Soil
(e) Ecology and Biodiversity **(f)** Socio-economy

Table 11.2: Baseline Environmental Status

Attribute	Baseline status
Ambient Air Quality	Ambient Air Quality Monitoring reveals that the maximum & minimum concentrations of PM_{10} & $PM_{2.5}$ for all the 8 AQ monitoring stations were found to be within the prescribed limit of CPCB. As far as the gaseous pollutants SO_2 and NO_2 are concerned, the prescribed CPCB limit of 80µg/m^3 for residential and rural areas has never been surpassed at any station.
Noise Levels	Noise monitoring was carried out at 8 locations. The results of the monitoring program indicated that both the daytime and night time levels of noise were well within the prescribed limits of NAAQS, at all the four locations monitored.
Water Quality	8 Groundwater samples and 2 surface water samples were analyzed and concluded that: The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards by Indian Standards IS: 10500.
Soil Quality	Samples collected from identified locations indicate the soil is sandy Clay, Sandy Clay Loam type and Clay loam type.
Ecology and Bio-diversity	There are no Ecologically Sensitive Areas present in the study area.
Socio-economy	The implementation of the mining project in the district will throw opportunities to local people for both direct and indirect employment. The study area is still lacking in education, health, housing, water, electricity

	etc. It is expected that same will improve to a great extent due to proposed mining project and associated industrial and business activities.

Table 11.3 ENVIRONMENTAL MONITORING

PARAMETERS	DESCRIPTION	
Ambient Air Quality Monitoring	❖ PM_{10}– 60.93 (Min.) at AQ-3 to 73.54µg/m^3 (Max.) at AQ-8 ❖ $PM_{2.5}$ – 31.38 (Min.) at AQ-3 to 38.6 µg/m^3 (Max.) at AQ-8 ❖ SO_2 – 5.73 (Min.) at AQ-3 to 13.5 µg/m^3 (Max.) at AQ-8 ❖ NOx – 15.57 (Min.) at AQ-3 to 23.59 µg/m^3 (Max.) at AQ-8 ❖ CO -<0.5 (Min.) to <0.5 µg/m^3 (Max.)	
Noise Quality Monitoring	❖ Noise level during day time – 51.1 dB (A) (Min.) at AQ-3 to 60.8 dB (A) (Max.) at AQ-1 ❖ Noise Levels during night time – 40.1 dB (A) (Min.) at AQ-4 to 44.3 dB (A) (Max.) at AQ-1.	
Water Quality Sampling & Analysis	**Ground Water**	Analysis results of ground water in the study area reveal the following: - ❖ pH 7.15 (Min.) at GW-6 to 7.56 (Max.) at GW-8, ❖ Total Hardness 116 (Min.) mg/l at GW-6 to 192 mg/l (Max.) at GW-4, ❖ TDS 179 (Min) mg/l at GW -6 to 303 mg/l (Max) at GW -1, ❖ Sulphate 3.67 (Min.) mg/l at GW-6 to 13.31 mg/l (Max.) at GW- 4, ❖ Chloride 14.09 (Min.) at GW-6 to 25.44 mg/l (Max.) at GW-1
	Surface Water	The parameters results are as follows: ❖ pH value is 7.18 to 7.27 ❖ TDS was observed as 121 mg/l to 128 mg/l ❖ Chlorides were found as 21.68 to 23.65 mg/l ❖ Sulphates were found as 10.62 to 12.32 mg/l ❖ Total hardness was observed 64 to 72 mg/l.
Soil Quality	❖ **pH** – 6.56 to 7.46. ❖ **Organic matter** 0.92 to 1.24 % ❖ **Total Kjeldahl Nitrogen** 0.051 to 0.075%. ❖ **Phosphorous** 58.87 to 74.24 mg/kg. ❖ **Potassium** 178.39 to 204.13 mg/kg	

11.3 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

11.3.1 BIOLOGICAL ENVIRONMENT

The biological environment mainly consists of flora and fauna and its relationship with surroundings. Biological environment includes species of native plants and animals and one may measures the degradation of environment by noting the decrease in the commonly occurring species. As regards to fauna, the activity will have negative impact on them. At the beginning the animal will recede to distances due to noise generated from Transportation. They will trace back to an optimum distance

after some time, on being habituated by disturbances. After the mining activity and growth of forest local fauna will again be reinstated even in a better way due to the generated forest cover in lieu of the existing denuded tract of land. There is no rare and endangered fauna species close to the mining area. Considering the small area of mining, insignificant impact is envisaged on biological environment.

11.3.2 Direct Impact:

The Minor Mineral Quarry Cluster Masonry Stone Block which proposes production of 1,50,000 MT/Annum of minor mineral. No direct impact is anticipated from the project on biodiversity.

Indirect Impact:

The major indirect impact include following.

- Mining activity is likely to affect the movement of the animal and birds.
- Increase in noise may affect the feeding, breeding and movement of animals.
- Likely settling of dust to be generated by movement of vehicles on leaves may results in to stunted growth of vegetation and may also affect the capacity of production.
- Large numbers of labor population will influx the area during mining operation.
- The major threat to surrounding flora is through collection of fuel wood by labor for cooking purposes and thereby loss of trees.

Cumulative Impact:

- Indirect and cumulative impacts are associated with various mining activities such as clearing of vegetation for establishment of various project units, movement of vehicles, Mining equipment s& machineries etc., interferences due to influx of labours etc.

- The losses of land for various project units will also not adversity affect the fauna as similar habitat is present throughout the project immediate influenced area. Therefore, impact due to loss of habitat for birds, reptiles and mammals of the project area is not expected.

11. 3.2: LAND ENVIRONMENT

The sanctioned MLA is a virgin land and the mining for the extraction of granted quantity of minor mineral will be started after the grant of environment clearance. At present, there is no any type of pit is present in the mining lease area. However, at the end of the first year period of mining lease granted period the impact on land use will be limited.

11.3.3: AIR ENVIRONMENT

Anticipated impacts and evaluation:

In mining operations, loading, transportation and unloading operations may cause deterioration in air quality due to handling dry materials. In the present case, only wet materials will be handled, thus eliminating problems of fugitive dust.

MITIGATION MEASURES:

The collection and lifting of minerals will be done manually. Therefore the dust generated is likely to be insignificant as there will be no drilling. The only air pollution sources are the road transport network of the trucks. The mitigation measures like the following will be resorted.

- Water sprinkling will be done on the roads regularly. This will reduce dust emission further by 75%.

- ❖ Care will be taken to prevent spillage by covering the carrying vehicles with tarpaulin and sprinkling of water, if dry.
- ❖ Fortnightly scraping of road in order to keep the roads almost leveled. This will ensure smooth flow of vehicles and also prevent spillage.
- ❖ Overloading will be kept under check by giving prior awareness.
- ❖ Proper Tuning of vehicles to keep the gas emissions under check.
- ❖ Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- ❖ Care will be taken to use PUC certified trucks.

11.3.4: WATER ENVIRONMENT

- ❖ Various surface and ground water samples are collected and analyzed in the reputed laboratory. The report indicated that the water available in the area is potable and all values are within the permissible limit.
- ❖ Hand pumps and dug wells are situated within 500 m Core Zone in which drinking water facilities are available.
- ❖ No pumping of water will be done in any surface body directly. The mine water will be pump out during rainy seasons. The pumped out water will be stored and utilized for sprinkling of water on haul roads, watering of plants, drilling and other dust suppression measures.
- ❖ Post-monsoon and Pre-monsoon groundwater level will be monitored regularly through nearby hand pumps and dug wells.
- ❖ Awareness programs will be taken up to educate public for conservation of water.
- ❖ Mobile toilets will be used at site.
- ❖ ML area under reference is water scarce and water reservoir will be a source of water to villagers. It will also attract birds and will improve aquatic environment.

11.3.5 NOISE ENVIRONMENT

Anticipated impacts and evaluation:

The mining methodology is done in semi mechanized process so there will not be any major impact on noise level due to the mining. The only impact will be due to transportation of materials by trucks.

- ❖ Mental disturbance, stress & impaired hearing.
- ❖ Decrease in speech reception & communication.
- ❖ Distraction and diminished concentration affecting job performance efficiency.

Mitigation measures

- ❖ Well maintained vehicle will be used which will reduced the noise level.
- ❖ **Plantation:** Plantation of trees along the road will be done to dampen the noise, if possible.
- ❖ The vehicles will be maintained in good running condition so that noise will be reduced to minimum possible level.
- ❖ Awareness will be imparted prior to mining operations that smoke silencers remain in a good conditions not to generate noise.
- ❖ In addition, truck drivers will be instructed to make minimum use of horns at the village area.
- ❖ Where ever space is made available by the authorities' plantation will be done and also post Plantation care will be provided.

11.4 ENVIRONMENT MONITORING PROGRAME

Regular Monitoring of all the environmental parameters *viz.*, air, water, noise and soil as per the formulated program based on CPCB and MoEF&CC guidelines will be carried out every year in order to detect any changes from the baseline status.

Table 11.4: Monitoring Schedule & Parameters

S.No.	Attributes	Parameters for monitoring	Frequency	Locations
1.	**Meteorology**	Wind speed, Wind direction, Dry bulb temperature, Wet bulb temperature, Relative humidity, Rainfall	Minimum 1 site in the project impact area	Regularly in one season by Weather Monitoring Station
2.	**Ambient Air**	PM_{10}, $PM_{2.5}$, SO_2, NOx, Free Silica	As per CPCB/ MoEF&CC requirement i.e. 24 hourly monitoring for one month in each season except monsoon.	One location in down wind direction /impact zone (core Zone) & seven locations in Buffer zone.
3.	**Noise**	Noise level at Day and Night – Leq dB (A), Day Time: Leq (6.00 AM to 10.00 PM), Night Time: Leq (10.00 PM) To 6.00 AM)	Periodic/ As per CPCB norms	One location in core Zone (Mine Boundary) & High noise generating areas within buffer Zone
4.	**Water Quality & Surface Water Quality**	TDS, Total Hardness, Calcium hardness, Magnesium hardness, Chloride, Fluoride, Sulphate, Nitrates, pH ,Alkalinity, Iron, Odour, Zinc, Cyanide, Taste, Copper & Microbiological Parameter As per IS 10500:2012	Diurnal and Season wise As per IS 10500-2012	Set of grab samples during pre monsoon for ground and surface water for 10 km distance.
5.	**Soil quality Monitoring**	pH, Bulk Density, Soil texture, Nitrogen, Available Phosphorus, Potassium, Calcium, Magnesium, Sodium, Electrical Conductivity, Organic Matter, Chloride	Yearly	8 location in the Project impact area

6.	**Socioeconomic Status**	• Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes • Education	Yearly	Socio -economic survey is based on proportionate, stratified and random sampling Method. Secondary data from census records, statistical hard books, Topo-sheets, health records and relevant official records available with Govt. Agencies.
7.	**Ecological Impact**	• Green Belt Development • Conservation of Wild Life	Yearly	Survey Secondary data from statistical hard books, toposheets and relevant official records available with Govt. agencies

Table 11.5: Budget Allocation for Environment Monitoring Programme

1	Air Quality:	@20000 x 8	1,60,000
2	Water Quality	@10000 x 10	1,00,000
3	Ambient Noise Level	@10000 x 8	80,000
4	Soil Quality	@10000 x 8	80,000
5	Biodiversity Survey	-	80,000
6	Socio Economic Survey	-	80,000
	TOTAL		**5,80,000**

Corporate Environment Responsibility (CER)

- Total Cost of the Project = 97.33 Lakhs
- 5% of the total Project Cost will be expended towards CER i.e. 4.87 Lakhs

As Per The G.O.I Notification, File No. 22-65/2017-I A, III dated on 1st May, 2018

Table 11.6: The Proposed Cost for CER Plan

This is the Proposed cost CER Plan, Activities and actual cost will be Finalized as per the Actual need of the area. (ON THE BASIS OF NEED BASE ASSESSMENT SURVEY)				
S. No.	**Activity**	**Cost per Unit (Rs)**	**Quantity**	**Total (Rs)**
1.	Solar street light Installation in rural areas	15,000	15	2,25,000

2.	Toilets for women nearby primary school	60,000	3	1,80,000
3.	Awareness Program on Personal Hygiene (COVID 19) and distribution of Mask and Sanitizers	82,000	-	82,000
	Total Proposed CER Cost			**4,87,000 (4.87 Lakhs)**

Conclusion:

In general, socio-economic environment will have positive impact due to the mining project in the area. The lessee has already allocated Rs 4.87 Lakhs (As per demand) for Socio-Economic measures.

CHAPTER 12

DISCLOSURE OF CONSULTANT ENGAGED

Project Name: Minor Mineral Quarry Cluster Masonry Stone Block Khasra-147**, Area-** 8.92 Ha**, Village-** Dakteng (Zewan)**,** Tehsil- Panthachowk, District- Srinagar, State- J&K **Area:** 5.72 Ha. **Schedule-** 1 (a)i**, Category-** B1 **Applicant Name: . Mohd Amin Wani S/o Gh. Mohd Wani** R/o: Sempora, Lasjan, District- Srinagar, State- J&K. **& Gh Hassan Bhat S/o Gh Mohd Bhat)** R/o: Aripora, Lasjan, District- Srinagar, State- J&K.	
Name and address of the Consultant Certificate No.	**GLOBUS ENVIRONMENT ENGINEERING SERVICES** 326-AB, 3rd Floor, Sahara Shopping Center, Faizabad Road, Lucknow -226016. Contact: 0522-4037540,+91-7398041242 ***NABET/EIA/2124/RA0245, Valid Till August 24/2024***
Name and address of the Laboratory Certificate No.	**Ultra Testing & Research Laboratory** C-43,1st Floor,Sector-88,Phase-2,Noida,Uttar Pradesh TC-8189, Valid Till 15/11/2024

Project Proponent…….

Quality Council of India

National Accreditation Board for Education & Training

Certificate of Accreditation

Globus Environment Engineering Services

326-AB, 3rd Floor, Sahara Shopping Center, Faizabad Road, Lucknow

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

S. No	Sector Description	Sector (as per)		Cat.
		NABET	MoEFCC	
1	Mining of minerals including opencast / underground mining	1	1 (a) (i)	A
2	Cement plants	9	3 (b)	A
3	Synthetic organic chemicals industry (dyes & dye intermediates; bulk drugs and intermediates excluding drug formulations; synthetic scrubbers; basic organic chemicals, other synthetic organic chemical sand chemical intermediates)	21	5 (f)	A
4	Building and construction projects	38	8 (a)	B
5	Townships and Area development projects	39	8 (b)	B

Note: Names of approved EIA Coordinators and Functional Area Experts are mentioned in RAAC minutes dated Dec 10, 2021 and Supplementary Assessment minutes dated May 20, 2022 posted on QCI-NABET website.

The Accreditation shall remain in force subject to continued compliance to the terms and conditions mentioned in QCI-NABET's letter of accreditation bearing no. QCI/NABET/ENV/ACO/22/2414 dated July 05, 2022. The accreditation needs to be renewed before the expiry date by Globus Environment Engineering Services following due process of assessment.

Sr. Director, NABET
Dated: July 05, 2022

Certificate No.
NABET/EIA/2124/RA 0245

Valid up to
August 24, 2024

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

Project Proponent…….

National Accreditation Board for Testing and Calibration Laboratories

NABL

CERTIFICATE OF ACCREDITATION

ULTRA TESTING & RESEARCH 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

C-43, SECTOR-88, NOIDA, GAUTAM BUDDHA NAGAR, UTTAR PRADESH, INDIA

in the field of

TESTING

Certificate Number: TC-8198

Issue Date: 16/11/2022 **Valid Until:** 15/11/2024

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 this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : Ultra Testing & Research Laboratory

Signed for and on behalf of NABL

N. Venkateswarna
Chief Executive Officer

Project Proponent…….

ANNEXURES
ANNEXURE 1: LETTER OF INTENT
ANNEXURE 2: AFFIDAVIT
ANNEXURE 3:AUTHORITY LETTER
ANNEXURE 4:REVENUE PAPER AND KEY PLAN
ANNEXURE 5:APPROVED MINING PLAN
ANNEXURE 6: NAQSHA AMINI AND AUTHORIZE AFFIDAVIT
ANNEXURE 7: INTIKHAB
ANNEXURE 8: LAB REPORT
ANNEXURE 9: QUESTIONNAIRE

Annexure -1

Letter of Intent

Government of Jammu and Kashmir
Directorate of Geology and Mining, Srinagar

Subject:- Declaration of Cluster of Quarries for grant of Quarry Licences.

Reference:- JDK/F-21/Sgr/II/352 dated 28.06.2016 .

Whereas, extraction of Stones from individual Stone Quarries was regulated through grant of Short Term Quarry Permits under the provisions of J&K Minor Mineral Concession Rules,1962.

Whereas, Government promulgated the Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016 vide SRO-105 of 2016 dated 31.03.2016 repealing J&K Minor Mineral Concession Rules, 1962.

Whereas, Under Rule, 14 of said rules the individual quarries falling in areas ancestrally occupied and certified by the revenue authority falling are to be clubbed and declared as cluster of quarries for grant of Mineral Concession.

Whereas, in pursuance to this office letter No. 296/TG/Cluster/16/734-40 dated 09.05.2016 Stone Quarry Belts were identified and blocks governing the existing quarries were prepared.

Whereas, under Rule, 44 the said quarry belts/clusters are to be considered for grant of quarry licence subject to the submission of following documents:

3. Approved Mining Plan with Environment Management Plan (EMP).
2. Environmental Clearance from the Competent Authority.

In view of the above and in pursuance to the provisions of Rule 14 of the Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules 2016, the quarry belts of **District, Srinagar** indicated in annexure "A" are declared as Cluster of Quarries subject to authentication by revenue authorities.

22/8/2017
Director
Geology & Mining
J&K Govt; Srinagar.

No:- 373 /MCC/DGM/CQK/16/ 3520 -22
Dated:- 22.08.2017.

Copy to:-

1. The Commissioner/Secretary to Govt; Industries and Commerce Department, Civil Secretariat, Srinagar for information please.
2. The Dy. Commissioner, Srinagar for information and necessary action.
3. The Joint Director(K) Geology & Mining Department, Srinagar for information with the request to direct I/C DMO concerned for advising the quarry holders to submit the requisite documents as required under rules for processing their cases for grant of Quarry Licence.

Director
Geology & Mining
J&K Govt; Srinagar.

Annexure "

District, Srinagar

S.No	Name of Stone Quarry Belt	Area	No. of Quarries
1	BSF(Panthachowk)	6.68	15
2	Dakteng(Zewan)	8.92	20
3	Shulguf(Zewan) Block-A Tehsil, Panthachowk	6.19	11
4	Shulguf(Zewan) Block-B Tehsil, Panthachowk	6.86	10
5	Zewan Bala, Block-A Tehsil, Panthachowk	7.64	20
6	Zewan Bala, Block-B Tehsil, Panthachowk	6.06	20

Annexure -2 – Affidavit

RUPEES TEN

JAMMU & KASHMIR

जम्मू व काश्मीर

नान जुडीशल

Rs. 10

BW 617522

AFFIDAVIT

We, **Ghulam Hassan S/o: Ghulam Mohammad Bhat R/o: Aripora 2) Mohammad Amin Wani S/o: Ghulam Mohammad Wani, R/o: Sempora** (project proponents) & Globus Environment Engineering Services do here by solemnly declare on oath as follows;

That Deponents 1 is Project Proponents and Deponent 2. Globus Environment Engineering Services is Environment Consultant of project **Masonry Stone Minor Mineral Quarry Cluster Block at Dakteng (Zewan) Tehsil Pantha Chowk District SriNagar J&K State (Area of 8.92 Hectares).**

a. That, the mining activity has not been started at site and No violation of Environment Protection Act of 1986 and Rules made there under has taken place.

b. That, no Court Case with respect to mining project/ block is pending in any Court of law.

c. That, area does not fall in Forest/ Wildlife Protected area/ ESZ or within 10 Km from Wildlife Protected Area boundary and does not attract General Condition of EIA Notification of 2006 read with amendments.

d. That, the project related activities shall not cause/ result in violation of Forest conservation Act,1980, Wildlife Protection Act, 1972, Mines and Mineral Development Act, 1957, Environment Protection Act, 1986 (and Rules made there under), standing instruction/OMs from MoEF & CC, GoI or IBM or any orders from Courts of Competent jurisdiction or orders from Hon'ble NGT.

e. That, all the information furnished to the JKEIAA is true. Grant of TORs on the basis of any wrong information furnished/ facts concealed by the Project Proponent/ Consultant on his behalf, is liable to summary cancellation at any point of time.

SHAHBAZ MAJID
ADVOCATE
J&K HIGH COURT
L.No.325/14

Deponent **Deponent**

ANAND

Verification

Verified that the contents of this affidavit are true and correct to the best of my knowledge and belief nothing has been concealed therein.

Deponent **Deponent**

ANAND

07-12-2020

3rd Addl. Munsiff
Judicial Magistrate
First Class, Srinagar

L 600777

AFFIDAVIT

We, Ghulam Hassan S/O: Ghulam Mohammad Bhat R/O: Aripora 2. Mohammad Amin Wani S/O: Ghulam Ahmad Wani R/O: Sempora and Globus Environment Engineering Services do hereby solemnly affirm & declare on oath as under:-

01. That deponent No. 1 is project proponent and Globus Environmental Engineering Services is Environment Consultant Globus Environment of Minor Mineral Blocks located at Dak tarng Zewan , Panthachowk District: Srinagar J&K U.T area 8.92. Hectare.

02. That the mining activity has not been started at the site and no violation of Environment Protection Act of 1986 and Rules made thereafter has taken place.

Verified by
Advocate J&K High Court
Shaifa BARQA Rashid
Lic. No. JK-270/2011

04. That no court case with respect to mining to mining project/ Blocks is pending in any Hon' ble court of law.

05. That the area does not fall in forest/ wildlife habitat and does not attract General Condition of EIA notification of 2006, read with amendments.

Deponent Deponent

Verification.

Verified that the contents of this affidavit are true and correct to the best of my knowledge and belief. Nothing has been concealed or suppressed by me herein above.

Certified that the contents
has been read and
is identified
Hence Attested

Ghulam Hassan
Moh. M. Bhat
Shaifa
R/O Sangam

Deponent Deponent

Remaining point of Affidavit given in EDS Letter (Annexure –D)

Point no. (C) – That, area does not fall in Forest /wildlife Protection area/ESZ or within 10 km from wildlife protected area boundary and does not attract General Condition of EIA Notification of 2006 read with amendments.

Point no. (d) – that, the project related activities shall not cause/result in violation of forest Conservation Act, 1980,Wildlife Protection Act,1972, Mines and Mineral Development Act, 1957, Environment Protection Act, 1986(and Rules made there under), Standing instruction/OMs from MoEF&CC or GoI or IBM or any orders from Courts of competent jurisdiction or orders from Hon'ble NGT.

Point no. (e) – that, all the information furnished to the JKEIAA is true. Grant of TORs on the basis of any wrong information furnished /facts concealed by the Project Proponent/Consultant on his behalf, is liable to summary cancellation at any point of time.

Deponent no.1

(Project Proponent)

Deponent no.2

Akhilesh

(Environment Consultant)

Annexure -3 Authority Letter

RUPEES TEN

JAMMU & KASHMIR

जम्मू व काश्मीर

नान जुडीशल

दस रुपये

Rs. 10

BW 617523

TO WHOM SO EVER IT MAY CONCERN

This is certify that M/s Globus Environmental Engineering Services, Regd. Office at 326-AB, 3rd Floor, Sahara Shopping Center, Faizabad Road, Lucknow – 226016 are the environmental consultant for our proposed **Masonry Stone Minor Mineral Quarry Cluster Block at Dakteng (Zewan) Tehsil Pantha Chowk District SriNagar J&K State (Area of 8.92 Hectares).**

As per the work order released and job allotted from the preparation of the report and present out proposal in the SEAC/SEIAA J&K meeting as and whenever required.

Mr. Ghulam Hassan

(Project Proponent)

Mohammad Amin Wani

(Project Proponent)

HABAZ
ADVOCA
&K HIGH CO
L.No.32

Date 07-11-2020.

IRFAN AHMAD KHAN (Advocate) NOTARY District Court Srinagar L.No. 624 J&K High Court

07-11-2020

Gh. Hassan & Mohd Amin

IRFAN AHMAD KHAN (Advocate) J&K High Court

7/11/2020

IRFAN AHMAD KHAN
Notary Public
District Court Srinagar.

Annexure – 4

Revenue Paper, Key Plan

Government of Jammu & Kashmir

OFFICE OF THE TEHSILDAR PANTHA CHOWK SRINAGAR

The District Mineral Officer,
Geology & Minning Department,
Srinagar.

No: 221 /TPC/OQ Dated: 08.09.2018

Subject: - Declaration of clusters of quaries for grant of Quarries licences.

Sir,

Regarding the subject cited above, the case submitted by DMO Srinagar has been got verified by field agency which reveals that the land is recorded as Khalsa Sarkar in estate Zewan under survey no. 147 measuring 70 kanals 19 marlas (Gair Mumkin dekanati sang, Bangir qadeem and Baghi khuski) the land is in shape of hill and various quarries are existing there since long time. The quarry holders have applied before the DMO Srinagar for issuance of licences.

Hence the report is submitted for favour of further necessary action at your end.

Yours faithfully

Tehsildar
Pantha Chowk 08/9/18

TEHSILDAR
Pantha Chowk

از ڈپٹی کمشنر ضلع [illegible] نمبر 27 6/18

مضمون Title verification of land
Regarding stone quarries at DAK-TENG
village Zewan. Tehsil Panthachowk.

تحریر تحصیلدار صاحب پانتھ چوک

جناب عالی! [illegible] [illegible] [illegible] [illegible] [illegible]
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زیون ... حال / بانشہ پورہ ... سرنیر

نمبر خسرہ	نمبر کھیوٹ	نام مالک معہ احوال	نام کاشتکار معہ احوال							
٢٢	٢١٣ جز	سرکار	متعلقہ سرکار	1/2	... 19	-	-	-	-	-

رپورٹ پٹواری — مقدمہ متعلقہ سیٹ دوکان شنگ ... محکمہ جیالوجی ... اجازت ... چیف ... صاحب (DMo) صاحب ... ① ... ولد عبدالستار بٹ ② ... ولد ... ③ ... ولد ... ④ ... ولد ... ⑤ عبدالرحمٰن ولد ... ⑥ ... ولد ... ⑦ ... ⑧ مختار احمد ولد عبدالعزیز وانی ⑨ ... ولد عبدالغنی وانی ⑩ ... ولد ... ساکنان آری پورہ بانشہ پورہ ⑪ ... وانی ولد ... ساکنہ ... ⑫ ... ولد ... ساکنہ زیون ⑬ مشتاق احمد ولد ... ⑭ اعجاز احمد وانی ولد عبدالرحمٰن ... ساکنہ آری پورہ ⑮ طارق احمد ولد عبدالاحد بٹ ⑯ ... ولد عبدالغنی بٹ ساکنان آری پورہ ... کا قبضہ ... دوکان شنگ ... ہے۔

(2) رقبہ زیر رپورٹ سرکار / متعلقہ ... 19 ... ہے۔

(3) رقبہ زیر رپورٹ بیرون حدود ... میں واقع ہے۔ Quarry - Holders ... دوکان شنگ ... 8 ... محکمہ جیالوجی ... ہیں۔

4. ... (No. DGM/Sgr/SQ/56/1406-90) dt 5/5/18 ... 27/6/18

27/6/18

C/S

06/07/18

انتخاب خسرہ گرداوری موضع زیون تحصیل حال ضلع سرینگر

۷	۶			۵	۴		۳	۲	۱
	خریف ۲۰۱۷ء				رقبہ				
کیفیت	کاشت واگذاری	انتقالات	جنس	قسم زمین	مرلہ	کنال	نام کاشتکار معہ احوال	نام مالک معہ احوال	نمبر خسرہ
			خالی 12	جنگلی بجر	-	12	مقبوضہ سرکار و مقبوضہ سرداشتہ ورثہ رشتہ دار عوض ... [illegible]	سرکار	127
			زمین دوفصلی خشکابہ		13	27			
			27	بنجر قدیم	15	26			
			زیر تعمیر		19	70			

نوٹ

کہ مقبوضہ ... [illegible] دار اندراج کیا گیا ... [illegible]

27/8

06/09/18

TEHSILDAR
Pantha Chowk

NAIB TEHSILDAR
Executive Magist

(5)

PLAN SHOWING MINERAL QUARRY BLOCK AT DAKTENG (ZEWAN), TEHSIL & DISTRICT SRINAGAR.

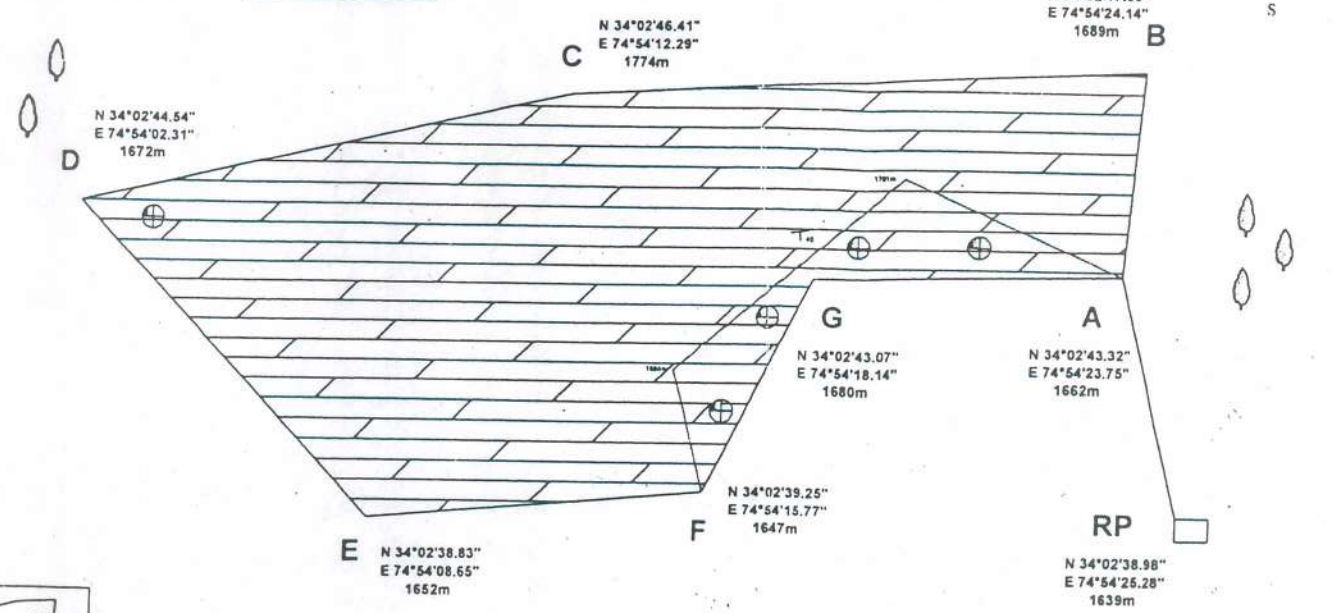
Area of Plan: 8.92 hectare

Scale: 1:4000

REFERENCE POINT: RP
NW CORNER OF HOUSE OF ROUF AH SHEIEK

INDEX:

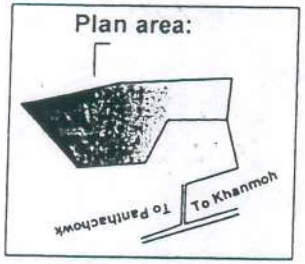
STATION		DISTANCE (Meters)	BEARING (Degrees)
FROM	TO		
RP	A	139	346
A	B	116	5
B	C	317	267
C	D	281	257
D	E	241	137
E	F	188	85
F	G	134	26
G	A	169	89



LEGEND:

1.	PLAN AREA	
2.	SHALE/SST/LST	
3.	ATTITUDE OF BEDS	T
4.	HABITATION & OTHERS	
5.	PLANTATION	
6.	ROAD/EXIT POINT	—
7.	QUARRY	⊕
8.	UPPER EXTRACTION LIMIT	

KEY PLAN (N.T.S.)



No. of Quarries: 20

GOVERNMENT OF JAMMU AND KASHMIR
DEPARTMENT OF GEOLOGY & MINING.

SHAKIL A ZARGAR	SARAFRAZ SHABAN	M YASEEN BHAT
Surveyor (Jr)	Geological Asstt	Geological Gr-III

Annexure – 5

Approved Mining plan

MINING PLAN WITH PROGRESSIVE MINE CLOSURE PLAN

(Submitted under Jammu &Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016 and MoEF&CC's Gazette Notification dated 15/01/2016)

FOR

MINOR MINERAL QUARRY CLUSTER BLOCK AT DAKTENG (ZEWAN) TEHSIL PANTHACHOWK DISTRICT SRINAGAR, J&K STATE (8.92 HECTARES)

Period of Proposal from 2018-19 to 2022-23 (5years)

Project Proponent:

Govt. of J&K
Deptt. of Geology & Mining
Sgr/Jmu
CONFIRMED
Director

M/S Mohd Amin Wani S/o Gh Mohd Wani R/o Sempora. &
Gh Hassan Bhat S/o Gh Mohd Bhat R/o Aripora

PREPARED BY

Maqbool Yousuf (RQP).
REGD No. 15/DGM/RQP/2018
Lalpora Lolab District Kupwara
Cell No. 9596570319
Pin 193223

Govt. of Jammu & Kashmir
Deptt. of Geology & Mining
APPROVED
WITH CONDITIONS
Vide Communication No. DDG Kpr/Amn/AAmp/Gr/F-103/225-227
Dated 26.9.18
Dr. A. S Sodhi
Dy Director
Officer Authorised

MAQBOOL YOUSUF GANA
Recognised Qualified Person
Reg. No. 15/DGM/RQP/2018

AUTHORIZATION LETTER BY THE APPLICANT

We Mohd Amin Wani S/o GH Mohd Wani & Gh Hassan Bhat S/o Gh Mohd Bhat, Applicant hereby authorize Shri Maqbool Yousuf (RQP) No. 15/DGM/RQP/2018 to prepare the Mining plan with Progressive Mine Closure Plan in respect of Minor Mineral Quarry Cluster Block at Dakteng Zewan Tehsil Panthachowk District Srinagar covering an area 8.92 hectares (Submitted under Jammu &Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules).

I request the Director, Geology & Mining, Jammu &Kashmir to make further correspondence regarding, Submission/modification/re-submission/ withdrawal and to collect the approved copies of the aforesaid Mining Plan with the said agency on following address:

Maqbool Yousuf (RQP).

REGD No. 15/DGM/RQP/2018
Lalpora Lolab District Kupwara
Cell No. 9596570319
Pin 193223

Date:- /09/2018
Place:- Srinagar

Mohd Amin Wani S/o GH Mohd Wani
& Gh Hassan Bhat S/o Gh Mohd Bhat,

CERTIFICATE

1. The provisions of **The Jammu & Kashmir Minor Mineral Concession, storage, transportation of minerals and prevention of illegal Mining Rules, 2016** have been observed in the Mining Plan and Progressive Mine closure plan in respect of Minor Mineral Quarry Cluster Block at Dakteng Zewan Tehsil Panthachowk District Srinagar covering an area 8.92 hectares **of** M/S Mohd Amin Wani S/o GH Mohd Wani & Gh Hassan Bhat S/o Gh Mohd Bhat Whenever specific permissions are required the lessee will approach the concerned authorities for the same.
2. The plan has been prepared as per the revenue details, lease agreement and site identification by the proponent and subsequent discussions held with the project proponent. It is also certified that information furnished in the above said Mining plan and PMCP are true and correct to the best of my knowledge and belief and in case of default the approval maybe withdrawn.

Govt. of J&K
Deptt. of Geology & Mining
Sgr/Jmu
CONFIRMED
Director

Maqbool Yousuf (RQP).
REGD No. 15/DGM/RQP/2018
Lalpora Lolab District Kupwara
Cell No. 9596570319

Govt. of Jammu & Kashmir
Deptt. of Geology & Mining
APPROVED
WITH CONDITIONS
Vide Communication No. DDGK/DGM/MMP/Sgr/F103/225-227
Dated 26-9-18
Dr. A.S. Sethi
Dy. Director
Officer Authorized

Government of Jammu and Kashmir
Department of Geology and Mining, Srinagar

4th Floor, Sanat Ghar
Bemina Srinagar-190018
(Ph/Fax. 0194-2493588)
E.mail:- dgmjak@gmail.com

CERTIFICATE OF RECOGNISATION AS QUALIFIED PERSON

(under Rule 11 of the Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016).

Mr. Maqbool Yousuf, Son of Sh. Mohd. Yousuf Ganai Resident of Lalpora Lolab, Kupwara having given satisfactory evidence of qualifications and experience is hereby granted recognition under Rule 11 of the Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016 as a qualified person to prepare Mining Plans/Schemes.

His registration No. is **15/DGM/RQP/2018.**

This recognition is valid for a period of 10 years w.e.f 15.09.2018 to 14.09.2028.

No. 159/MCC/DGM/RQP/18/3986
Dated:- 17 .09.2018

15/09/2018
Director
Geology & Mining Deptt.
J&K Govt. Sgr./Jmu.

CONTENTS

been prepared taking into account strictly the restrictions to be adopted by the applicant while conducting quarry operations due to the existence of any structures railway lines, roads, water bodies such as river, lake etc.

The present Mining plan is being submitted for production of approximately 7,50,000 tones of road metal during the five year plan.

MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg. No. 15/DGM/RQP/2018

Universal Format for Mining Plan/Scheme of Mining including progressive Mine Closure Plan.

1. GENERAL	
a) Name of the applicant	Mohd Amin Wani S/o GH Mohd Wani & Gh Hassan Bhat S/o Gh Mohd Bhat
Address	Sempora & Aripora respectively
District	Srinagar
State	Jammu and Kashmir
Pin Code	191101
Phone	-
Fax	-
e-mail	-
b) Status of the applicant	-
Private individual	Private
Cooperative Association	-
Private Company	-
Public Company	-
Public Sector Undertaking	-
Joint Sector Undertaking	Ancestrally quarry holders(20)
Other (pl.specify)	
c) Mineral(s) which are occurring in the area and which the applicant intends to	Masonry stone

LIST OF PLATES

S.NO.	LIST OF PLATES	PLATE NO.
1.	LOCATION PLAN	1
2.	KEY PLAN	2
3	SURFACE PLAN	3
4	GEOLOGICAL PLAN	4
5	EXTRACTION PLAN FOR FIVE YEARS	5
6	ENVIRONMENT PLAN	6

LIST OF ANNEXURE

S.NO.	PERTICULARS	ANNEXURE NO.
1	LETTER OF INTENT	A
2	SITE PLAN	B
3	KHASRA MAP, INTIKHAB GIRDAWARI	C
4	PHOTO IDENTITY OF THE OWNERS	D
5	PAN-CARD OF THE OWNER	E

LIST OF CERTIFICATES

S.NO.	TITLE	NUMBER.
1	AUTHORISATION LETTER BY THE PROPONENT	1
2	CERTIFICATE FROM THE RQP	2
3	CERTIFICATE OF RQP AS QUALIFIED PERSON	3

MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg. No. 15/DGM/RQP/2018

MINING PLAN INCLUDING PROGRESSIVE MINE CLOSURE PLAN FOR ROAD METAL AND BUILDING STONE QUARRY OVER AN EXTENT OF 8.92 Ha IN MINOR MNERAL CLUSTER QUARRY BLOCK –AT DAKTENG (ZEWAN), TEHSIL PANTHACHOWK DISTIRCT SRINAGAR, JAMMU AND KASHMIR STATE

INTRODUCTION

In pursuance to the provisions of Rule 14 of the **"Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of illegal Mining Rules 2016",** the Department of Geology & Mining has declared individual quarries ancestrally occupied quarry belts of Dakteng Zewan Tehsil Panthachowk District Srinagar as cluster of quarries for grant of Mineral Concession subject to the submission of Approved Mining Plan with Environmental Management Plan. The quarry cluster Block consists of 20 quarries located at Dakteng Zewan Tehsil Panthachowk District Srinagar covering an area of 8.92 ha **(copy enclosed as Annexure-B).** The Minor Mineral Block is located at village Zewan Tehsil Panthachowk District Srinagar.

The submission of Mining plan is a pre requisite for quarry license as per Rule 44 of **"Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of illegal Mining Rules 2016".**

In this connection, the quarry holders have approached Mr. Maqbool Yousuf, RQP to prepare the Quarry Mining Plan following the prescribed guidelines. Hence, this Mining Plan is being prepared and submitted under the Rules **"Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of illegal Mining Rules 2016".** The proposed Mining Plan covers a scientific and systematic assessment of the deposit which indicates the details of conservation of the deposit and protection of environment in and around the quarrying area. The survey includes of Topographical Survey, Large Scale Mapping with contours.

The survey enables the lessee to take up the exploration of Road Metal & Building Stone in a systematic manner and plan for future expansion programme. This Mine Plan has

mine	
d) Period for which the mining lease is granted / renewed / proposed to be applied	Five years (2018-2022)
e) Name of the RQP preparing the mining plan	Maqbool Yousuf
Address	Lalpora Lolab, Kupwara
Phone	9596570319
Fax	-
e-mail	makyousuf@hotmail.com
Pin	193223
Registration No.	15/DGM/RQP/2018
Date of grant / renewal	-
Valid upto	-
f) Name of the prospecting agency	NA
Address	-
Phone	
g) Reference no. and date of consent letter from the State Govt.	373/MCC/DGM/CQK/16/3520-22 DT; 22/08/2017 (Copy enclosed as **Annexure-A)**

MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg. No. 15/DGM/RQP/2018

2. LOCATION AND ACCESSIBILITY	
a) **Details of area (with location map)**	Applied for quarry license over an area of 8.92 ha. Copy of site plan enclosed as **Annexure-B.** Location map **refer plate 1**.
District and State	Srinagar, Jammu and Kashmir
Taluka	Panthachowk
Village	Zewan
Khasra No./ Plot No./ Block Range / Felling Series etc.	147 The details of Khasra (Jamabandi Nakal & Khasra Map) of the proposed area is enclosed as **Annexure-C**
Lease Area (hectares)	8.92
Whether the area is recorded to be in forest (please specify whether protected , reserved etc.)	No forest land involved, The proposed licensed area falls in Khalsa Sarkar
Ownership / Occupancy	Khalsa Sarkar
Existence of public road / railway line, if any nearby and approximate distance	The key plan has been prepared on a scale of 1:50,000. Refer key plan, **Plate No.02.** Facilities available near the proposed area: 1. Railway station at Nowgam at a distance of 6 Kms. 2. District/NH1A at a distance of 3km. 3. Government Health Centre at Khanmoh (2.6km). 4. Police Station at Panthachowk (3.3Km)

<table>
<tr>
<td>Toposheet No. with latitude and longitude</td>
<td>The area falls in Survey of Indian Toposheet no.43J/16, bounded by:-
Latitude: 34^{0}02$'$38.83$''$ to 34^{0}02$'$47.00$''$
Longitude:74^{0}54$'$02.31$''$ to 74^{0}54$'$24.14$''$
Each corner points have been demarcated by the State Government DGM. The details of the corner boundary pillars are listed below.
<table>
<tr><th>Pillar</th><th>Latitude</th><th>Longitude</th></tr>
<tr><td>RP</td><td>34^{0}02$'$38.98$''$</td><td>74^{0}54$'$25.28$''$</td></tr>
<tr><td>A</td><td>34^{0}02$'$43.32$''$</td><td>74^{0}54$'$23.75$''$</td></tr>
<tr><td>B</td><td>34^{0}02$'$47.00$''$</td><td>74^{0}54$'$24.14$''$</td></tr>
<tr><td>C</td><td>34^{0}02$'$46.41$''$</td><td>74^{0}54$'$12.29$''$</td></tr>
<tr><td>D</td><td>34^{0}02$'$44.54$''$</td><td>74^{0}54$'$02.31$''$</td></tr>
<tr><td>E</td><td>34^{0}02$'$38.83$''$</td><td>74^{0}54$'$08.65$''$</td></tr>
<tr><td>F</td><td>34^{0}02$'$39.25$''$</td><td>74^{0}54$'$15.77$''$</td></tr>
<tr><td>G</td><td>34^{0}02$'$43.07$''$</td><td>74^{0}54$'$18.14$''$</td></tr>
</table>
</td>
</tr>
<tr>
<td>Land Use Pattern (Forest, Agricultural, Grazing, Barren etc.)</td>
<td>Forest land- nil
Agricultural land- Nil
Grazing Land- Nil
Barren Land-8.92 ha (Khalsa Sarkar)</td>
</tr>
<tr>
<td colspan="2">b) Attach a general location and vicinity map showing area boundaries and existing and proposed access routes. It is preferred that the area to be marked on a Survey of India topographical map or a cadastral map or forest map as the case may be. However if none of these are available, the area should be shown on an accurate sketch map on scale of 1 : 50000.= The Location Map/Key Plan is enclosed as Plate No.01&02</td>
</tr>
</table>

3. DETAILS OF APPROVED MINING PLAN / SCHEME OF MINING (if any) : Nil

PART – A

1.GEOLOGY AND EXPLORATION

Briefly describe the topography and general geology and local / mine geology of the mineral deposit including drainage pattern.

a. Physiography:

i. Topography:

The Topography of the area is rugged mountainous with peaks rising to 2510m above msl and lowest point is 1600m above msl. The topography of the area is barren stony without any overburden and is devoid of vegetation.

The general slope of the area is from North to South. The precipitation naturally follows the natural slope to river Jhelum about 2Km from the proposed area. The proposed quarry licensed area lies towards north of the Zewan village. In the surrounding areas of the villages one spring exists which is one of the source of water for the villagers.

ii. Climate and Rainfall:-

The climate of the District is Temperate cum Mediterranean type. In the higher reaches the temperature remains cold throughout the year, average minimum and maximum temperature varies from -5^0C to 32^0C.

The winter season starts from middle of the November and severe winter conditions continues till the middle of February. The District receives an average annual precipitation of about 556.5mm in the form of rain and snow for about 60 days.

B. General Geology:

The Geology of the area has been studied in detail by pioneering workers like Middlemiss, Wadia etc. A Geological succession of Rock Formation is given in the table below:

Table 1: Regional Geology of the Area:

S.No	Formation	Lithology	Age

1	**Alluvial, Scree, Talus deposits**	Recent Alluvium, in the low-lying areas adjoining the Jhelum river and its tributaries consist of finely compacted detrital sediments such as loam, clay, silt and sand with occasional gravel.	Recent
2.	**Karewas**	Lacustrine deposits of alternate bands of loose sand, clays & silt	Pleistocene to Recent
3.	**Triassic** **a. Upper** **b. Middle** **c. Lower**	Limestone (High grade) with minor shale & siliceous limestone bands. Calcareous & argillaceous material. Shale with siliceous Limestone	Triassic
4.	**Panjal Traps**	Basaltic Lava	Upper Carboniferous.
5.	**Nishatbagh Beds**	the Formation comprises a 220 m thick sequence of tuffaceous shale/slate with plant fossils in the basal part, 60 m thick varvite in the middle and 20 m thick shale and sandstone in the upper part.	Lower Permian age
6.	**Agglomeratic Slate**	The Agglomeratic Slate consists of pyroclastic slates, conglomerates and Agglomeratic/pyroclastic products and forms the lower part of the Panjal Volcanic Series.	Permian

LITHOLOGICAL DESCRIPTION:

The lithological description, aerial extent of different Formations and the

hydrogeological importance of some of the major rock types are briefly summarized hereunder:

1. Agglomeratic Slate: The Agglomeratic slates constitute a conspicuous and an interesting group of rocks occurring in various parts of Kashmir. In district Srinagar, some good outcrops of this formation occur along the base of hill bordering the Dal Lake from Gupkar to Shalimar Garden. The Agglomeratic Slate consists of pyroclastic slates, conglomerates and Agglomeratic/pyroclastic products and forms the lower part of the Panjal Volcanic Series. They are gritty or greywacke-like, and often grade into slates. In the fine matrix, angular fragments of quartzite, slate, porphyry granites, etc., are sporadically distributed. The Agglomeratic Slates at Brein contain Lower Gondwana plants, associated with a series of sandstones and shales containing a marine brachiopod faunas.

3. Nishatbagh Beds: At Nishatbagh and Brein in Srinagar district Agglomeratic Slate is overlain by Gondwana plant fossil bearing beds, designated as Nishatbagh Formation. In the type locality Nishatbagh, the Formation comprises a 220 m thick sequence of tuffaceous shale/slate with plant fossils in the basal part, 60 m thick varvite in the middle and 20 m thick shale and sandstone in the upper part. The plant bearing beds have yielded *Gangamopteris augustifolia*, *G. kashmirensis, Glossopteris augustifolia, G. Indica Psygmophyllum haydeni, Cordaites*, etc. imparting a Lower Permian age to the rocks.

4. Panjal Trap: Agglomeratic Slates are overlain by a thick series of bedded and massive andesitic and basaltic flows, called the Panjal Traps. It forms a conspicuous, topographical feature by making prominent cliffs and precipices. The primary constituents are plagioclase and augite in a fine-grained semi crystalline ground mass. The ferromagnesian minerals have been chloritized and/or epidotized to give the traps a green colour. These litho-units are characterized by amygdaloidal (structure) and non-porphyritic and glomeroporphyritic texture. The Panjal Trap is widely distributed in the district Srinagar and well exposed at Panthachowk, Dalgate, Athwajan, Brain,

Chesmashai and Zewan areas. The Traps have developed secondary fissures, joints and weathered residuum.

5. Zewan Formation: In Zewan, which is a type locality in Vihi district, the Gangamopteris beds (Gondwana plant bearing calcareous beds) are overlain by a series of marine fossilferous calcareous shale and crystalline limestone. The name 'Zewan Formation' has been applied to the entire succession from Gangamopteris beds to Lower Triassic beds. The lower part of the Zewan formation is argillaceous but the upper part is calcareous. Zewan Formation is well developed in Zewan Spur, Guryal ravine near Khanmoh. This section forms the type section not only for Permian but also for Permo-Triassic boundary richly preserving the palaeo-climatic and biotic database. The site is of an international importance in geoscientific community and is promoted and developed as national Geo-heritage site.

6. Triassic Formation: The Triassic Formation is mainly composed of homogeneous compact, light grey coloured limestone with shale in the lower parts. In the middle part, shale and sandstone are intercalated with limestone whereas in the upper part it contains massive limestone. A superb development of litho-units of this system is exhibited in a series of picturesque escarpments and cliffs forming the best part of Khanmoh area of the district. Khanmoh Formation of Lower Triassic age comprises dark grey shale and limestone. The Formation is cavernous in nature and extensively folded, faulted, and jointed, besides identified with ammonoid and bivalve fossils.

7. Karewa Formation: The Karewas overlie the folded Triassic and pre-Triassic rocks, flanking the surrounding mountain precipices. The Karewas (Neogene-Quaternery sediments) are fluvio- lacustrine deposits; deposited in two stages, mutually separated by a dry interval during which sub-aerial agents intensively eroded them. In district Srinagar Upper Karewas are exposed which comprises yellow silt, grey clay, calcareous layers and sand with conglomerate in the marginal areas in the lower part and continental loess and reworked loess in the upper part. This Formation is disposed horizontally and is reportedly devoid of fossils or presence of lignite.

8. Alluvial, Scree, Talus deposits: The Recent Alluvium, in the low-lying areas

adjoining the Jhelum river and its tributaries consist of finely compacted detrital sediments such as loam, clay, silt and sand with occasional gravel. The fringe areas of the district are covered by scree and talus material derived from the hill slopes of surrounding ranges. The sediments are of heterogeneous nature ranging from boulder, cobbles, pebbles, gravels before merging into valley fill of fine-grained sediments.

The hydrogeological framework represents modest groundwater potentialities in the area wherein groundwater development is restricted in soft rock Formations of Karewa & colluviums/alluvium deposits of Quaternary age. The distribution of groundwater in these Formations is not ubiquitous and the aquifers (water bearing Formations) vary in their lateral and vertical extensions.

c. Prospecting Agency: Not Available.

d. Details of Prospecting/Exploration Already Carried Out:

The mining operations are already carried out since the decades and as such confirms the presence of the limestone (R) (Zewan Formation) deposits in the proposed cluster. In addition, sufficient information gathered and careful observation during the site visit has aided in determination of the presence of reserves in the Quarry cluster area. Hence, specific exploration is not required. The subject area is demarcated on the ground with reference to the permanent reference point. Later topographical survey of the area was carried out.

The **cluster quarry area** is connected to Grid of Latitude: $34^0 02' 38.83''$ to $34^0 02' 47.00''$ Longitude:$74^0 54' 02.31''$ to $74^0 54' 24.14''$ located in North of the Zewan village. Based on topographical survey and geological features, collected from the surface data, the surface geological plan is prepared on 1:2000 scales with 5.0 m contour interval and enclosed as **Plate – 4.**

e. The Key Plan:

The key cum Location plan (Topo map) of the area is prepared on a scale of 1:50,000 with 5 km radius from the center of the cluster quarry area showing predominant wind

direction, drainage pattern, water bodies, topo features along with extremities of the lease cum Location area(**Plate – 1&2**).

F . The Surface cum Geological Plan:

The surface cum geological plan of the Quarry cluster area is prepared on 1:2000 scale with 5.0 m contour interval and is enclosed as **Plate – 4**.

g. Geological Sections:

Two Geological cross sections AA', & BB' was drawn on 1:1000 scale and enclosed as Plate –4A, & 4B.

h. Future Programme of Exploration:

Since the deposit is exposed over the surface, no future programme of exploration is required.

i. Previous Production Status:

The quarrying operations is going on, hence there was a Previous production.

2. Reserves and Resources as per UNFC

i. Type of Deposit as Per UNFC Guidelines

Road metal and Building stone is not failing in any category of UNFC classification. It is a localized minor mineral available, spatially utilized for construction purpose such as laying of roads, construction of buildings etc., depending upon the characteristics of the rock.

ii. Parameter – Grade, Threshold Value, Sectional Area And Bulk Density:

As the ROM is intended for use in the Road Metal and Building Stone, no specific parameters considered. The bulk density of Limestone was considered at 2.5 to estimate the reserves.

iii. Status of Exploration: G1

b. GEOLOGICAL AXIS

1. Geological Survey:

i. Mapping:

Detailed geological survey was carried out in the cluster quarry area on 1:2,000 scale with 5.0 meter contour intervals.

ii. Preparation of Detailed Topographical Cum Geological Map:

The topographical cum Geological map including all surface Geological features, extent of deposit, structures, have been prepared on 1:2,000 scale with 5.0 contour interval duly marked with surface geological features, and presented on **Plate-3&4**.

iii. Topo Grid / Triangulation Stations:

The topo grid with Geological cross-sections has been prepared on 1:1,000 scale showing litho-units. Relevant plans are enclosed as Plate- 4A & 4B.

2. Geochemical Survey:

Geo-Chemical survey is not warranted as the deposit is used for Road Metal & Building stone purpose only.

3. Geophysical Survey: Not carried out.

4. Technological Survey:

a. Detailed topographical and geological survey was carried out on 1:2,000 scale showing all the surface features, contours at 5.0 m interval, the lease boundary, surface Geology & Structural features.

b. The maximum thickness of Road metal & Building stone was taken upto depth of 12m from the surface, with RL in between 1640 m – 1775 m that is considered to be proved reserves.

c. Reserves are estimated by cross sectional method.

5. FEASIBILITY AXIS

a. Geology: The detailed Geology of the area has been presented in Part-A, which may kindly be referred to.

i. Geology: Road Metal and Building stone will be exploited through opencast other than fully mechanized mining methods with drilling & Blasting. The quarrying operation will be carried out in a systematic way by forming benches of 5.0 m height and the height with proportionate width will be maintained. Jack Hammer drilling and controlled blasting will be carried out in the cluster quarry area.

ii. Environment: The deposit will be mined adopting conventional opencast semi-mechanized mining methods without any adverse environmental impact. The Licensee will obtain statutory clearances as soon as this Mining Plan is approved. Mining in the license hold does not disturb any human settlements as they are far away from the cluster quarry area. On the other hand, the quarrying operations will create livelihood to the villagers nearby. The Licensee will develop green belt around the cluster quarry area as part of his commitment to environment protection. At the time of rainy season water flows through stream channel from the up streams to downwards. This stream channel will goes from northeast to Southwest in the quarry lease area, however precaution measures will take as per the norms of **"Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of illegal Mining Rules 2016".**

iii. Processing: After blasting, the ROM will be directly supplied to the consumers and crusher units holders/industries. No processing is required excepting sizing manually.

Quarrying operations will be carried out by deploying the following machinery:

Table 2: Machinery & Equipment:

S.No	Type of Machine	No.	Motive Power	Consumption of Diesel (in Ltr)/day
1	Excavator /JCB	2	**Diesel**	**112**
2	Tippers	**12**	**Diesel**	**Depends on the distance of destination. AV. 8ltr/Km.**
3	Drilling machines	2	**Diesel**	**56**
4	Tractor mounted compressors	2	**Diesel**	**48**
5	Water Tankers	2	**Diesel**	**14**
6	Pick-up/Jeep	2	**Diesel**	**17**

iv. Infrastructure: The necessary infrastructure of site services such as office, rest shelter, magazine, explosive van, water tankers, power connection etc., will be provided at the south western part of the Cluster quarry block, once the mining plan is approved. The cluster quarry area is connected with District headquarters.

v. Costing: The cost of production of Road Metal & Building Stone works out to be approximately Rs300/- per ton.

vi. Marketing: ROM generated from this quarry is proposed for captive purpose for the crusher and hot mix plant intended to put for use in the highway/District road project of the District. Besides the licensee intends to continue selling the Road Metal and Building stone for various civil projects in and around the District.

vii. Economic Viability: As the proposed quarry license is in the near vicinity and quarrying of road metal is definitely economic and viable.

viii. Other Factors: Relevant clearances shall be obtained for continuing the mining operations in the Cluster Quarry area.

6. ECONOMIC AXIS

i. Detailed Exploration: Detailed topographic survey and geological mapping of the applied cluster quarry area was subject to detailed exploration by field traverses and well inventory data. The depth of rock is assessed by the litho log observed in the vertical cuttings made by the quarry holders during the quarrying for the last decades.

ii. Mining Reports / Mining Plan: This is the first Mining Plan has been submitted.

iii. Specific End-Use Grades Of Reserves (Above Economic Cut-Off Grade): ROM is intended for crushing to use in the aggregates for roads and building stone materials.

iv. Specific Knowledge Of Forest / Non-Forest And Other Land Use Data: The entire cluster quarry area is Government waste land.

v. Feasibility Report Along With Financial Analysis per Economic Viability of the Deposit:

The cost of production of road metal and building stone is arrived at Rs. 300/- per ton inclusive of taxes and royalty. The entire ROM is for captive purpose as such it is surely economic and profitable.

7. Reserves:

i. Mining Method, Recovery Factor, Mining Losses, Processing Loss etc: Road Metal and Building Stone will be quarried by open cast other than fully mechanized method with drilling and controlled blasting. The recovery factor is considered as 95% with 5% intercalated waste. There will not be any quarrying losses except handling loss, which will be recovered during next loading.

ii. Cut-off Grade, Ultimate Pit Depth Proposed: There is no cut-off grade as the ROM will be put to use for road metal and building stone as aggregates. The Ultimate Pit average depth is 12 mts.

iii. Mineral/ Ore Blocked Due to Benches, Barriers, Pillars, Road, Railway, River, Nala, Reservoir, Electric Line and Other Statutory Barriers etc,: The mineral will be blocked in 7.5m safety barrier zone, roads and benches which is computed separately and tabulated below in the succeeding sections.

iv. Total Mineral Reserves: The reserves are estimated basing on field traverses and the information gathered during the field visit of the area and cross section drawn. The reserves are calculated on the basis of established width, thickness and strike influence of the mineralized formation in the area. A barrier of 7.5 m width has been left from the lease boundary as a statutory area. Based on the field traverses, the estimated reserves considered as Proved Reserves, two cross-section AA', BB', is considered for computation of reserves. The depleted reserves have been accounted by cross section and reserves are computed.

Table 3: Reserves Estimation:

Section	Category	Sectional area (M^2)	Volume (M^3)	Specific Gravity	Geological Reserves (MT)	**Mineable Reserves @95% (MT)**	**Waste @5% (MT)**
AA'	Proved	52579	630948	2.5	1577370	1498502	78868.5
BB'		26079	312948	2.5	782370	743251.5	39118.5
	Total				23,59,740	22,41,753	1,17,987

Table 3 a: Reserves Blocked in 7.5m Buffer Zone

Section	Category	Sectional area (M^2)	Volume (M^3)	Specific Gravity	Geological Reserves (MT)	**Mineable Reserves @95% (MT)**	**Waste @5% (MT)**
AA'	Proved	7046	84552	2.5	211380	200811	10569
BB'		3495	41940	2.5	104850	99607.5	5242.5
	Total				3,16,230	3,00,418.5	15,811.5

(A)Total Mineable Reserves = 23,59,740 tons

(B)Reserves blocked in 7.5 m buffer zone = 3,16,230 tons

Net Mineable Reserves A – (B)

= 23,59,740 – 3,16,230 = 20,43,510 tons

v. Mineable Reserves and life of the Quarry:

Initially the total quantity of mineable reserves is considered as (economic) marketable reserves. In this way a total mineable reserves available in this Quarry License area = **20,43,510 MT**.

The average production is proposed to obtain per annum = 150,000 MT and as such the life of mine is almost fourteen years.

The life of mine is calculated for a period of five years as the ancestrally occupied quarry blocks shall be granted quarry license for a period of five years.

Vi . Mineral Reserves and Resources

Table 4: Resources

Level of Exploration	Resources in MT	Grade
G1 – Detailed exploration	20,43,510	-
G2 – General exploration	-	-
G3 – Prospecting	-	-
G4 – Reconnaissance	-	-

2. MINING:

i. OPEN CAST MINING

a. Briefly describe the existing as well as proposed method for Excavation with all design parameters indicating plate nos of plans / sections.

The applied area belongs to hilly terrain with RL ranges from 1640m to 1775m above msl. Most of the area is covered by the limestone deposits at higher levels with less over burden. The mining activity is proposed to be carried out by open cast bench forming method with the help of drilling, blasting and using excavator. The rock is hard in nature as such the blasting is required for excavation. Hence the licensee is advised to get the explosive license, since it is a time taking process, the blasting will be allocated to put sourcing blasting licensed agencies which has an explosive license in starting of the lease period. The blasted ROM will be loaded into trippers of 7 tons capacity by using excavator/loader or even manually. The loaded ROM will be transported to the crushing plant or directly to the consumers. The ROM will crushed in the crusher plant to different sizes of 60mm, 40mm, 20mm, 12mm, 6mm and dust and supplied to construction, road and railway works. The quarry operations will be carried out by benches of 5.0 m height from higher levels to lower levels. It is proposed to raise about 7,50,000 tons ROM during the five years plan.

b. Year-Wise Tentative Excavation in Metric Tonnes Indicating Development, ROM, Pit Wise:

It is proposed to raise the insitu ROM of 1,50,000 tons on an average per year from this quarry. The limestone/shale (R) deposit is exposed as a hillock, so no separate development is required in the beginning of the mining activity to get the target production from this quarry. The quarry working will be carried out by open cast method with the help of drilling and blasting from the top of the hill. Since the applicant does not have blasting license, the blasting part will be allocated to private licensed agency in the initial stage in which the licensee has get an blasting license. The blasted ROM will be loaded into trippers of 7 tons capacity by excavator/loader or even manually. The loaded ROM will be transported to the crushing unit or the consumers. The ROM will be crushed at the crushing unit to various sizes and sorted to 60mm, 40mm, 20mm, 12mm, 6mm and sand and supplied to different construction works, road works and railway ballast. The Tentative excavation proposed to be

carried out for the five years plan is estimated at 7,50,000 tons of Road Metal and Building Stone will be mined out by open cast mechanised method by forming benches of 5.0m each and 7.5m buffer zone. The year-wise details are presented below in table 5:

Table 5: Year wise details:

Year	Bench		Sectional Area (m^2)	Ultimate pit (m)	Volume (M^3)	Specific Gravity	Geological Reserves	**Mineable Reserves @95% (MT)**	**Waste @5% (MT)**
	From	To							
2018-19	1775	1750	21080	12	252960	2.5	632400	600780	31620
2019-20	1750	1730	15418	12	185016	2.5	462540	439413	23127
2020-21	1730	1710	11500	12	138000	2.5	345000	327750	17250
2021-22	1710	1690	10063	12	120756	2.5	301890	286795.5	15094.5
2022-23	1690	1650	20599	12	247188	2.5	617970	587071.5	30898.5
Total							2359800	2241810	117990

No working will be carried out in rainy season.

c.Layout of Mine Workings, Pits, Roads etc:

The quarrying operation is going on, previous working one pit is observed in the cluster quarry area. At the time of quarrying operation the overburden will be used for existing haulage roads and strengthened for better navigation. Dump will be positioned at southern portion of the cluster quarry area. The Licensee intends to extract Road Metal and Building Stone production to the tune of 7,50,000 MTs of road metal and building stone of saleable mineral during this Plan. During this Plan period, it is proposed to exploit the road metal from the total area of 78658M^2 to an average depth of 8-12 m over the lease area maximum RL 1640 m to RL1775m as depicted **on Plate – 5A-5E.**

d. **Production Schedule**: The production of Road Metal and Building Stone will continue for a minimum 300 working days per annum. An anticipated average production of 1,50,000 tons/annum is planned from this Quarry during this five years plan. Adequate men and machinery is planned to meet this production schedule.

e. **Drilling & Blasting**. Drilling: 54 mm diameter hammer drilling will be employed for blasting holes in staggered pattern of 2X3m with a depth of 3.35m. Holes will be drilled vertically to a depth of 3.35m for a bench height of 3.0 m with a spacing and burden of 3.0 m and 2.5m respectively.

f. **Blasting:** Blasting will be carried out by using controlled blasting techniques for the purpose to reduce the amount of over break and to control the ground vibrations. Blasting will be done with the help of electronic merger by using electronic detonators, ordinary detonators, fuse wire and Ammonium Nitrate. The applicant will be hiring a licensed blasting contractor for the services of blasting. Besides this, the applicant has to obtain all necessary permits to store, handle the explosives on site. The charge per hole will be about 1kg of explosive.

Amount of explosive required per hole - 1 Kg

No of holes planned per day - 10

Amount of explosive required per day - 10.0 Kg

Amount of explosive required per annum – 30,00 Kg

Amount of explosive required for five years plan - 15,000 Kg

After blasting working places will not be entered by any of the worker, unless sufficient time has elapsed for dust, smoke and fumes to be cleared by a current of air and the broken ore or rock will not be removed unless it has been thoroughly wetted with water.

Environment Management Plan:

1. Baseline Information:

i. Details of the conceptual status of pits: The license period is for 5 years. By the end of the five years plan, total of 7,50,000 tons of ROM is planned for production. The planned depth of the quarry would be 8-12.0m.

ii, The worked out pit as a whole will occupy an area of 78658 m^2 to a depth of 8-12.0 m from the existing RL 1775 m of the worked out pit. The plantation would be occupying an area of 10542 m^2 in all the four directions in buffer zones of cluster quarry area. The conceptual plan and conceptual section on a scale of 1:2000 is presented **on Plate –6**.

2. UNDERGR GROUND MINING =N.A.

3. MINE DRAINAGE:

a. **Minimum and Maximum Depth of Water Table:** The Quarry cluster area is a mound with a maximum height of 1775 m above msl. There are no water bodies existing in the vicinity. GW level is observed at the toe of the hill in nearby villages.

b. **Quantity and Quality of Water Likely to be encountered**: No water will not be encountered in the cluster quarry area during the excavations and subsequent operations as the quarrying is on an elevated mound above the GL. Hence, need for pumping does not arise. Quality of GW tested from the surroundings is found to be potable.

c. **Regional and Local Drainage Pattern**: The entire cluster quarry area has a down slope only. Sheet wash run-off is anticipated during the rainy season. Precautions measures takes as per the norms of **"Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of illegal Mining Rules 2016",** Solid wash expected during rainy season in the cluster quarry area is negligible.

4. STACKING OF MINERAL REJECT / SUB-GRADE MATERIAL AND DISPOSAL OF WASTE

Tops soil in the quarry cluster area is negligible. The waste that would be generated is only form interstitial voids that is estimated at 5%. This will be utilized for the formation of internal roads periodically. Rest of the waste will be utilized to form a 2.0m high barrier all along he 7.5m buffer zone of the quarry cluster area.

5. USE OF MINERAL AND MINERAL REJECT

The ROM will be fed to the consumers and to the crushers outside the quarry cluster area where it will be crushed to desired sizes. Different grades of output from the crusher will be primarily used in the construction of National Highway and District road and also the material will be sold in the market for various civil works in and around Srinagar District.

6. PROCESSING OF ROM AND MINERAL REJECT

ROM will be fed to the crusher to obtain different sized aggregates required for road construction and input to hot mix plant.

7. OTHER

a. Site Services:

Site services such as office room, first aid, rest shelter, toilets for gents and ladies will be built at the Southern part of the QL area.

b. Employment Potential:

1. Highly skilled - Mines Manager (part time) - 1
2. Mine Supervisor - 1
3. Skilled &Semi-skilled - Bore Compressor Operators - 2
4. Bore Compressor Assistants - 2
5. JCB Backhoe Operator - 2
6. JCB Backhoe Assistants – 2
6. Skilled labours-10
7. Pick-up Drivers - 2
8. Security Guard – 2
9. Tipper Drivers-10

Total personnel in Mining Operations – 34

PART-B

8. PROGRESSIVE MINE CLOSURE PLAN (PMCP)

8.1. Environment Base line information:

a. Existing Land Use Pattern: The QL area is a wasteland. An area of about 78658 m^2 will be excavated to a depth of 8-12.0m on an average to win the mineral. An area of 10542 m^2 is proposed for afforestation. The QL area is a barren land and surrounding lands are also are wastelands. In the north, northeast and northwestern part is the barren land. On the southern part agricultural land exists. Environmental Plan not to scale is **enclosed as Plate-7.**

b. Human Settlements: Within a radius of 5km of QL area exists 13 villages. The main profession of the people is business and the Mining, rearing sheep and cows and other small business and labour on daily wages. More details of the villages in the surroundings are as tabulated below in Table No.6.

Table 6: Villages in the Vicinity of QL Area

S. No	Village	Distance (KMs)
1.	Zawoora	0.433
2.	Zewan	1.10
3.	Khanmoh	2.6
4.	Zawarah (Zaffron Colony)	2.8
5.	Wuyan	5.06
6.	Sampoora	2.6
7.	Panthachowk	3.3
8.	Athwajan	4.3
9.	Lasjan	4.9
10.	Aliabad	3.6
11.	Sumerbugh	4.54
12.	Pampore	3.09
13.	Rakhshalina	3.8

c. Public Buildings, Places of Worship and Monuments: No monuments are present in the vicinity of QL area. However a mosque and public buildings are near the cluster area at a distance of around 300m.

d. Sanctuary if any in the Vicinity of the Lease Hold: No sanctuary, zoo or park are present in the vicinity of the QL area.

8.2. Impact Assessment:

a. Land Area Degraded: An area of about 7.86ha will be degraded for the working pit. Plantation will occupy 10542 Sq mts.

b. Air Quality: Various activities involved in mining of Road Metal and Building Stone generates dust. To some extent, dust generated will be controlled by sprinkling of water on roads. Masks, earplugs and safety goggles will be supplied to the workers on site to protect themselves from dust.

c. Water Quality: There are no water bodies like ponds, lakes in the vicinity of QL area. The precautions takes as per the norms of **"Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of illegal Mining Rules 2016".** Quarrying of Road Metal and Building Stone generates minimal dust, which is not harmful. Hence, the quality of the water in the surrounding water bodies will not be affected by the mining activity.

d. Noise Level: The QL area does not have any villages in the immediate neighborhood. The nearest village is Khanmoh which is 1.0km away from the QL area. Noise is anticipated in the various activities involved like Drilling, blasting and vehicle movement. As the mining activities are of the small scale in nature, the noise generated would be well within the limits and would not affect the residents in the surrounding villages. Lessee will take all necessary measures to minimize the sound generated particularly during blasting activity like using of mufflers. Site workers will be supplied with ear plugs to protect themselves from noise pollution.

e. **Vibration Levels due to Blasting**: As the drilling method proposed, is by using tractor mounted compressors and controlled blasting vibration level will be within the limits and will not affect the people working on site.

f. Water Regime: Mining activity proposed is over the elevated mound and the overall slope of the mining face will be kept 45^0 and as such does not affect the water bodies. Groundwater will no way, will be affected.

g. Acid Mine Drainage: No chemicals are involved in the extraction or processing of the mineral, hence there is no danger of acid mine drainage.

h. Surface Subsidence: The ground surface in around the QL area is covered by limestone hill mount and for the mining operation the overall slope is to be maintained at around 45^0 which does not disturb the slope that may results rock falling. Internal roads are well compacted to avoid any skidding of vehicles. The benches and ramp ways will be well built and maintained to avoid any kind of subsidence or skidding.

i. Socio Economics: Quarrying of Road Metal and Building Stone will generate employment to the people of surrounding villages both skilled and unskilled. Government will get income in the form of royalty, rent etc. Raw material for the road and civil works will be generated by the quarrying activity that will be one of the boosting factors for the local economy.

j. Historical Monuments: No historical, archaeological or Geological monuments are present in and around the QL area. However at the top of the plateau mound, South Campus of University of Kashmir exists.

k. Bio-Diversity: The slopes and crevices of the mound have some local species of trees in the form of Kikar, willow etc besides bushes and shrubs. No wild animals are reported within these bushes.

8.3. Progressive Reclamation Plan:

a. Mined-Out Land: although the quarry cluster area is stony hilly terrain where the possibility of planting saplings is rare. However utmost efforts shall be applied towards plants growth. In case non-growth of plants, plantation shall be carried out outside the license boundary. It is proposed to develop green belt within the 7.5m statutory barrier along the license boundary. The plantation shall be planted every year at regular interval and in phased manner.

b. Topsoil Management: Top soil present in the QL area is negligible and hence topsoil management does not arise.

c. Tailings Dam Management: Tailings Dam is not required.

d. Acid Mine Drainage and Mitigation Measures: No chemicals are involved in the extraction or processing of the mineral, hence there is no danger of acid mine drainage.

e. Surface Subsidence Mitigation Measures: The ground surface in around the QL area is covered by trap hill mount and for the mining operation the overall slope shall be kept at around 45^0 which does not disturb the slope that may results rock falling. Internal roads are well compacted to avoid any skidding of vehicles. The benches and ramp ways will be well built and maintained to avoid any kind of subsidence or skidding.

8.4. Disaster Management and Risk Assessment:

Disasters are possible in an industry like mining. To meet with any kind of emergency on or off site, risks are assessed in advance and Risk assessment plan is prepared. Assessing the possible hazards and planning the procedures to be followed in case of emergency will reduce the intensity impact. Proper bench design in mine and observing all kind of safety measures, usage of proper PPE on site, attentiveness of the work force on site, following pre-defined traffic rules by all the people on site some of the measures to be followed to reduce accidents on site. Proper care in storage and handling of explosives, hazardous materials, fuels is also necessary. Proper communication is key factor in minimizing the accidents on site. Safety of all working personnel will be the utmost priority of the lessee. Lessee will provide all the site personnel with necessary PPE like, hard hats, safety goggles, earplugs, dust masks etc.

To meet any kind of emergency, readiness to shift the injured to the nearest hospital is necessary. All mining personnel should be aware of the nearest health centres and hospitals. All managing personnel will take the responsibility of taking the injured immediately to the hospital in case of any accident. A few of the site personnel should be provided first aid training besides the presence of a well-maintained first aid kit. District Hospital is at a distance of 1.0 km from the lease area, which has healthcare facilities. In case of emergency state government's service is available. Apart from this one additional pick up with driver will always be available to meet with emergency situation.

8.5. Care and maintenance during temporary discontinuance :

An emergency plan to deal with the situation of temporary discontinuance or incomplete programme due to court order / due to statutory requirements or any other unforeseen circumstance will be drawn by the technical and managerial person to suit the specific situation of this mine. This would be reviewed and modified to suit the changing conditions and needs. This would take care of preventing of access to dangerous places, pits and prevent accidental fall in to the water logged pit of animals and men. Security is also to be looked in to the safety measures placed at various places like firefighting equipment, main switches etc. Security to be deployed at Explosive storage.

The mining is yet to commence. As mining continues till then the question of discontinuance does not arise. However, any untoward incidence happens the safety of the mining area will not be disturbed. Security / Watchmen will be posted at the mine site for watch and ward.

8.6. Financial Assurance:

As the mine belongs to "B2" category mine hence Financial Assurance is calculated @ 25,000/- per hectare or the part the area put to use for mining and allied activities subject to minimum to rupees one lac in the form and manner as may be prescribed. The financial assurance is to be submitted in the form of Bank Guarantee at the time of final submission of this document.

Government of Jammu and Kashmir
Directorate of Geology and Mining, Srinagar

Subject:- Declaration of Cluster of Quarries for grant of Quarry Licences.

Reference:- JDK/F-21/Sgr/II/352 dated 28.06.2016 .

Whereas, extraction of Stones from individual Stone Quarries was regulated through grant of Short Term Quarry Permits under the provisions of J&K Minor Mineral Concession Rules,1962.

Whereas, Government promulgated the Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules, 2016 vide SRO-105 of 2016 dated 31.03.2016 repealing J&K Minor Mineral Concession Rules, 1962.

Whereas, Under Rule, 14 of said rules the individual quarries falling in areas ancestrally occupied and certified by the revenue authority falling are to be clubbed and declared as cluster of quarries for grant of Mineral Concession.

Whereas, in pursuance to this office letter No. 296/TG/Cluster/16/734-40 dated 09.05.2016 Stone Quarry Belts were identified and blocks governing the existing quarries were prepared.

Whereas, under Rule, 44 the said quarry belts/clusters are to be considered for grant of quarry licence subject to the submission of following documents:

3. Approved Mining Plan with Environment Management Plan (EMP).
2. Environmental Clearance from the Competent Authority.

In view of the above and in pursuance to the provisions of Rule 14 of the Jammu and Kashmir Minor Mineral Concession, Storage, Transportation of Minerals and Prevention of Illegal Mining Rules 2016, the quarry belts of **District, Srinagar** indicated in annexure "A" are declared as Cluster of Quarries subject to authentication by revenue authorities.

22/8/2017
Director
Geology & Mining
J&K Govt; Srinagar.

No:- 373 /MCC/DGM/CQK/16/ 3520 -22
Dated:- 22.08.2017.

Copy to:-

1. The Commissioner/Secretary to Govt; Industries and Commerce Department, Civil Secretariat, Srinagar for information please.
2. The Dy. Commissioner, Srinagar for information and necessary action.
3. The Joint Director(K) Geology & Mining Department, Srinagar for information with the request to direct I/C DMO concerned for advising the quarry holders to submit the requisite documents as required under rules for processing their cases for grant of Quarry Licence.

Director
Geology & Mining
J&K Govt; Srinagar.

Annexure "

District, Srinagar

S.No	Name of Stone Quarry Belt	Area	No. of Quarries
1	BSF(Panthachowk)	6.68	15
2	Dakteng(Zewan)	8.92	20
3	Shulguf(Zewan) Block-A Tehsil, Panthachowk	6.19	11
4	Shulguf(Zewan) Block-B Tehsil, Panthachowk	6.86	10
5	Zewan Bala, Block-A Tehsil, Panthachowk	7.64	20
6	Zewan Bala, Block-B Tehsil, Panthachowk	6.06	20

Government of Jammu & Kashmir

OFFICE OF THE TEHSILDAR PANTHA CHOWK SRINAGAR

The District Mineral Officer,
Geology & Minning Department,
Srinagar.

No: 221 /TPC/OQ Dated: 08.09.2018

Subject: - Declaration of clusters of quaries for grant of Quarries licences.

Sir,

Regarding the subject cited above, the case submitted by DMO Srinagar has been got verified by field agency which reveals that the land is recorded as Khalsa Sarkar in estate Zewan under survey no. 147 measuring 70 kanals 19 marlas (Gair Mumkin dekanati sang, Bangir qadeem and Baghi khuski) the land is in shape of hill and various quarries are existing there since long time. The quarry holders have applied before the DMO Srinagar for issuance of licences.

Hence the report is submitted for favour of further necessary action at your end.

Yours faithfully

Tehsildar
Pantha Chowk 08/9/18

TEHSILDAR
Pantha Chowk

از پٹواری حلقہ زیون مورخہ 27 6/18

مضمون Title verification of land regarding Stone quarries at DAK-TENG village Zewan. Tehsil Panthachowk.

بخدمت جناب تحصیلدار صاحب پانتھ چوک

جناب عالی! عرض [illegible] [illegible] الکرک [illegible] مطابق [illegible] [illegible]
[illegible] [illegible]
No: DMO/DGM/Sgr/SQ/56/1486-90 مورخہ 5-5/18
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[illegible] [illegible]

[illegible]

[illegible] [illegible] ہے
[illegible]

ضلع ... تحصیل ... سال ... موضع زیوت ... مالک / پانچ چوک ... نمبر

نمبر		نام مالک معہ احوال	نام کاشت کار معہ احوال								
۳۲	۲/۲ بنجر قدیم	سرکار	مقبوضہ سرکار	1/2	بنجر قدیم 19	-	-	-	-	-	-

ریمارکس — قطعہ نمبر ہذا دوکان تعمیر شدہ ہیں کرایہ محکمہ جنگلات رپورٹ موقع جموں و کشمیر ... (DMO) صاحب ... (1) ... ولد عبدالرشید بٹ (2) ... ولد ... (3) ... مشتاق احمد ... (4) مشتاق احمد ولد ... (5) عبدالرحمان ولد ... (6) ... ولد ... (7) ... (8) مختار احمد ولد عبدالعزیز ... (9) ... ولد عبدالغنی ... (10) ... ولد ... ساکنان ... پانچ چوک (11) ... ولد ... (12) ... ولد ... ساکنہ زیوت (13) مشتاق احمد ولد ... (14) اعجاز احمد ... عبدالرحمان ... (15) طارق احمد ولد عبدال ... (16) ... ولد عبدالغنی بٹ ساکنان ... موقعہ پر ... 19 ... دوکان تعمیر شدہ ہے۔

(2) رقبہ زیر رپورٹ سرکار / مقبوضہ سرکار ... 19 ... بنجر قدیم ... ہے۔

(3) رقبہ زیر رپورٹ بیرون حدود ... میں واقع ہے۔ Quarry-Holders ... دوکان تعمیر ... 8 ... محکمہ جنگلات ... ہیں۔

(4) ... محکمہ جنگلات ... (No. DCM/Sgr/SQ/56/1406-90) dt 5/5/18 ... 27/6/18

... 27/6/18

06/12/18

انتخاب خسرہ گرداوری موضع زیون تحصیل حال ضلع سرینگر

۷	۶			۵	۴		۳	۲	۱
	خریف ۲۰۱۷ء				رقبہ				
کیفیت	کاشت و مالکان	انتقالات	جنس	قسم زمین	مرلہ	کنال	نام کاشتکار معہ احوال	نام مالک معہ احوال	نمبر خسرہ
			خالی ۱۷	خشکی ب۳	-	۱۷	مقبوضہ سرکار و مقبوضہ سرو واتند و دیگر [illegible] وغیرہ مندرجہ اندراجات گرداوری	سرکار	۱۲۷
			[illegible]	[illegible]	۴	۲۷			
			۲۶	نمبر ندرم	۱۵	۲۶			
					۱۹	۷۰			

زیست

کہ مقبوضہ روٹ شمولی [illegible] درانداج کیا [illegible]

27/8

06/09/18

C/S

NAIB TEHS[illegible]
[illegible]
Executive Magist[illegible]

TEHS[illegible]
Pantha Chow[illegible]

(5)

PLAN SHOWING MINERAL QUARRY BLOCK AT DAKTENG (ZEWAN), TEHSIL & DISTRICT SRINAGAR.

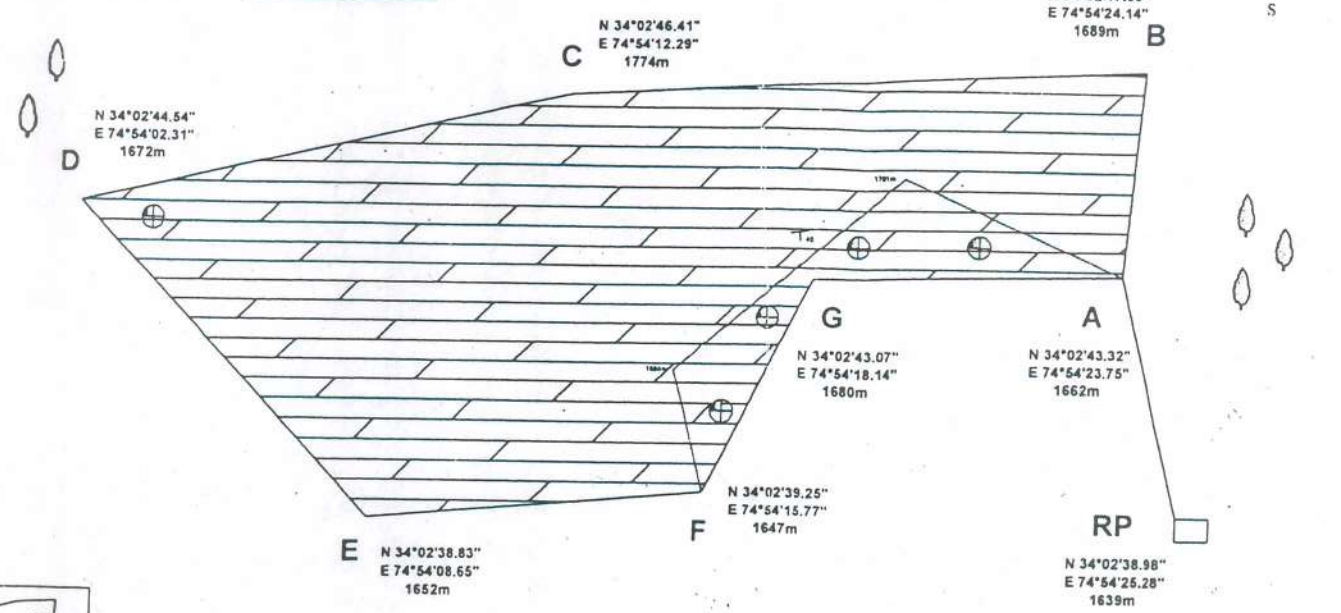
Area of Plan: 8.92 hectare

Scale: 1:4000

REFERENCE POINT: RP
NW CORNER OF HOUSE OF ROUF AH SHEIEK

INDEX:

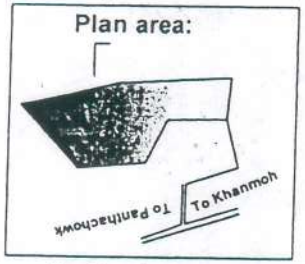
STATION		DISTANCE (Meters)	BEARING (Degrees)
FROM	TO		
RP	A	139	346
A	B	116	5
B	C	317	267
C	D	281	257
D	E	241	137
E	F	188	85
F	G	134	26
G	A	169	89



LEGEND:

1.	PLAN AREA	
2.	SHALE/SST/LST	
3.	ATTITUDE OF BEDS	T
4.	HABITATION & OTHERS	
5.	PLANTATION	
6.	ROAD/EXIT POINT	—
7.	QUARRY	⊕
8.	UPPER EXTRACTION LIMIT	

KEY PLAN (N.T.S.)



No. of Quarries: 20

GOVERNMENT OF JAMMU AND KASHMIR
DEPARTMENT OF GEOLOGY & MINING.

SHAKIL A ZARGAR	SARAFRAZ SHABAN	M YASEEN BHAT
Surveyor (Jr)	Geological Asstt	Geological Gr-III

حکومت ہند

Government of India

محمد امین وانی

Mohammad Amin Wani

تاریخ پیدایش / DOB : 22/06/1968

مرد / Male

3794 1011 2035

عام آدمی کا ادھیکار - ادھار

بھارتی مخصوص شناخت اتھارٹی

Unique Identification Authority of India

پتہ:
ولد: حاجی غلام محمد اونی,
سمبورہ, -, لسجن, سرینگر,
لسجن, جمو اند کشمیر,
191101

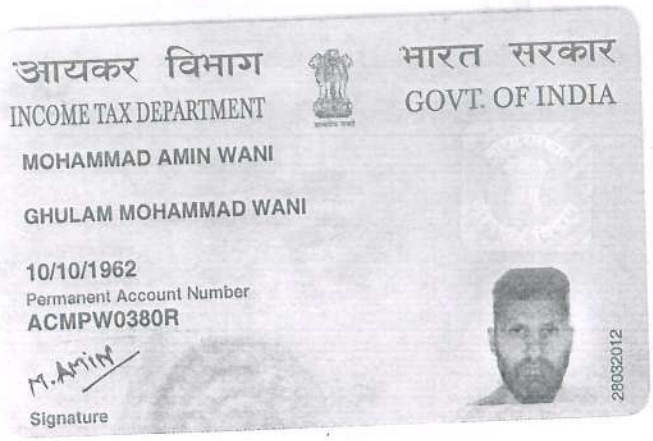
Address:
S/O: Haji Ghulam Mohammad Wani, SEMPORA, -, Lasjan, Srinagar, Lasjan, Jammu And Kashmir, 191101

3794 1011 2035

1947
1800 300 1947

help@uidai.gov.in

www.uidai.gov.in


आयकर विभाग
INCOME TAX DEPARTMENT
भारत सरकार
GOVT. OF INDIA
MOHAMMAD AMIN WANI
GHULAM MOHAMMAD WANI
10/10/1962
Permanent Account Number
ACMPW0380R
Signature
28032012

حکومت ہند
Government of India

غلام حسن بھٹ
Ghulam Hassan Bhat
والد : گھ مُحامد بھٹ
Father : Gh Mohammad Bhat
تاریخ پیدایش / DOB : 06/04/1970
مرد / Male

7960 9290 9425

عام آدمی کا ادھیکار - ادھار

بھارتی مخصوص شناخت اتھارٹی
Unique Identification Authority of India

پتہ:
آری پورہ, لسجن, سرینگر, ۷۳,
لسجن, جممو اند کشمیر,
191101

Address:
73, ARIPORA, Lasjan, Srinagar,
Lasjan, Jammu And Kashmir,
191101

7960 9290 9425

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1800 300 1947

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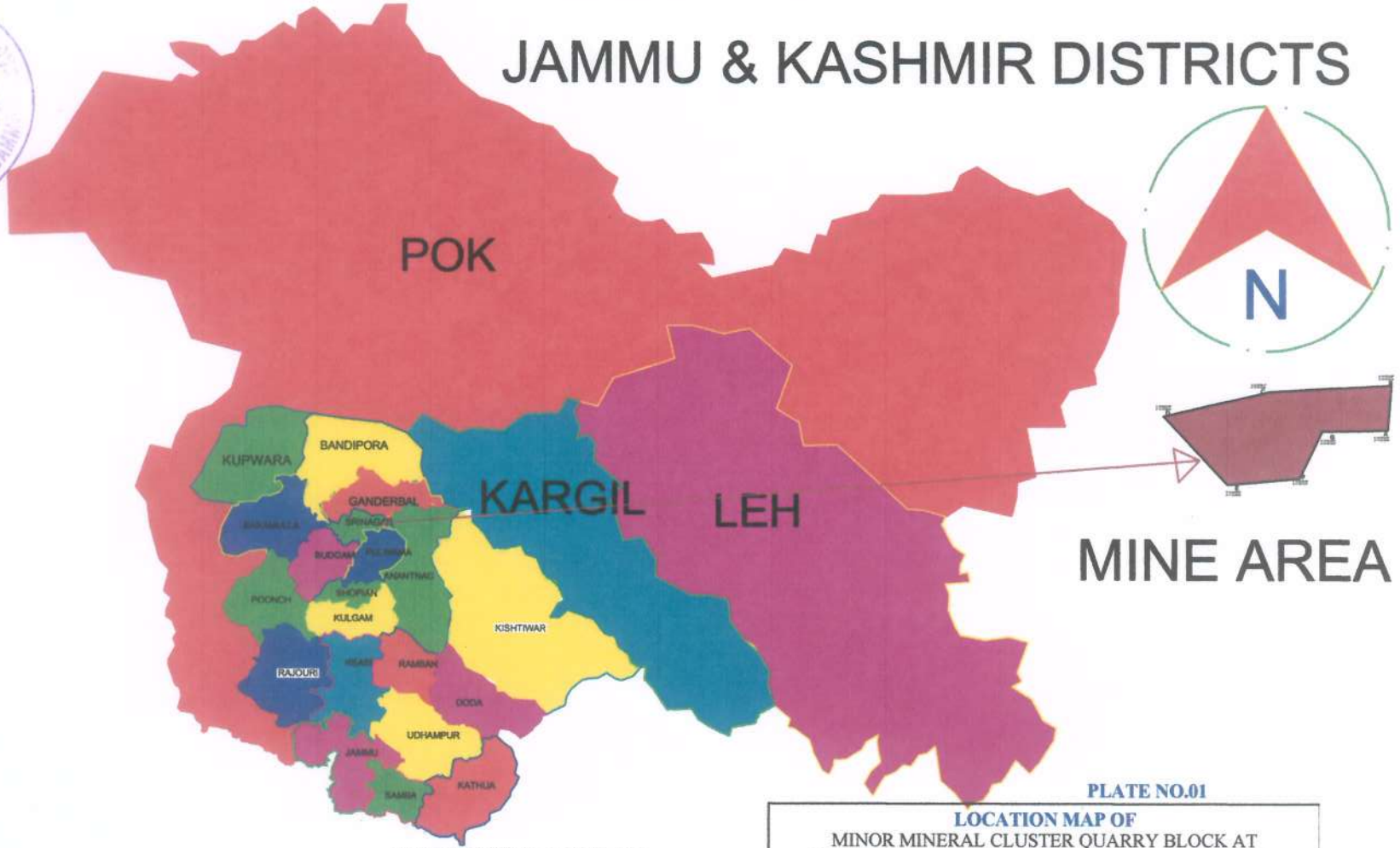
आयकर विभाग
INCOME TAX DEPARTMENT
भारत सरकार
GOVT. OF INDIA
GHULAM HUSSAIN BHAT
GHULAM MOHAMMAD BHAT
24/04/1969
Permanent Account Number
CGAPB5470K
Signature

JAMMU & KASHMIR DISTRICTS



INDEX/LEGEND

S.NO.	DESCRIPTION	
1	LEASE BOUNDARY	
2	DISTRICT BOUNDARY	

PLATE NO.01

LOCATION MAP OF

MINOR MINERAL CLUSTER QUARRY BLOCK AT DAKTENG (ZEWAN) BLOCK-A DISTRICT SRINAGAR, J&K STATE

TOPOSHEET NO. 43J/16 (Restricted)

AREA: 8.92 HECTARES

LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT

PREPARED &

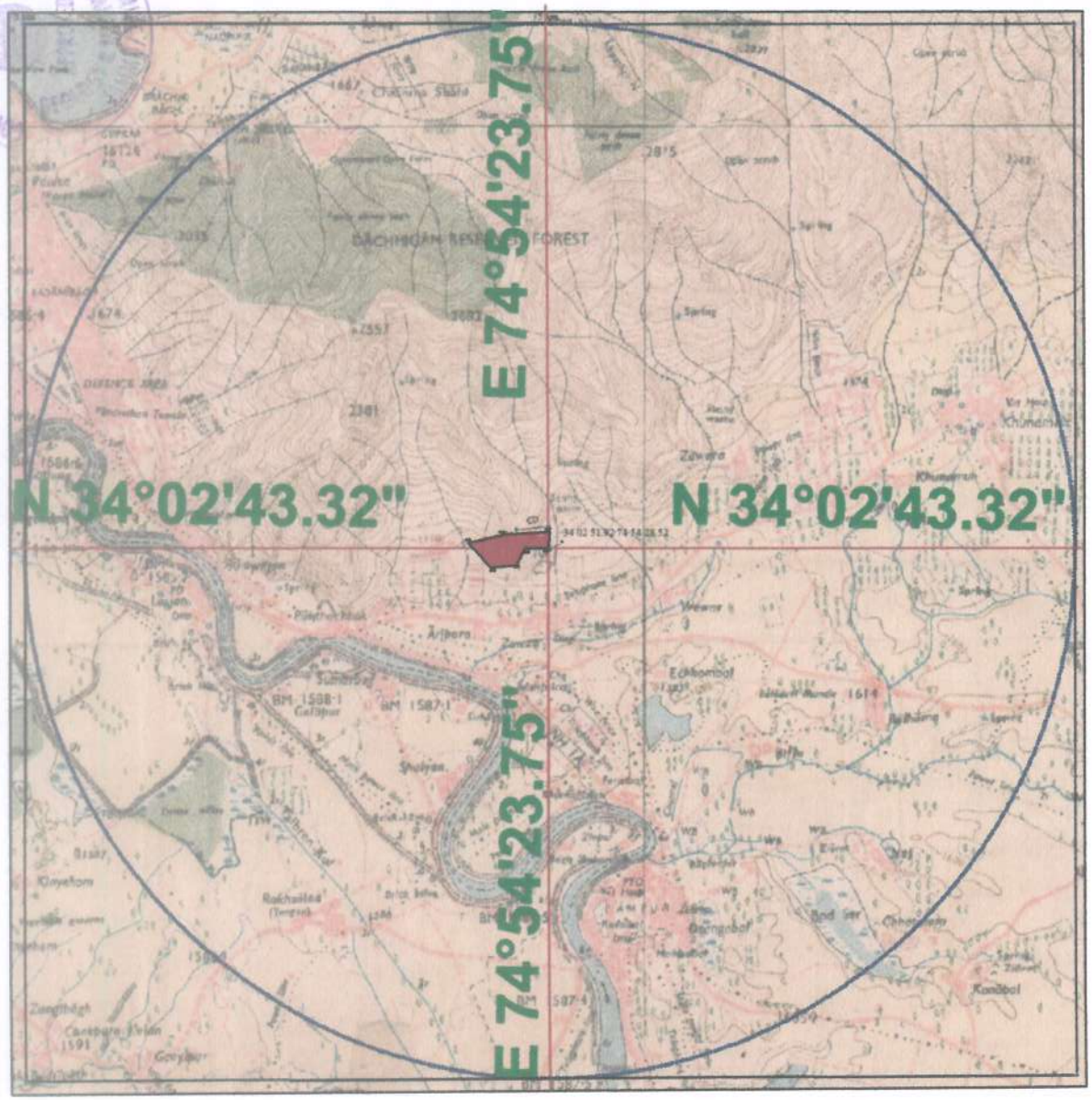
SURVEYED BY: MAQBOOL YOUSUF SCALE: NTS

CERTIFIED THAT PLATES ARE PREPARED BASED ON THE LEASE/LICENSE MAP AUTHENTICATED BY J&K STATE GOVT.

MAQBOOL YOUSUF
15/DGM/RQP/2018

GOVERNMENT OF JAMMU & KASHMIR APPROVED GEOLOGIST JAMMU

MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg. No. 15/DGM/RQP/2018



INDEX

S.NO.	DESCRIPTION	
1	LEASE BOUNDARY	
2	CONTOUR	1676
3	ROAD	
4	RIVER	
5.	GPS READINGS	N 34°02'43.32" E 74°54'23.75"
6	HABITATION	

PLATE NO.02

KEY PLAN WITH 5KM BUFFER ZONE OF
MINOR MINERAL CLUSTER QUARRY BLOCK AT DAKTENG (ZEWAN) DISTRICT SRINAGAR, J&K STATE

TOPOSHEET NO. 43J/16 (Restricted)

AREA: 8.92 HECTARES

LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT

PREPARED &

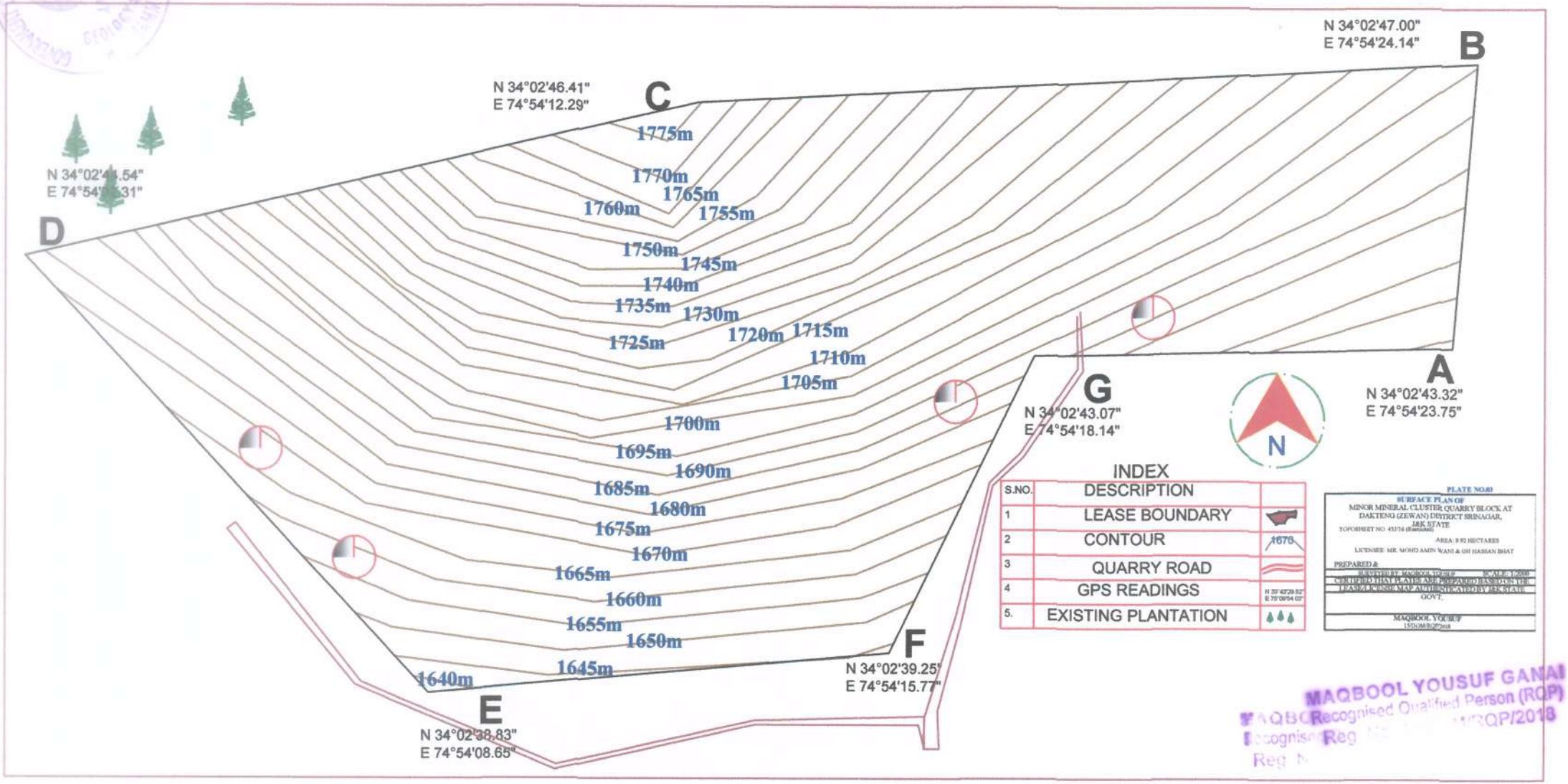
SURVEYED BY: MAQBOOL YOUSUF SCALE: NTS

CERTIFIED THAT PLATES ARE PREPARED BASED ON THE LEASE/LICENSE MAP AUTHENTICATED BY J&K STATE GOVT.

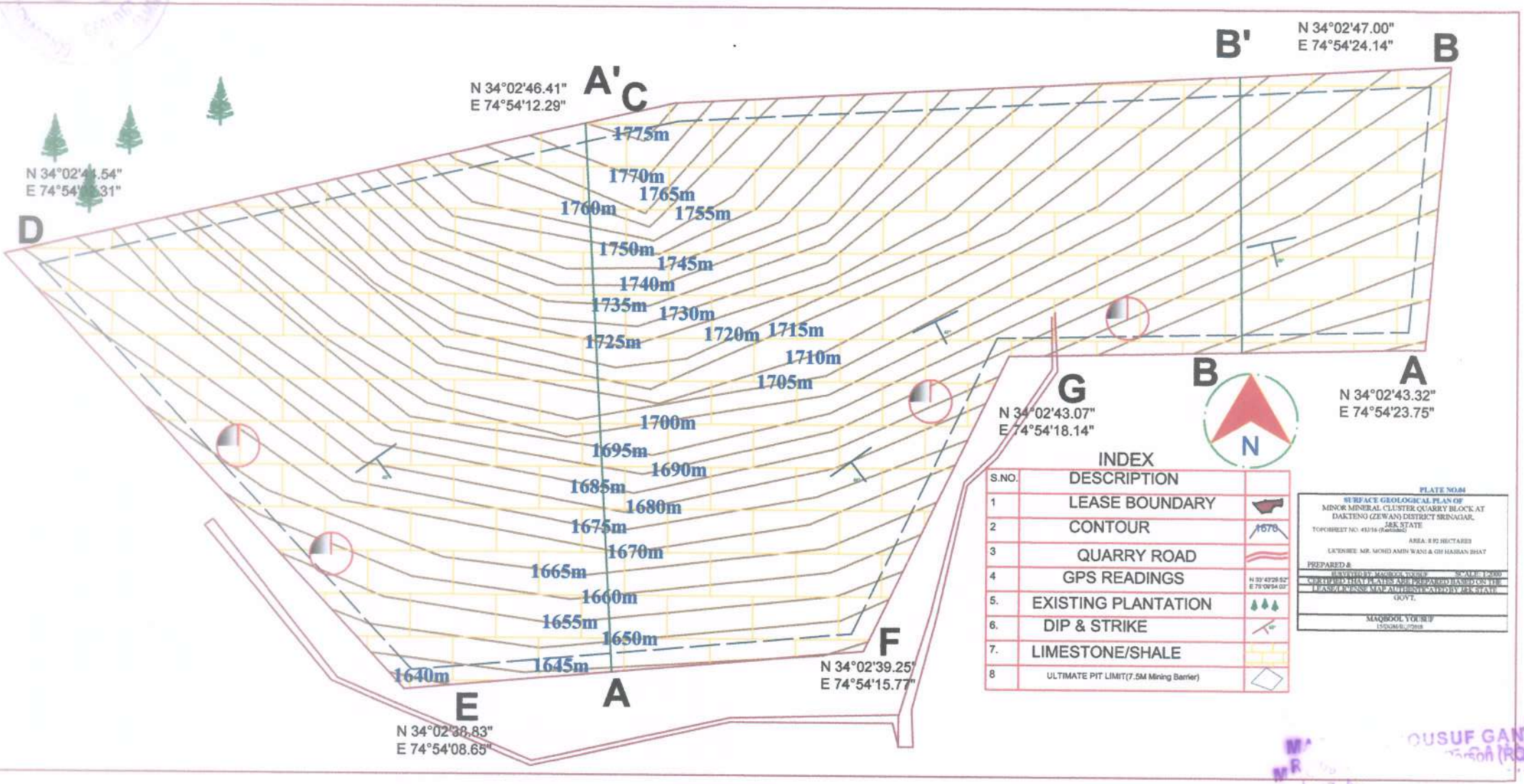
MAQBOOL YOUSUF
15/DGM/RQP/2018

N

MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg. No. 15/DGM/RQP/2018



MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg No. [illegible]/RQP/2018



INDEX

S.NO.	DESCRIPTION	
1	LEASE BOUNDARY	
2	CONTOUR	1670
3	QUARRY ROAD	
4	GPS READINGS	N 33°43'28.52" E 75°09'54.03"
5.	EXISTING PLANTATION	
6.	DIP & STRIKE	
7.	LIMESTONE/SHALE	
8	ULTIMATE PIT LIMIT(7.5M Mining Barrier)	

PLATE NO.04

SURFACE GEOLOGICAL PLAN OF
MINOR MINERAL CLUSTER QUARRY BLOCK AT
DAKTENG (ZEWAN) DISTRICT SRINAGAR,
J&K STATE

TOPOSHEET NO. 43J/16 (Kanimarg)

AREA: 8.92 HECTARES

LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT

PREPARED &
SURVEYED BY: MAQBOOL YOUSUF — SCALE: 1:2000

CERTIFIED THAT PLANS ARE PREPARED ON THE BASIS OF PLANS AND AUTHENTICATED BY J&K STATE GOVT.

MAQBOOL YOUSUF
15/DGM/RQP/2018

PLATE NO.04A

GEOLOGICAL SECTION OF

MINOR MINERAL CLUSTER QUARRY BLOCK AT DAKTENG (ZEWAN) DISTRICT SRINAGAR, J&K STATE

TOPOSHEET NO. 43J/16 (Restricted)

AREA: 8.92 HECTARES

LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT

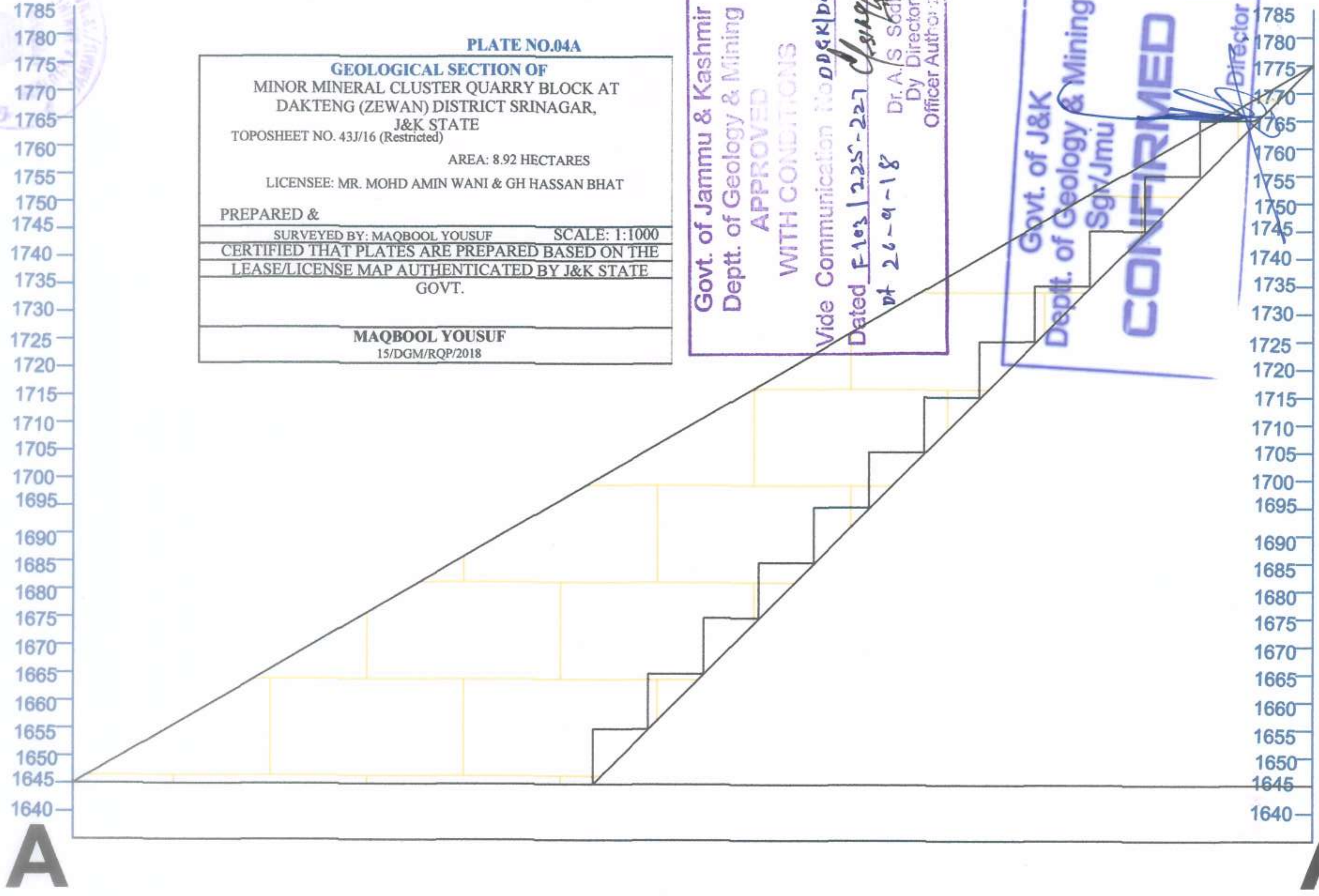
PREPARED &

SURVEYED BY: MAQBOOL YOUSUF SCALE: 1:1000

CERTIFIED THAT PLATES ARE PREPARED BASED ON THE LEASE/LICENSE MAP AUTHENTICATED BY J&K STATE GOVT.

MAQBOOL YOUSUF

15/DGM/RQP/2018



Govt. of Jammu & Kashmir
Deptt. of Geology & Mining
APPROVED
WITH CONDITIONS
Vide Communication No DDGK/DAM/ /Sgr
Dated F103/225-227
Dt 26-9-18
Dr. A.S Sodhi
Dy Director
Officer Authorized

Govt. of J&K
Deptt. of Geology & Mining
Sgr/Jmu
CONFIRMED
Director

MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg. No. 15/DGM/RQP/2018

PLATE NO.04B

GEOLOGICAL SECTION OF
MINOR MINERAL CLUSTER QUARRY BLOCK AT
DAKTENG (ZEWAN) DISTRICT SRINAGAR,
J&K STATE
TOPOSHEET NO. 43J/16 (Restricted)

AREA: 8.92 HECTARES

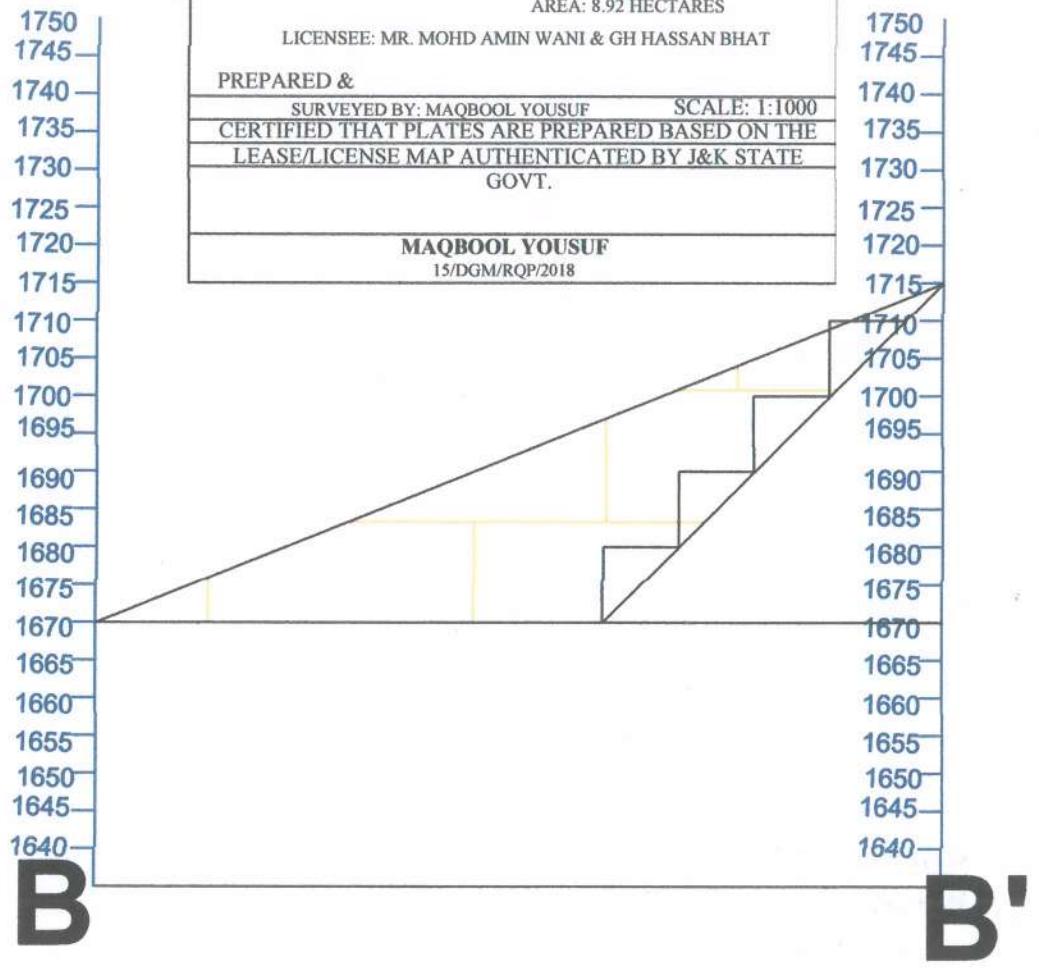
LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT

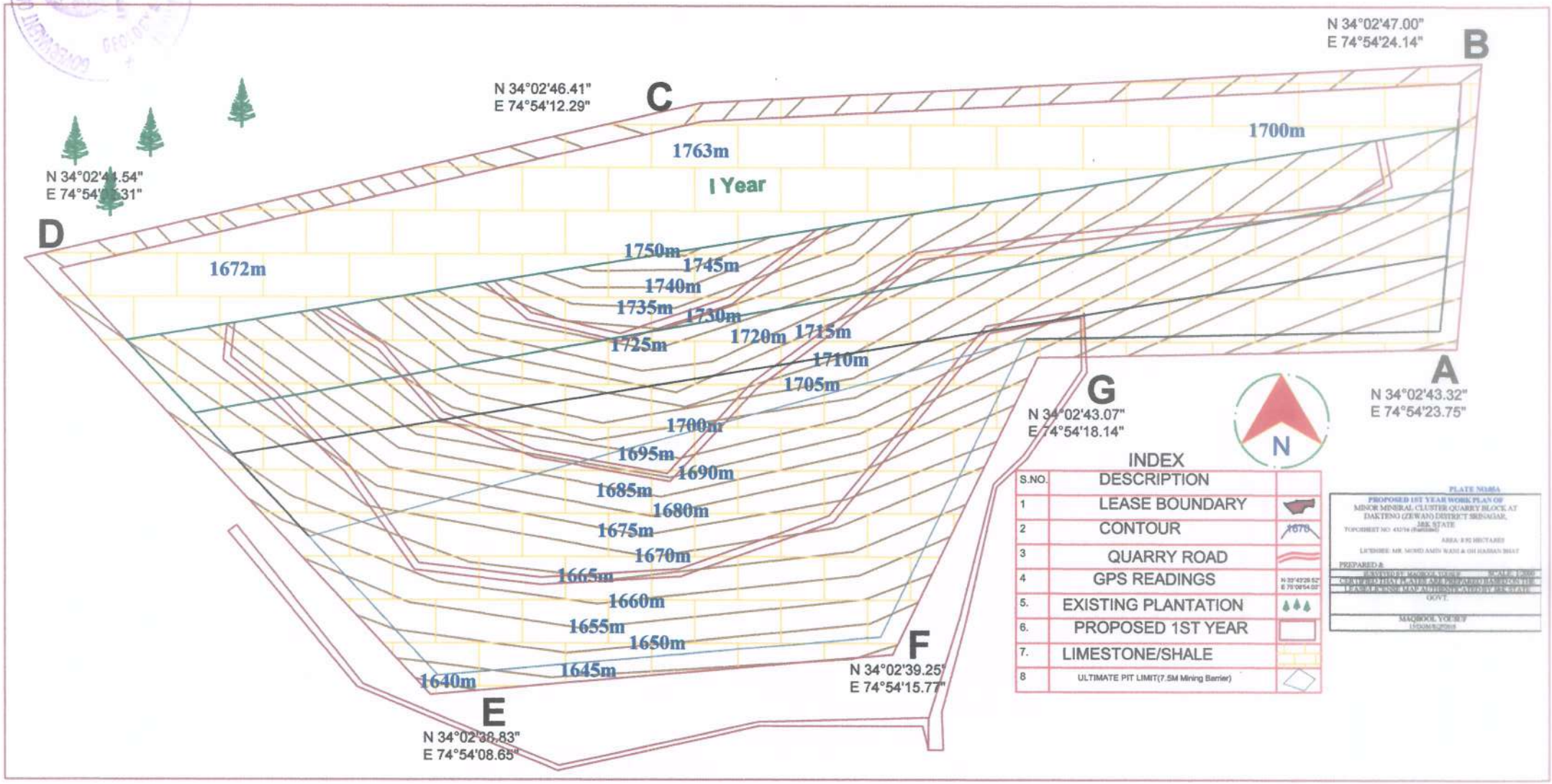
PREPARED &

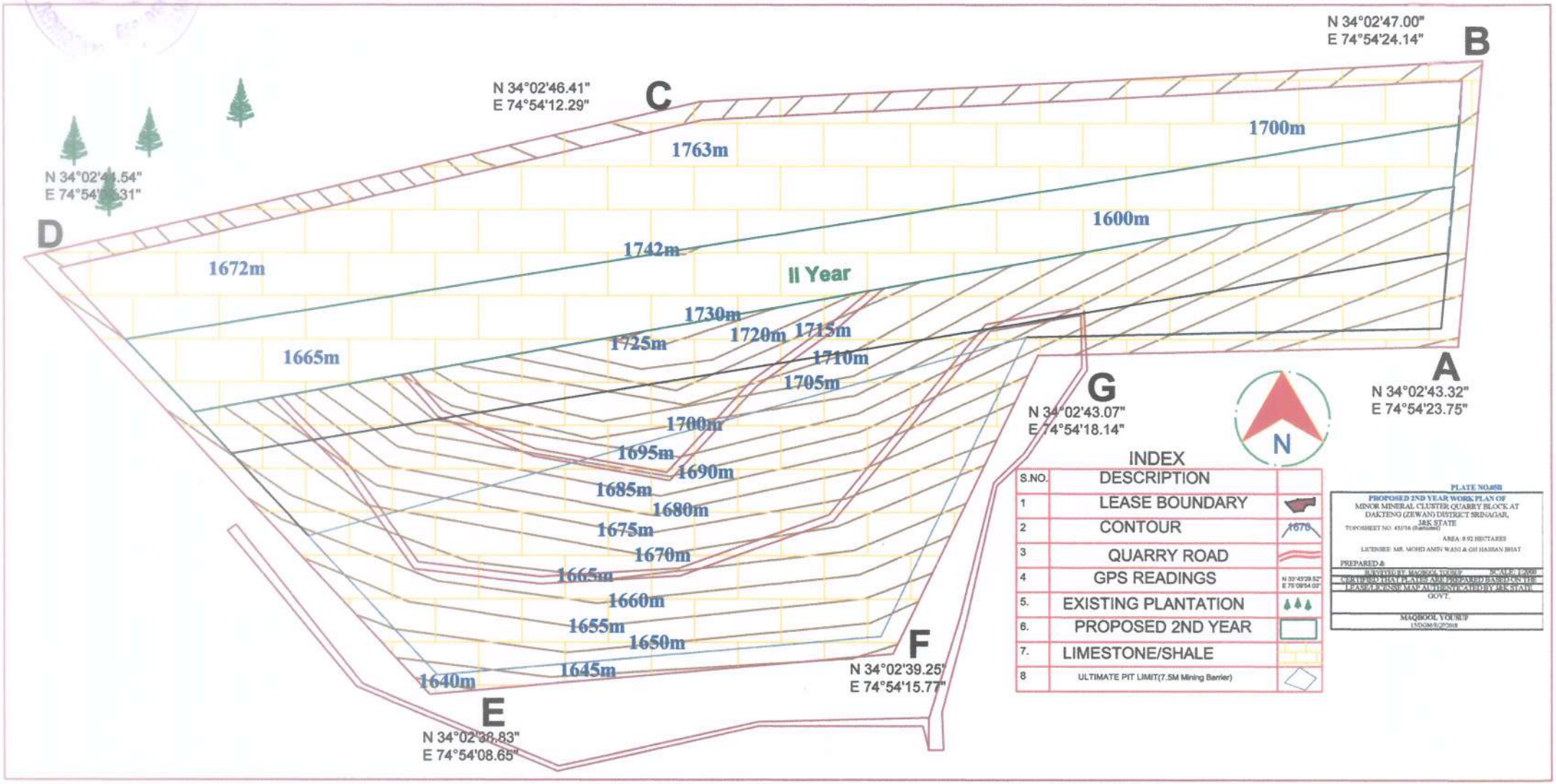
SURVEYED BY: MAQBOOL YOUSUF SCALE: 1:1000

CERTIFIED THAT PLATES ARE PREPARED BASED ON THE LEASE/LICENSE MAP AUTHENTICATED BY J&K STATE GOVT.

MAQBOOL YOUSUF
15/DGM/RQP/2018







INDEX

S.NO.	DESCRIPTION	
1	LEASE BOUNDARY	
2	CONTOUR	1670
3	QUARRY ROAD	
4	GPS READINGS	N 33°43'28.52" E 75°09'54.02"
5.	EXISTING PLANTATION	
6.	PROPOSED 2ND YEAR	
7.	LIMESTONE/SHALE	
8	ULTIMATE PIT LIMIT(7.5M Mining Barrier)	

PLATE NO.05B

PROPOSED 2ND YEAR WORK PLAN OF
MINOR MINERAL CLUSTER QUARRY BLOCK AT
DAKTENG (ZEWAN) DISTRICT SRINAGAR,
J&K STATE

TOPOSHEET NO: 43J/16 (Rationalised)

AREA: 8.92 HECTARES

LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT

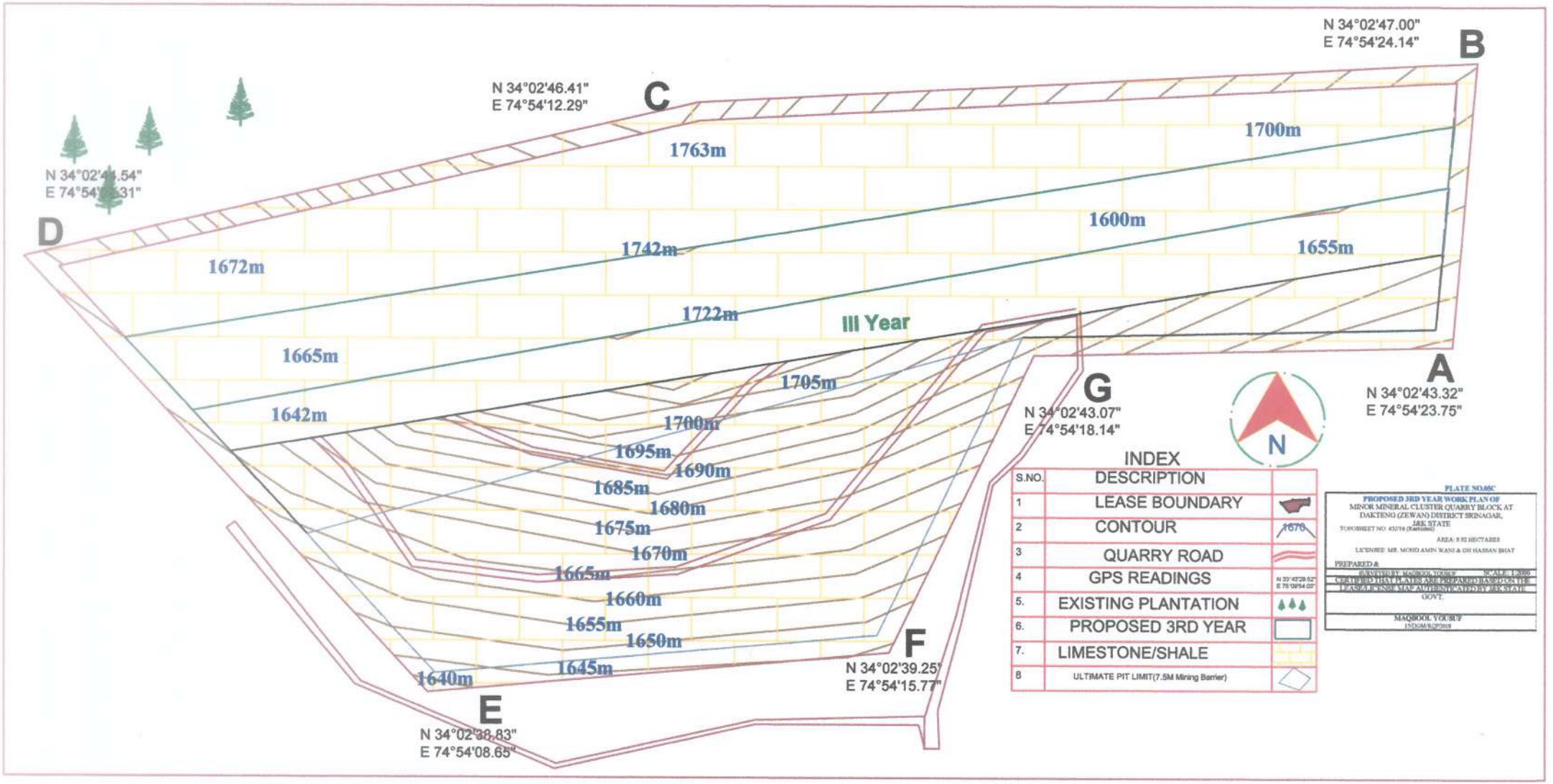
PREPARED &

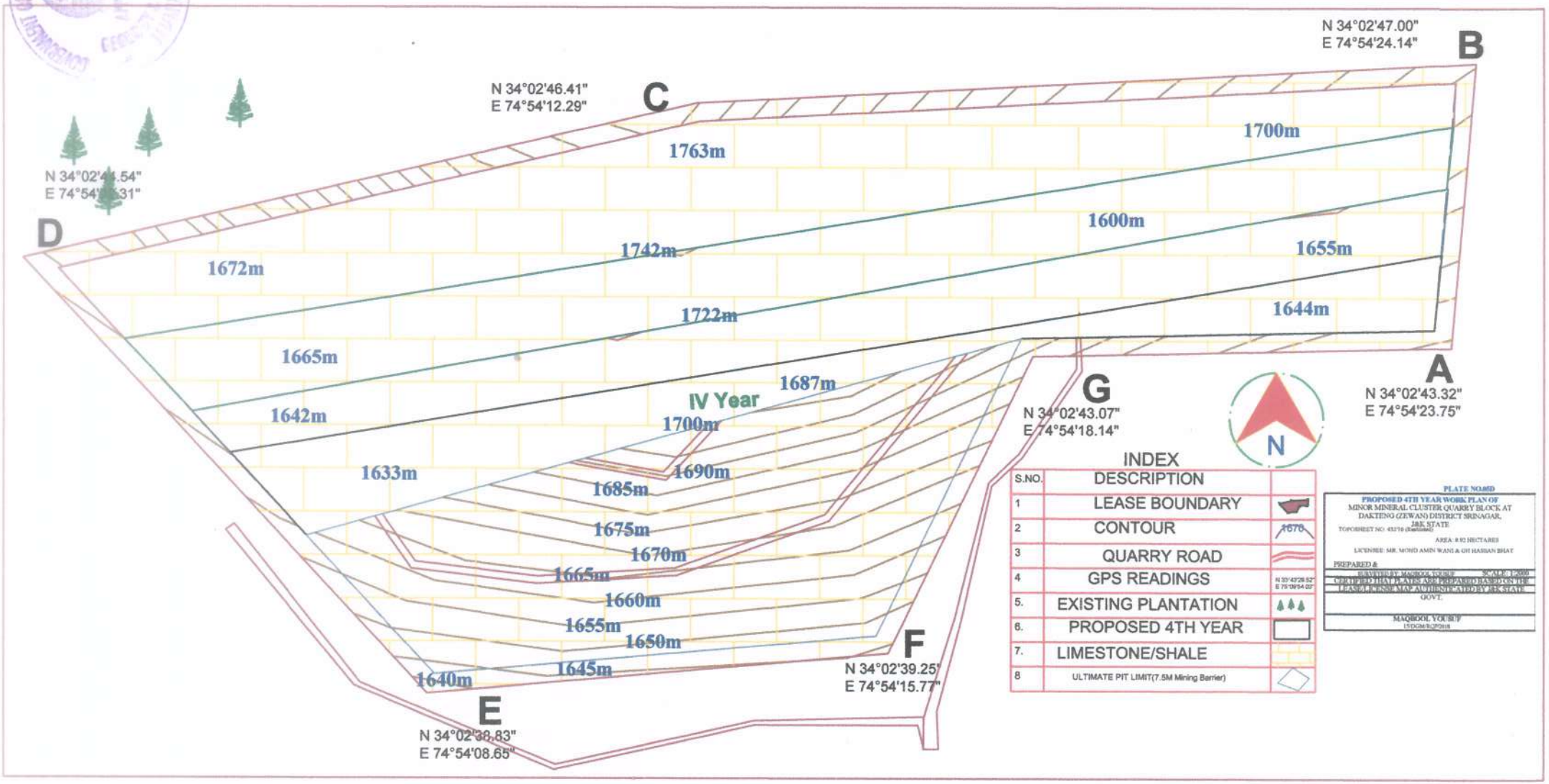
SURVEYED BY: MAQBOOL YOUSUF — SCALED ON: [illegible]

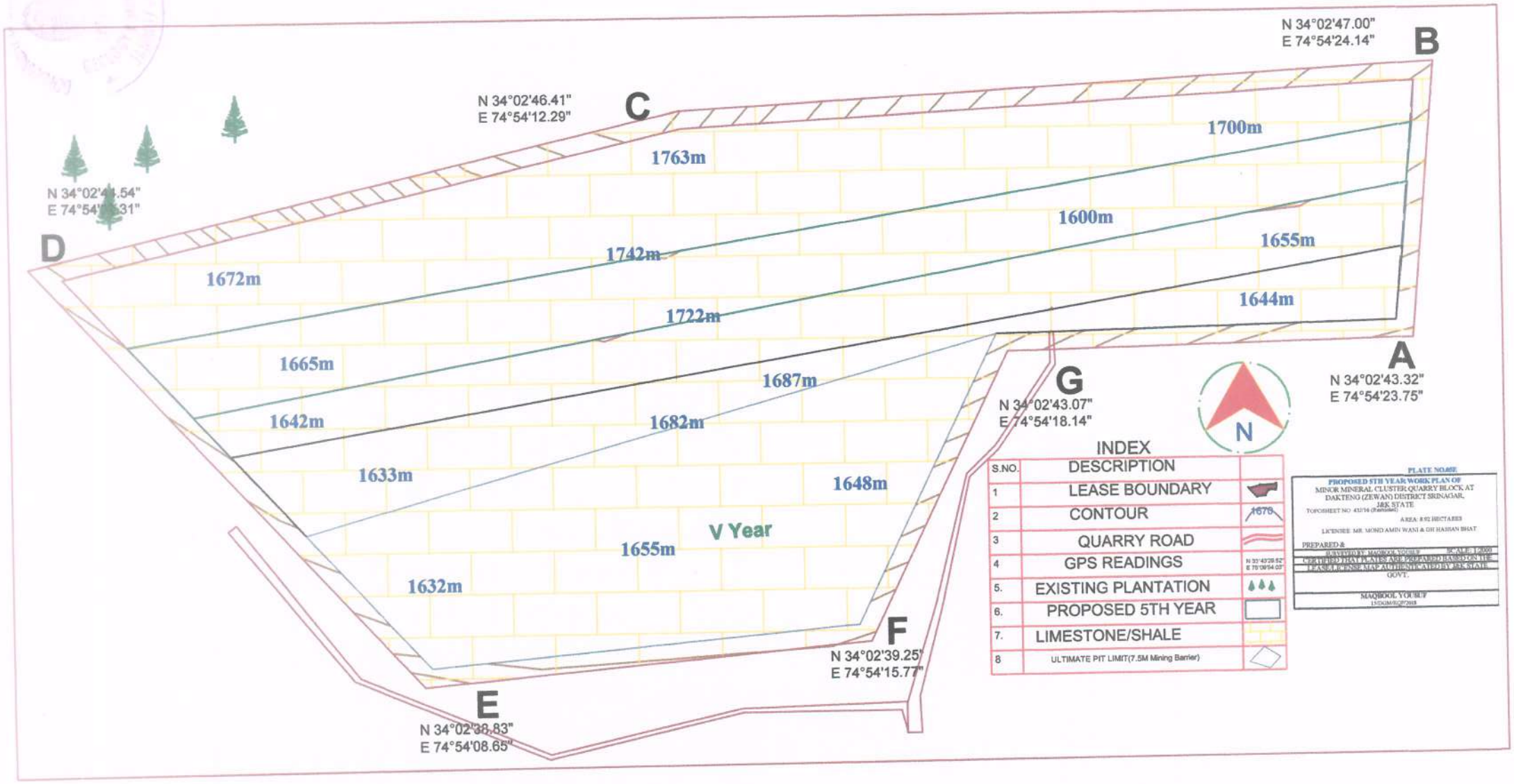
CERTIFIED THAT PLATES ARE PREPARED ON THE BASIS OF DGPS MAP AUTHENTICATED BY J&K STATE GOVT.

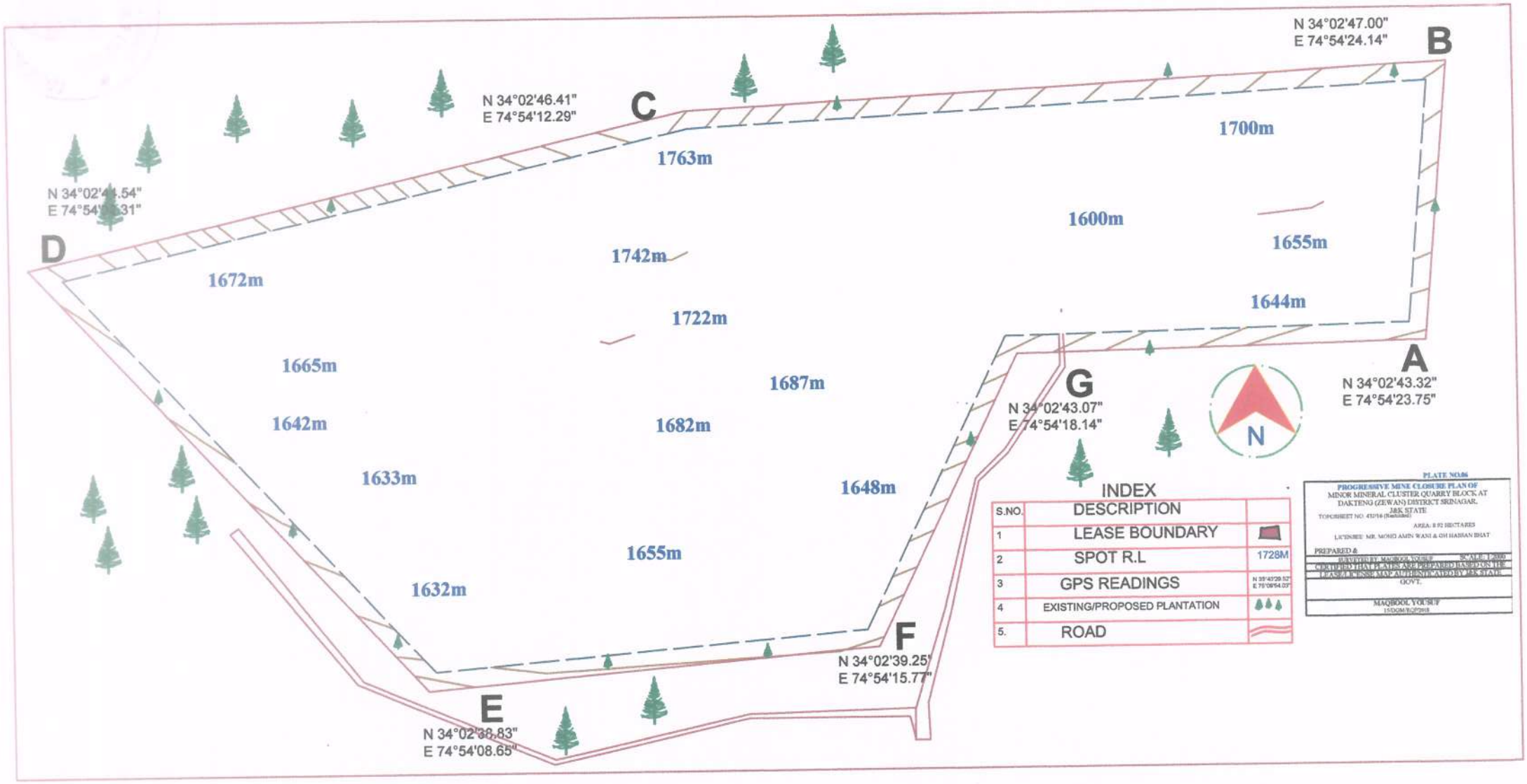
MAQBOOL YOUSUF
15/DGM/RQP/2018

MAQBOOL YOUSUF GANAI
Recognised Qualified Person (RQP)
Reg. No. 15/DGM/RQP/2018









INDEX

S.NO.	DESCRIPTION	
1	LEASE BOUNDARY	
2	SPOT R.L	1728M
3	GPS READINGS	N 35°43'29.52" E 75°09'54.03"
4	EXISTING/PROPOSED PLANTATION	
5.	ROAD	

PLATE NO.06

PROGRESSIVE MINE CLOSURE PLAN OF
MINOR MINERAL CLUSTER QUARRY BLOCK AT
DAKTENG (ZEWAN) DISTRICT SRINAGAR,
J&K STATE

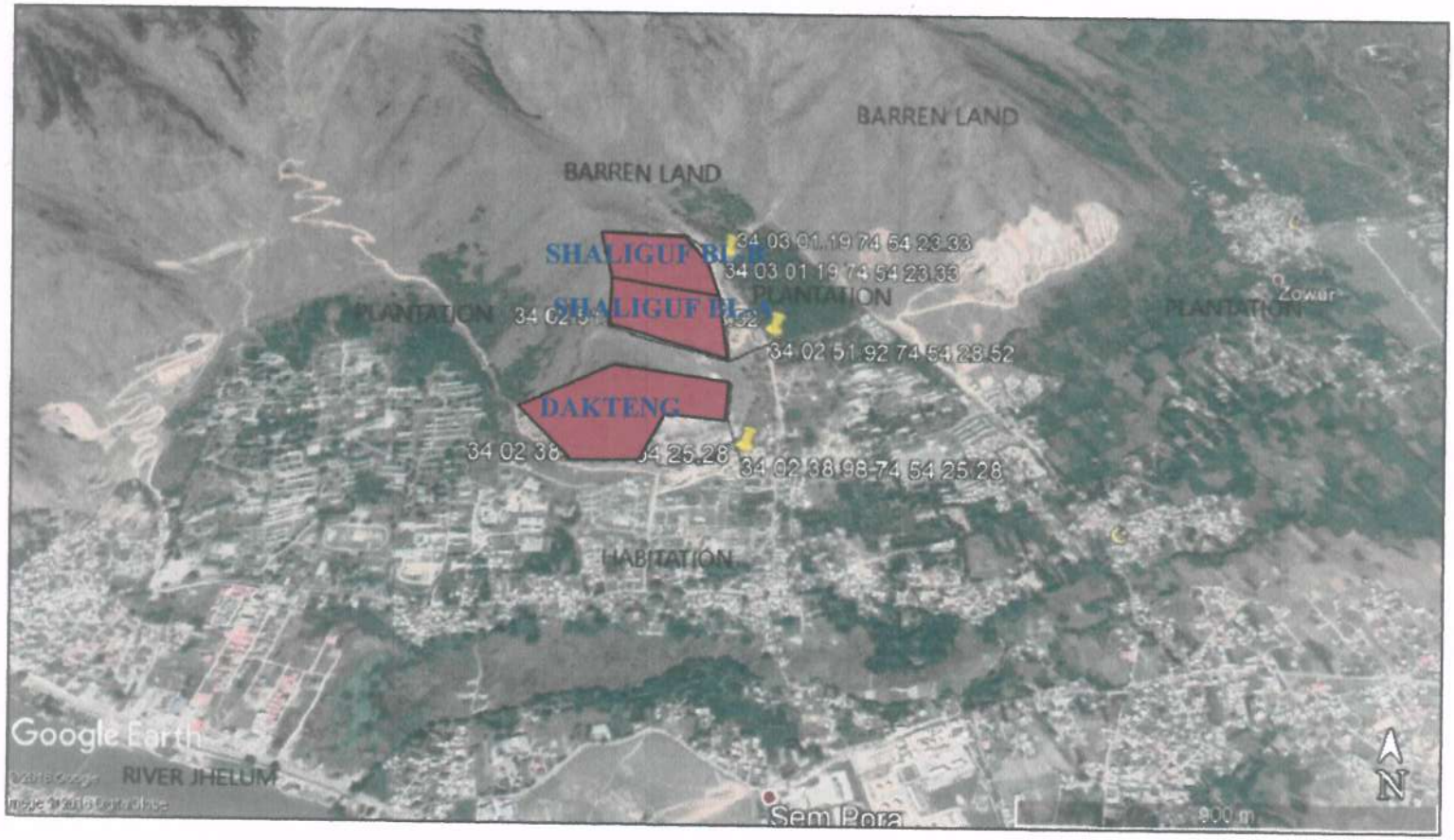
TOPOSHEET NO. 43J/16 (Kashmir)

AREA: 8.92 HECTARES

LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT

PREPARED &
SURVEYED BY: MAQBOOL YOUSUF — SCALE: 1:2000
CERTIFIED THAT PLANS ARE PREPARED AS PER ON THE
GROUND LICENSE MAP AUTHENTICATED BY J&K STATE
GOVT.

MAQBOOL YOUSUF
15/DGM/RQP/2018



INDEX

S.NO.	DESCRIPTION
1	LEASE BOUNDARY
2	ROAD
3	RIVER/NALLA
4	HABITATION

PLATE NO.07

ENVIRONMENTAL PLAN OF

MINOR MINERAL CLUSTER QUARRY BLOCK AT
DAKTENG (ZEWAN) DISTRICT SRINAGAR,
J&K STATE
TOPOSHEET NO. 43J/16 (Restricted)
AREA: 8.92 HECTARES
LICENSEE: MR. MOHD AMIN WANI & GH HASSAN BHAT
PREPARED &
SURVEYED BY: MAQBOOL YOUSUF SCALE: NTS
CERTIFIED THAT PLATES ARE PREPARED BASED ON THE LEASE/LICENSE MAP AUTHENTICATED BY J&K STATE GOVT.

MAQBOOL YOUSUF
15/DGM/RQP/2018

Annexure – 6

Naqsha Amini and Authorize affidavit

NAQSHA AMINI

MOUNTAIN / STONE QUARRY

OWNERS

1) MR. GHULAM HASSAN BHAT S/O SATAR BHAT R/O AARIPORA PANTHACHOWK
MR. KHURSHEED AHMAD & BASHIR AHMAD S/s/O GH. MOHD WANI R/O AARIPORA PANTHACHOWK
2) MR. MUZAMIL AHMAD MALIK S/O MUSHTAQ AHMAD MALIK R/O ZEWAN
3) MR. MUSHTAQ AHMAD GANIE S/O GH. MOHD GANIE R/O ZEWAN
4) MR. AB RAHMAN BHAT S/O MOHD RAMZAN BHAT R/O ZEWAN
5) MR. MOHD AKBER WANI S/O GH. MOHD WANI R/O AARIPORA PANTHACHOWK
MR. GH. AHMAD WANI & AZAD WANI S/s/O GUL WANI R/O AARIPORA PANTHACHOWK
6) MR. MUKHTIYAR AHMAD WANI S/O LATE AB AZIZ WANI R/O AARIPORA PANTHACHOWK
7) MR. KHAZER MOHD WANI S/O AH GANI WANI R/O ZEWAN
8) MR. MOHD SHAFI KHAN S/O LALA KHAN R/O AARIPORA PANTHACHOWK
9) MR. MOHD AMIN WANI S/O GH MOHD WANI R/O SEMPORA SRINAGAR
10) MR. GH NABI SOFI S/O ALI MOHD SOFI R/O ZEWAN
11) MR. AJAZ AHMAD WANI S/O AB RAHIM WANI R/O AARIPORA PANTHACHOWK
12) MR. AARIF AHMAD BHAT S/O AB AHAD BHAT R/O AARIPORA PANTHACHOWK
13) MR. GH. NABI BHAT S/O AB GANI BHAT R/O ZEWAN

PURPOSE

FOR REGISTRATION OF STONE QUARRIES IN GEOLOGY AND MINING DEPARTMENT

NOTE:-

THE SITE IN QUESTION IS SITUATED AT DAKH-TANG ZEWAN TEHSIL PANTHACHOWK DIST. SRINAGAR AND THE MAP DRAWN AT SITE ON THE INSTRUCTIONS OF APPLICANTS. EACH APPLICANT HOLDS EQUAL SHARE i.e, 56'-6" FOR EXTRACTING OF STONES (STONE QUARRIES) DAKH TANG ZEWAN

29/08/22

Quarry list of Zewan Dak Teng, Shalguf and BSF Zewan

S.No	Name of the Quarry Holder	Perantage	Residence	Location	Rer
1	Muneer Ah Pandit	Khazir Mohammad	Zawoora	Zewan	
2	Adil & Firdous	Ab Rahman & M Ashraf	Khunmoh & Athwajan	Zewan	
3	Ab Rahman Bhat	M Ramzan Bhat	Aripora	Zewan	
4	Jamshed Ah Wani	Gh Mohammad Wani	Sempora	Zewan	
5	Shabir Ah Wani	Ab Samad Wani	Zewan	Zewan	
6	Gh Hassan Bhat	Ab sattar Bhat	Aripora	Zewan	
7	Mushtaq Ah Bhat	Gh Mohammad Bhat	Zewan	Zewan	
8	Ab Hameed Bhat	Wali Mohammad Bhat	Zewan	Zewan	
9	Sajad Ah Shah	Gh Nabi Shah	Sempora	Zewan	
10	M Jamal Bhat	Ab Salam Baht	Zewan	Zewan	
11	Manzoor & Bilal	Gh Mohammad Bhat	Zewan	Zewan	
12	Firdous ah Bhat	Manzoor Ah Bhat	Zewan	Zewan	
13	Manzoor ah Bhat	M Sultan Bhat	Zewan	Zewan	
14	Mushtaq Ah Shah	Pir Hafiz Ullah	Athwajan	Zewan	
15	Ashiq Ah Wani	M Sultan	Athwajan	Zewan	
16	Nazir Ah Mir	M Ramzan	Panthachowk	Zewan	
17	Shabir Ah Chopan	M Ramzan	Zewan	Zewan	
18	Ab Rashid Bhat	M Jamal	Zewan	Zewan	
19	Riyaz Ahmad Bhat	Ab Aziz	Zewan	Zewan	
20	Hameed & Nisar Bhat	Ab Aziz	Zewan	Zewan	
21	Aqib Khursheed Wani	Khursheed Ah	Sempora	Zewan	
22	Feroz Ah Reshi	Gh Mohammad	Sempora	Zewan	
23	M Maqbool Bhat	Assadullah	Zewan	Zewan	
24	GH Mohammad Bhat	Assadullah	Zewan	Zewan	
25	Nazir Ah Chopan	Gh Qadir	Zewan	Zewan	
26	M Shaban Chopan	Gh Qadir	Zewan	Zewan	
27	Nazir Ah Bhat	Gh Qadir	Zewan	Zewan	
28	M Sultan Bhat	Ali Mohammad Bhat	Zewan	Zewan	
29	Feroz Ali Mir	M Akbar	Tengan	Zewan	
30	GH Rasool Allai	Ali Mohammad Allai	Zewan	Zewan	
31	Rafiq Ahmad Shah	Ab Gani Shah	Sempora	Zewan	
32	Ab Gaffar Mir	Habib Mir	Aripora	Zewan	
33	Hussan Bhat	Mehda Bhat	Zewan	Zewan	
34	GH Rasool Mir	GH Ahmad Mir	Lasjan	Zewan	
35	M shaban Chopan	GH Qadir	Zewan	Zewan	

36	Shah Nasrullah	M Sultan Shah	Sempora	Zewan
37	Abid Ah Shah	Ab Gani Shah	Sempora	Zewan
38	Ab Ahad Beigh	Ab Samad	Zewan	Zewan
39	Zoona Begum	W/O Ab Ahad Beigh	Zewan	Zewan
40	M Jabar Akhoon	Ab Salam	Lanjan	Zewan
41	Beigh Transport	Prop Ab Ahad Beigh	Zewan	Zewan
42	Gowhar Ah Beigh	Ab Ahad Beigh	Zewan	Zewan
43	Ab Gani Beigh	Ab Samad Beigh	Zewan	Zewan
44	Danish Gani Beigh	Ab Gani	Zewan	Zewan
45	Jan Mohammad Pandit & Bashir Ah Beigh	Ab Samad Beigh	Zewan	Zewan
46	Haseena Begum	W/O Ab Gani Beigh	Zewan	Zewan
47	Gh Ahmad Dar	Gh Mohammad Dar	Zewan	Zewan
48	M Yusuf Malik	Ab Razak	Zewan	Zewan
48	Gh Nabi Bhat	Ab Salam	Zewan	Zewan
50	Manzoor Ah Bhat	Gh Nabi Bhat	Zewan	Zewan
51	Wali Mohammad Bhat	GH Rasool Bhat	Zewan	Zewan
52	M Amin Wani	Gh Mohammad Wani	Sempora	Zewan
53	Hussan Bhat	Mehda Bhat	Zewan	Zewan
54	M Sultan Bhat	Ali Mohammad Bhat	Zewan	Zewan
55	Gh Qadir Bhat	M Sidiq Bhat	Aripora	Zewan
56	Abid Nazir Chopan	Nazir Ah Chopan	Zewan	Zewan
57	Gh Hassan Bhat	Ab sattar Bhat	Aripora	Dak Taing
58	Khursheed Ah & Bashir Ah Wani	Gul Wani	Aripora	Dak Taing
59	Muzamil Mushtaq	Mushtaq Ah Malik	Aripora	Dak Taing
60	Mushtaq Ah Ganai	Subhan Ganai	Aripora	Dak Taing
61	Ab Rahman Bhat	M Ramzan Bhat	Aripora	Dak Taing
62	M Akbar Wani	Gh Mohammad Wani	Aripora	Dak Taing
63	Ama Wani & Azad Wani	Gul Wani	Aripora	Dak Taing
64	Mukhtar Ah Wani	Ab Aziz Wani	Aripora	Dak Taing
65	Khazir Mohammad Wani	Ab Gani Wani	Aripora	Dak Taing
66	M Shafi Khan	Lal Khan	Aripora	Dak Taing
67	M Amin Wani	GH Mohammad	Sempora	Dak Taing
68	GH Nabi Sofi	Ali Mohammad Sofi	Zewan	Dak Taing
69	Mushtaq Ah Ganai	Gh Mohammad Ganai	Zewan	Dak Taing
70	Aijaz Ah Wani	Ab Rahim Wani	Aripora	Dak Taing
71	Tariq Ah Bhat	Ab Ahad Bhat	Aripora	Dak Taing
72	Gh Nabi Bhat	Ab Gani Bhat	Aripora	Dak Taing
73	Bilal Ah rather	Ab Aziz Rather	Athwajan	BSF Zewan

74	Riyaz Ah Mir	Ali Mohammad Mir	Panthachowk	BSF Zewan	
75	Ab Rashid Paul	GH Mohammad	Budgam	BSF Zewan	
76	Manzoor Ah Sofi	M Abdullah	Sanat Nagar	BSF Zewan	
77	M Amin Dar	Gh Nabi	Rawalpora	BSF Zewan	
78	Ali Mohammad Yatoo	Ab Kamal Yatoo	Budgam	BSF Zewan	
79	Farooq Ah Rather	Ab Aziz	Athwajan	BSF Zewan	
80	M Shafi Bhat	Gh Mohammad Bhat	Budgam	BSF Zewan	
81	Nisar Ah Hajam	Gulzar Ah Hajam	Panthachowk	BSF Zewan	
82	Mukhtar Ah Baba	M Yusuf	Panthachowk	BSF Zewan	
83	Ab Hameed & Feroz Ah Baba	Ab Ahad & Wali Mohammad	Panthachowk	BSF Zewan	
84	Gh Mohammad Hajam & Assadullah Hajam	Ab Khaliq Hajam	Panthachowk	BSF Zewan	
85	Habib Ullah Mir	Ali Mohammad Mir	Panthachowk	BSF Zewan	
86	M Yusuf Bhat	M Ismail Bhat	Panthachowk	BSF Zewan	
87	Gh Mohammad Baba	GH Ahmad Baba	Panthachowk	BSF Zewan	
88	Muzaffar Ah Mir	Gh Nabi Mir	Chanpora	BSF Zewan	
89	Riyaz Ahmad Bhat	Ab Rahim Bhat	Budgam	BSF Zewan	
90	Farooq Ah Bhat	GH Mohammad Bhat	Kremsher Budgam	BSF Zewan	
91	Fayaz Ah Kumar	Ab Ahad Kumar	Zewan	Shalguf Zewan	
92	Fayaz Ah Mir	Ab Rahim Mir	Athwajan	Shalguf Zewan	
93	GH Mohammad Ganai	M Shaban Ganai	Zewan	Shalguf Zewan	
94	Feroz Ah Khanday & GH Mohi ud Din	Gh Mohammad	Zewan	Shalguf Zewan	
95	M Amin Bhat	Gh Rasool Bhat	Zewan	Shalguf Zewan	

96	Fayaz Ah Bhat	GH Rasool Bhat	Zewan	Shalguf Zewan
97	Manzoor ah Ganai & Firdous Ahmad	M Rajab Ganai	Zewan	Shalguf Zewan
98	Riyaz Ah Wani	GH Mohammad Wani	Zewan	Shalguf Zewan
99	Wali Mohammad Rather	GH Hassan Rather	Lasjan	Shalguf Zewan
100	Nayeem AH Bhat	Nazir Ah Bhat	Zewan	Shalguf Zewan
101	Saqib Ali Rather	Wali Mohammad Rather	Lasjan	Shalguf Zewan
102	Akther Hussain	Wali Mohammad	Lasjan	Shalguf Zewan
103	Nisar Ah Mir	GH Qadir Mir	Zewan	Shalguf Zewan
104	Javed Ah Wani	GH Ahmad Wani	Aripora	Shalguf Zewan
105	Gh Mohammad Sheikh	Ab Rahman Sheikh	Pampore	Shalguf Zewan
106	Tariq Ah Mir	Gh Qadir Mir	Panthachowk	Shalguf Zewan
107	M Shafi & Showkat Ah Mir	Gh Mohammad Mir	Lasjan	Shalguf Zewan
108	Habibullah Thokar	Gh Mohammad Thokar	Lasjan	Shalguf Zewan
109	Ali Mohammad Malik	Ab Aziz Malik	Panthachowk	Shalguf Zewan
110	Zahoor Ah Sofi	Ab Aziz Sofi	Panthachowk	Shalguf Zewan
111	M Ramzan Parra	Noor Mohammad Parra	Panthachowk	Shalguf Zewan
112	Fayaz Ah Kumar II	Ab Ahad	Zewan	Shalguf Zewan
113	Mushtaq Ah Bhat	GH Mohammad Bhat	Panthachowk	Shalguf Zewan
114	Ashiq Hussain Bhat	Gh Qadir Bhat	Aripora	Shalguf Zewan
115	Aijaz Ah Mir	Gh Rasool Mir	Panthachowk	Shalguf Zewan
116	Ashiq Ah Mir	Gh Qadir Mir	Panthachowk	Shalguf Zewan
117	Mushtaq Ahmad Malik	Ghulam Nabi Malik	Zewan	Shalguf Zewan

118	Gh Nabi Wani	Ali Mohd Wani	Zewan	Shalguf Zewan	
119	Khursheed Ahmad Wani	Gul Wani	Aripora	Shalgufh Zewan	
120	Gulzar Ahmad Mir	Ali Mohd Mir	Ahtwajan	Shalgufh Zewan	
121					

DMO Srinagar

INDIA NON JUDICIAL

Government of Jammu and Kashmir

e-Stamp

सत्यमेव जयते

Certificate No.	:	IN-JK50509620905216U
Certificate Issued Date	:	05-Mar-2022 12:23 PM
Account Reference	:	NEWIMPACC (SV)/ jk12526904/ PAMPORE/ JK-PW
Unique Doc. Reference	:	SUBIN-JKJK12526904970712575861 53U
Purchased by	:	Mohd Amin Wani and Gh Hussain Bhat
Description of Document	:	Article 4 Affidavit
Property Description	:	Not Applicable
Consideration Price (Rs.)	:	0 (Zero)
First Party	:	Mohd Amin Wani and Gh Hussain Bhat
Second Party	:	Not Applicable
Stamp Duty Paid By	:	Mohd Amir Wani and Gh Hussain Bhat
Stamp Duty Amount(Rs.)	:	100 (One Hundred only)

Please write or type below this line

Firdous Mohd. Khanday
STAMP VENDOR
Licence No:146/DMP/JC

KC 0021128422

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.

TO WHOM IT MAY CONCERN

We the owners of the mining lease Quarry having an area of 8.92 ha, Khara No. 147 Block at Dakteng Village Zewan Tehsil: Panthachowk District: Srinagar J&K UT are willingly authorize:-

1. Mr. Mohd Amin Wani S/O: Gh Mohd Wani
2. Mr. Gh. Hussain Bhat S/O: Gh Mohd Bhat

For the submission and presentation of the EIA Project on behalf of us and we have no objection on this matter.

All 16 land owner name and signature with Photo/ Address Proof.

1. Name : Ghulam Hassan Bhat
   S/O: Gh Mohammad Bhat
   R/O: Aripora, Srinagar.

2. Name: Mohammad AMin Wani
   S/O: Haji Ghulam Mohammad Wani
   R/O: Sempora, Srinagar

3. Muzammil Mushtaq
   S/O: Haji Mushtaq Ahmad Malik
   R/O: Zewan, Srinagar.

4. Mushtaq Ahmad Ganaie
   S/O: Ghulam Mohammad Ganaie
   R/O: Zewan Srinagar.

5. Mukhtar Ahmad
   S/O: Abdul Aziz Wani
   R/O: Aripora, Srinagar.

6. Aijaz Ahmad
   S/O: Abdul Aziz Wani
   R/O: Aripora, Srinagar.

7. Khazir Mohd Wani
   S/O: Abdul Gani Wani
   R/O: Zewan Srinagar

08. Name : Mohammad Azad Wani
S/O : Ghulam Ahmad Wani
R/O : Pantha Chowk, Sempora, Srinagar.

09. Name : Tariq Ahmad Bhat
S/O : Abdul Ahad Bhat
R/O : Arifpora, Srinagar.

10) Mohd Shafi Khan
S/o Gul Khan
R/o Anipora, Srinagar

11) Ghulam Nabi Sof.
S/o Ali Gohad Sof.
R/o Zawura, Sgr

12) Bashir Ahmad Wani
S/o Gul Wani
R/o Anipora Sgr.

Certified that the statement declared on oath before me at Srinagar on this day of 12.03.2022
by Mohd Amin Wani & Another
who is identified by Identified

SHAMIMA AZIZ
Notary Public

13 Abdul Rehman Bhat

S/O: Mohammad Ramzan Bhat

R/O: Kani Mohallah Zewan Srinagar

14 Mohammad Akbar Wani

S/O: Gh Mohd Wani

R/O: Aripora, Panthachowk

15 Gh Nabi Bhat

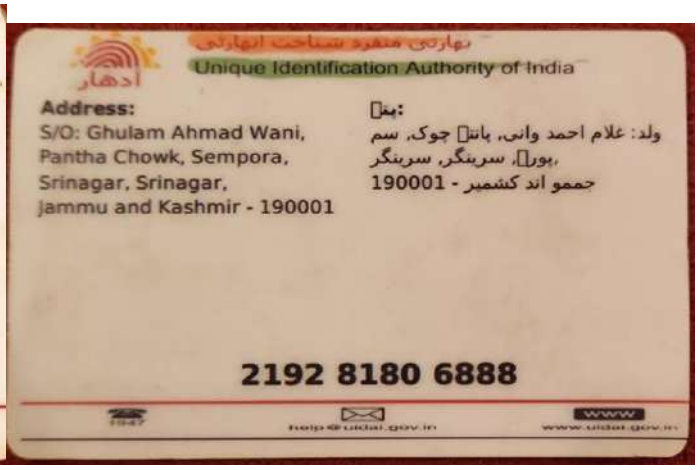
S/O: Abdul Gani Bhat

R/O: Kani Mohallah Zewan Srinagar.

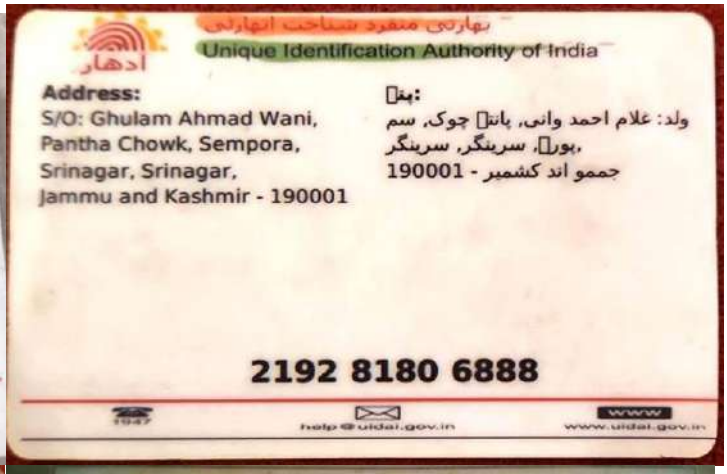
Certified that the statement declared on oath before me at Srinagar on this day of 12.03.2022 by Mohd Akbar Wani S/o Gh Mohd Aripora. who is identified by

SHAMIMA AZIZ
Notary Public


حکومت ہند
Government of India
محمد آزاد وانی
Mohammad Azad Wani
تاریخ پیدائش/DOB: 03/05/1968
مرد/ MALE
2192 8180 6888
میرا آدھار، میری شناخت


Unique Identification Authority of India
Address:
S/O: Ghulam Ahmad Wani,
Pantha Chowk, Sempora,
Srinagar, Srinagar,
Jammu and Kashmir - 190001
2192 8180 6888
help@uidai.gov.in
www.uidai.gov.in


حکومت ہند
Government of India
مزمل مشتاق
Muzamil Mushtaq
والد : مشتاق احمد ملک
Father : Mushtaq Ah Malik
تاریخ پیدائش / DOB : 15/11/1994
مرد / Male
2385 2975 9306
عام آدمی کا ادھیکار - ادھار


Unique Identification Authority of India
Address:
S/O: Ghulam Ahmad Wani,
Pantha Chowk, Sempora,
Srinagar, Srinagar,
Jammu and Kashmir - 190001
2192 8180 6888
help@uidai.gov.in
www.uidai.gov.in


حکومت ہند
Government of India
محمد آزاد وانی
Mohammad Azad Wani
تاریخ پیدائش/DOB: 03/05/1968
مرد/ MALE
2192 8180 6888
میرا آدھار، میری شناخت


भारत सरकार
GOVERNMENT OF INDIA
مشتاق احمد گنائی
Mushtaq Ahmad Ganaie
DOB: 02/01/1985/ تاریخ پیدائش
MALE / مرد
8929 6714 1542
میرا آدھار، میری شناخت


Unique Identification Authority of India
Address:
2, ZEWAN, PANTH CHOWK, Lasjan, Srinagar, Lasjan, Jammu And Kashmir, 191101
2385 2975 9306


حکومت ہند
Government of India
بشیر احمد وٹی
Bashir Ahmed Wani
تاریخ پیدائش/DOB: 11/11/1958
مرد/ MALE
4476 4824 5508
میرا آدھار، میری شناخت


Unique Identification Authority of India
Address:
S/O: Gula Wani, -, -, -, pantha chowk, Lasjan, Srinagar, Jammu and Kashmir - 191101
4476 4824 5508


Unique Identification Authority of India
Address:
71, ARIPORA, Lasjan, Srinagar, Lasjan, Jammu And Kashmir, 191101
7855 4297 0637
1947
1800 300 1947
help@uidai.gov.in
www.uidai.gov.in

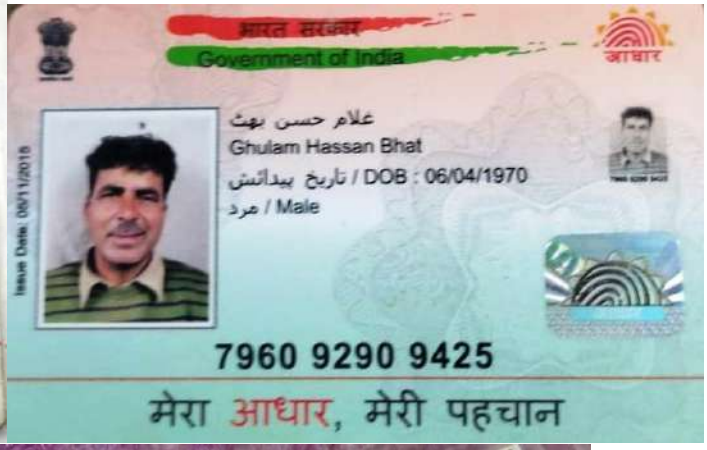

حکومت ہند
Government of India
اعجاز احمد
AIJAZ AHMAD
والد : عبدالرحیم وانی
Father : Abdul Rahim Wani
تاریخ پیدائش / DOB : 01/04/1970
مرد / Male
7855 4297 0637
عام آدمی کا ادھیکار - ادھار

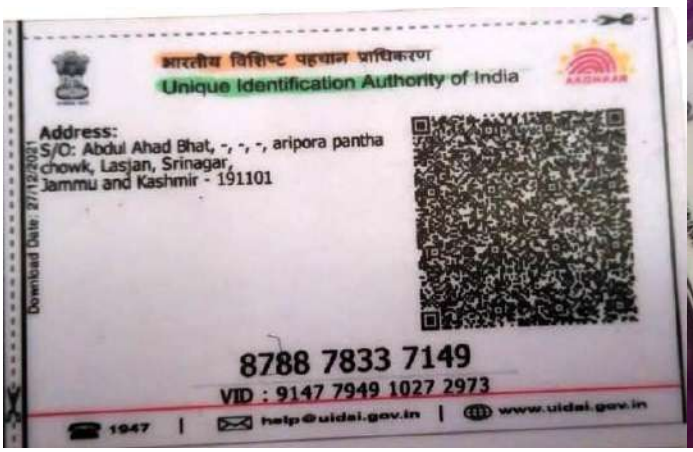

Unique Identification Authority of India
Address: S/O Abdul Aziz Wani, 47, ARIPORA, Lasjan, Lasjan, Srinagar, Jammu And Kashmir, 191101
2384 3327 3555
1947
help@uidai.gov.in
www.uidai.gov.in


भारत सरकार
Government of India
Tariq Ahmad Bhat
Date of Birth/DOB: 01/01/1982
Male/ MALE
Issue Date: 06/09/2017
8788 7833 7149
VID : 9147 7949 1027 2973
मेरा आधार, मेरी पहचान


Unique Identification Authority of India
Address:
2, ZEWAN, PANTH CHOWK,
Lasjan, Srinagar, Lasjan, Jammu
And Kashmir, 191101
2385 2975 9306


حکومت ہند
Government of India
مختار احمد
Mukhtar Ahmad
تاریخ پیدائش / DOB : 05/04/1981
مرد / Male
2384 3327 3555
میرا آدھار، میری شناخت

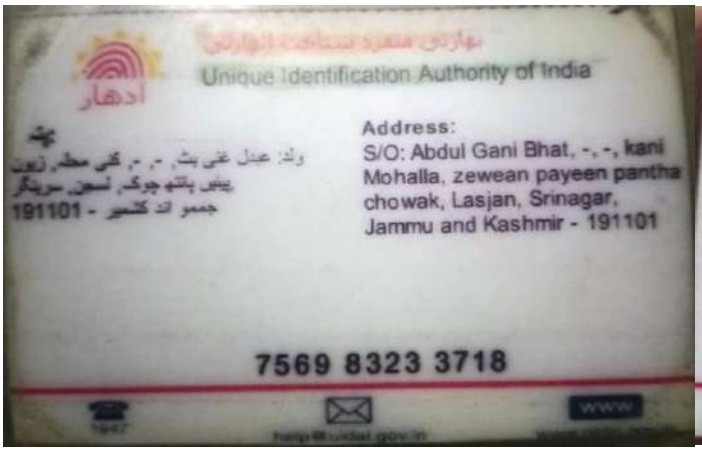

भारत सरकार
Government of India
आधार
غلام حسن بھٹ
Ghulam Hassan Bhat
تاریخ پیدائش / DOB : 06/04/1970
مرد / Male
Issue Date: 05/11/2018
7960 9290 9425
मेरा आधार, मेरी पहचान


भारतीय विशिष्ट पहचान प्राधिकरण
Unique Identification Authority of India
Address:
S/O: Abdul Ahad Bhat, -, -, -, aripora pantha
chowk, Lasjan, Srinagar,
Jammu and Kashmir - 191101
Download Date: 27/12/2021
8788 7833 7149
VID : 9147 7949 1027 2973
1947 | help@uidai.gov.in | www.uidai.gov.in


भारत सरकार
Government of India
Mohd Shafi Khan
Date of Birth/DOB: 04/03/1953
Male/ MALE
2109 4275 5438
VID : 9165 0532 6470 6443
मेरा आधार, मेरी पहचान

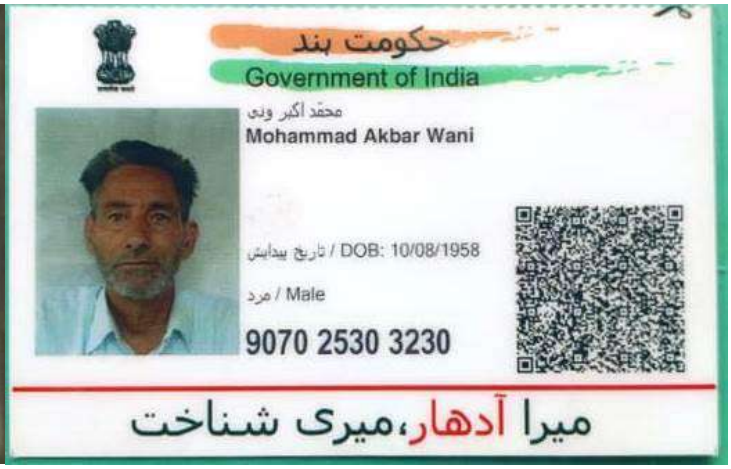

2109 4275 5438


Unique Identification Authority of India
AADHAAR
Address: 73, ARIPORA, Lasjan, Srinagar, Jammu and Kashmir, 191101
7960 9290 9425
1947
help@uidai.gov.in
www.uidai.gov.in


Unique Identification Authority of India
Address:
S/O: Abdul Gani Bhat, -, -, kani Mohalla, zewean payeen pantha chowk, Lasjan, Srinagar, Jammu and Kashmir - 191101
7569 8323 3718


حکومت ہند
Government of India
Abdul Rehman Bhat
DOB: 17/02/1948
MALE
4333 0590 1971
میرا آدھار،میری شناخت


حکومت ہند
Government of India
Ghulam Nabi Bhat
DOB: 08/11/1963
MALE
7569 8323 3718
میرا آدھار،میری شناخت


حکومت ہند
Government of India
Mohammad Akbar Wani
DOB: 10/08/1958
Male
9070 2530 3230
میرا آدھار،میری شناخت


Unique Identification Authority of India
Address:
S/O: Mohd Ramzan Bhat, -, -, -, zewan, Lasjan, Srinagar, Jammu and Kashmir - 191101
4333 0590 1971
1947
help@uidai.gov.in
www.uidai.gov.in


Unique Identification Authority of India
Address: S/O: Ghulam Mohammad Wani, -, -, -, aripora pantha chowk, Lasjan, Srinagar, Lasjan, Jammu And Kashmir, 191101
9070 2530 3230
1947
help@uidai.gov.in
www.uidai.gov.in

आधार

حکومت ہند

Unique Identification Authority of India

Government of India

اندراج نمبر/ Enrolment No.: 1355/12062/27000

To
خضر محمد وانی
Khazir Mohammad Wani
S/O: Abdul Gani Wani
zewan
near indian oil depot
Lasjan
Lasjan
Srinagar Jammu and Kashmir - 191101
9906452716

Download Date: 04/05/2017

Generation Date: 21/08/2012

Validity unknown

آپ کا آدھار نمبر/ Your Aadhaar No. :

4792 2851 8276

میرا آدھار، میری شناخت

INFORMATION

- Aadhaar is a proof of identity, no
- To establish identity, authenticate
- This is electronically generated le

- Aadhaar is valid throughout the
- Aadhaar will be helpful in avail and Non-Government services

حکومت ہند

Government of India

خضر محمد وانی
Khazir Mohammad Wani
تاریخ پیدائش/DOB: 03/03/1947
مرد/ MALE

4792 2851 8276

میرا آدھار، میری شناخت

Unique Identification

Address:
S/O: Abdul Gani Wani, near indian oil depot, zewan, Lasjan, Srinagar, Jammu and Kashmir - 191101

4792 28

حکومت ہند

Government of India

غلام نبی صوفی

Ghulam Nabi Sofi

تاریخ پیدائش / DOB : 07/11/1955

مرد / Male

2505 4109 2791

عام آدمی کا ادھیکار - ادھار

بھارتی مخصوص شناخت اتھارٹی

Unique Identification Authority of India

ادھار

پتہ:

ولد: الی مُحمّد سوفی, -, زاووره, بالهامه, لسجن, سرینگر, نسجان, جممو اند کشمیر, 191101

Address:

S/O: Ali Mohammad Sofi, -, ZAWOORA, BALHAMA, Lasjan, Srinagar, Lasjan, Jammu And Kashmir, 191101

2505 4109 2791

1947

1800 300 1947

help@uidai.gov.in

www

www.uidai.gov.in

Annexure – 7

Intikhab

انتخاب جمعبندی / شخصیت / بابت موضع زونو تحصیل [illegible] ضلع سرینگر مرتبہ سال [illegible]

۱	۲	۳	۴	۵	۶	۷	۸	۹	۱۰	۱۱	۱۲	۱۳
نمبر کھیوٹ	نمبر کھتونی	[illegible]	نام مالک معہ احوال	نام مالک کاشتکار معہ احوال	ذریعہ آبپاشی	نمبر خسرہ معہ [illegible]	رقبہ و قسم زمین	[illegible]	[illegible]	[illegible]	حوالہ انتقالات: نمبر	حوالہ انتقالات: [illegible]
۱۲۶	۶/۱	[illegible]	سرکاری سرکار	مقبوضہ سرکار		۱۲۰۹	[illegible] ۱۲	[illegible]	—	—	—	—
			//	[illegible]		[illegible]	[illegible] ۱۶					
			[illegible]	//		[illegible] ۲۱	[illegible] ۶					

[illegible] List of quarry holders [illegible] DMO-Srinagar ① [illegible] ② [illegible] ③ [illegible] ④ [illegible] ⑤ [illegible] ⑥ [illegible] ⑦ [illegible] ⑧ [illegible] ⑨ [illegible] ⑩ [illegible] ⑪ [illegible] ⑫ [illegible] ⑬ [illegible] ⑭ [illegible] ⑮ [illegible] ⑯ [illegible] ⑰ [illegible] ⑱ [illegible] ⑲ [illegible]

② [illegible]

③ [illegible] 9-5-18 [illegible]

NAIB TEHSILDAR KHANMOH
Executive Magistrate
TEHSILDAR Pantha Chowk

بخدمت [illegible] حلقہ زیوان

2018

مورخہ 22 جون سال

مضمون:- Title verification of land regarding grant of Quarrying licences for cluster "C" at Zeewan

عزت مآب جناب تحصیلدار صاحب

جناب عالی:- [illegible] زیوان

[illegible] No: DMO/DGM/Sgr/SQ/56/1486-90 [illegible]

زیوان No: 19/TPC/Sand [illegible] 9/5/18 [illegible]

[illegible] (3) [illegible] (35)

[illegible] cluster "C" [illegible] 1459 [illegible]

[illegible]

[illegible] 1459 [illegible] 170=14 کنال [illegible]

[illegible]

[illegible] "licences" [illegible]

[illegible]

[illegible] 22-6-18

[illegible]

[illegible] Circle [illegible] Chowk, Sgr.

Patwari [illegible]

[illegible] 06/7/18

[illegible]

NAIB TEHSILDAR

[illegible]

Executive Magistrate Ist Class

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Girdawar
Pantha Chowk
A. Q. Khan

Tehsildar 6/18

NAIB TEHSILDAR
KHANMOH
Executive Magistrate Ist Class

TEHSILDAR
Pantha Chowk

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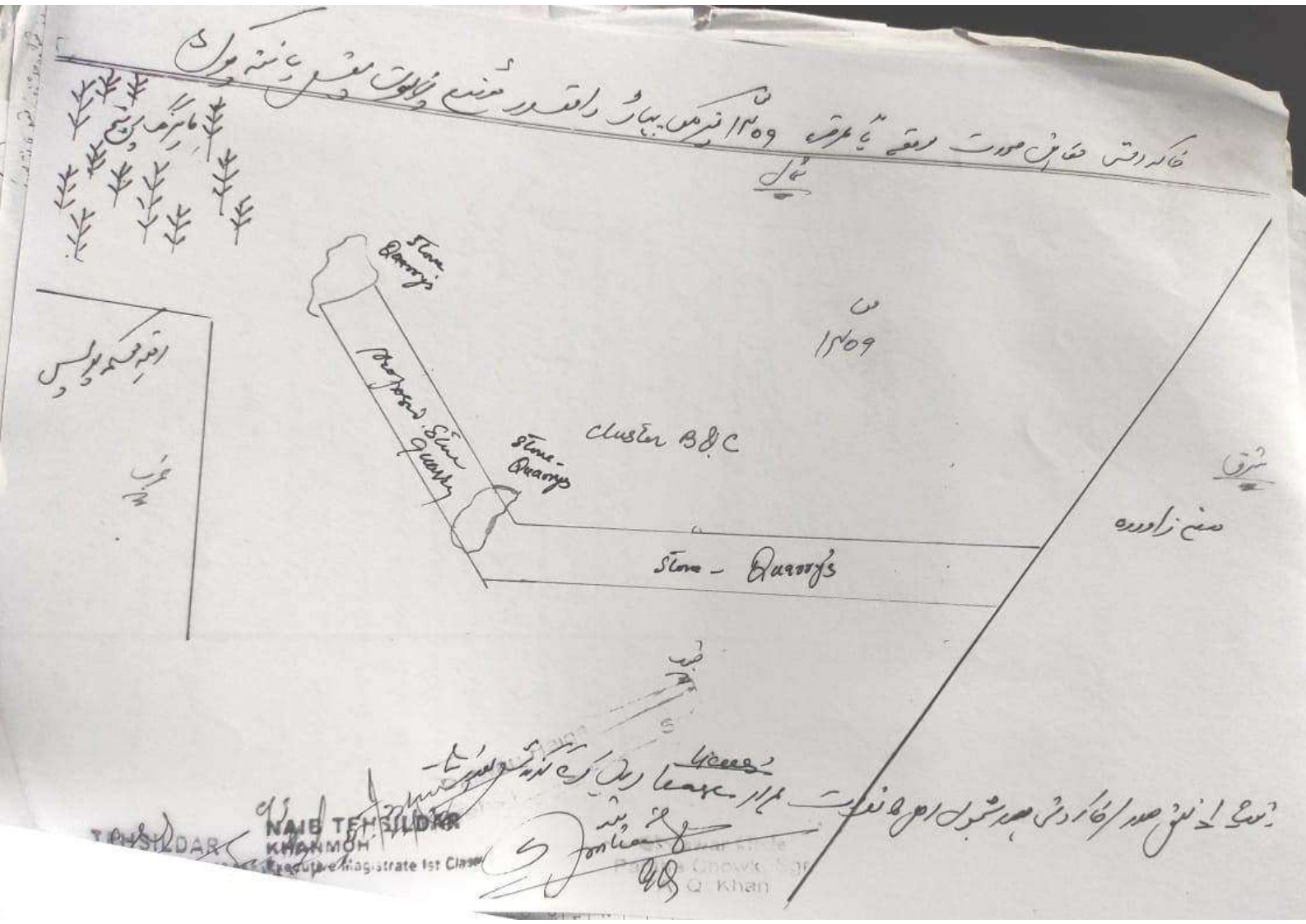
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NAIB TEHSILDAR
KHANMOH
Executive Magistrate 1st Class
TEHSILDAR

Annexure – 8

Lab Report

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
Laboratory: C43, Sector-88, Phase-II, Noida, U.P.
Ph. No.: +91-9971912476, 9350952231
E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-01 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01	Location : AQ1 Core Zone(Zewan).
Analysis Duration : 05/03/2023 To 30/05/2023	Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3) IS:5182(Part-23	Particulate Matter PM2.5 (µg /m^3) IS:5182(Part-24	Sulphur Dioxide SO_2 (µg /m^3) IS:5182(Part-2)	Nitrogen Dioxide NO_2 (µg /m^3) IS:5182(Part-6)	Carbon monoxide CO (mg /m^3) IS:5182(Part-X)
1	01/03/2023	64.50	34.53	9.28	17.79	<0.5
2	04/03/2023	62.85	32.52	6.83	16.52	<0.5
3	08/03/2023	63.47	33.38	8.67	18.51	<0.5
4	11/03/2023	65.98	36.53	9.66	19.58	<0.5
5	15/03/2023	63.31	33.57	6.65	16.41	<0.5
6	18/03/2023	65.66	35.40	7.31	17.41	<0.5
7	22/03/2023	62.47	32.66	6.72	16.59	<0.5
8	25/03/2023	64.27	34.69	7.12	17.46	<0.5
9	29/03/2023	65.12	35.40	8.58	18.91	<0.5
10	01/04/2023	63.57	33.67	7.88	17.23	<0.5
11	05/04/2023	62.81	32.37	6.61	16.48	<0.5
12	08/04/2023	64.46	34.47	7.49	17.54	<0.5
13	12/04/2023	65.82	36.40	9.21	19.13	<0.5
14	15/04/2023	63.27	33.19	7.90	17.54	<0.5
15	19/04/2023	64.24	34.31	8.66	18.79	<0.5
16	22/04/2023	62.61	32.69	6.73	16.98	<0.5
17	26/04/2023	65.47	35.55	8.51	18.76	<0.5
18	29/04/2023	63.77	33.43	7.12	17.66	<0.5
19	03/05/2023	62.69	32.42	6.76	16.50	<0.5
20	06/05/2023	64.69	34.96	9.42	19.85	<0.5
21	10/05/2023	61.92	32.10	7.39	17.64	<0.5
22	13/05/2023	64.61	34.84	8.58	18.80	<0.5
23	17/05/2023	63.59	33.52	7.70	17.71	<0.5
24	20/05/2023	65.25	35.52	9.62	19.49	<0.5
Minimum		**61.92**	**32.10**	**6.61**	**16.41**	<0.5
Maximum		**65.98**	**36.53**	**9.66**	**19.85**	<0.5
Average		**64.02**	**34.09**	**7.93**	**17.89**	<0.5
98th Percentile		**65.90**	**36.47**	**9.64**	**19.72**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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2 This test report will not be used for any publicity/legal purpose
3 The test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer.
4 The Report can not be used as evidence in a court of law without the written approval of the lab.

Checked By

For Ultra Testing & Research Laboratory
(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
Laboratory: C43, Sector-88, Phase-II, Noida, U.P.
Ph. No.: +91-9971912476, 9350952231
E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-02 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01 | Location : AQ2 Pantha Chowk.

Analysis Duration : 05/03/2023 To 30/05/2023 | Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3) IS:5182(Part-23	Particulate Matter PM2.5 (µg /m^3) IS:5182(Part-24	Sulphur Dioxide SO_2 (µg /m^3) IS:5182(Part-2)	Nitrogen Dioxide NO_2 (µg /m^3) IS:5182(Part-6)	Carbon monoxide CO (mg /m^3) IS:5182(Part-X)
1	01/03/2023	66.32	36.56	9.25	19.22	<0.5
2	04/03/2023	65.31	35.74	8.60	18.64	<0.5
3	08/03/2023	68.69	38.41	10.57	20.73	<0.5
4	11/03/2023	66.63	36.60	8.87	18.83	<0.5
5	15/03/2023	65.32	35.74	9.43	19.75	<0.5
6	18/03/2023	67.28	37.85	10.39	20.66	<0.5
7	22/03/2023	69.46	39.57	8.97	18.84	<0.5
8	25/03/2023	68.39	38.33	9.43	19.40	<0.5
9	29/03/2023	65.40	35.24	7.84	17.90	<0.5
10	01/04/2023	67.25	37.23	8.78	18.75	<0.5
11	05/04/2023	64.61	34.42	10.66	20.46	<0.5
12	08/04/2023	65.20	35.42	9.59	19.62	<0.5
13	12/04/2023	67.56	37.58	10.43	20.56	<0.5
14	15/04/2023	66.62	36.26	8.86	18.91	<0.5
15	19/04/2023	67.55	37.50	7.64	17.75	<0.5
16	22/04/2023	69.56	39.71	10.83	20.78	<0.5
17	26/04/2023	66.39	36.80	7.81	17.64	<0.5
18	29/04/2023	67.57	37.55	9.56	19.66	<0.5
19	03/05/2023	68.84	38.43	10.71	20.56	<0.5
20	06/05/2023	65.75	35.85	8.62	18.70	<0.5
21	10/05/2023	67.81	37.29	9.63	19.71	<0.5
22	13/05/2023	68.27	38.41	10.71	20.55	<0.5
23	17/05/2023	66.49	36.38	8.78	18.75	<0.5
24	20/05/2023	65.54	35.47	7.57	17.58	<0.5
Minimum		**64.61**	**34.42**	**7.57**	**17.58**	<0.5
Maximum		**69.56**	**39.71**	**10.83**	**20.78**	<0.5
Average		**66.99**	**37.01**	**9.31**	**19.33**	<0.5
98th Percentile		**69.51**	**39.65**	**10.78**	**20.76**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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Checked By

For Ultra Testing & Research Laboratory
(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
Laboratory: C43, Sector-88, Phase-II, Noida, U.P.
Ph. No.: +91-9971912476, 9350952231
E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-03 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01	Location : AQ3 Zowur.
Analysis Duration : 05/03/2023 To 30/05/2023	Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3)	Particulate Matter PM2.5 (µg /m^3)	Sulphur Dioxide SO_2 (µg /m^3)	Nitrogen Dioxide NO_2 (µg /m^3)	Carbon monoxide CO (mg /m^3)
		IS:5182(Part-23	IS:5182(Part-24	IS:5182(Part-2)	IS:5182(Part-6)	IS:5182(Part-X)
1	01/03/2023	63.60	32.69	7.85	17.72	<0.5
2	04/03/2023	64.52	34.47	5.96	15.69	<0.5
3	08/03/2023	63.14	33.71	7.79	17.59	<0.5
4	11/03/2023	65.38	35.83	8.86	18.54	<0.5
5	15/03/2023	64.24	34.69	6.70	16.91	<0.5
6	18/03/2023	62.61	32.62	5.73	15.64	<0.5
7	22/03/2023	60.93	31.38	7.70	17.34	<0.5
8	25/03/2023	63.50	33.62	8.73	18.64	<0.5
9	29/03/2023	65.56	35.40	6.75	16.66	<0.5
10	01/04/2023	66.62	36.64	8.71	18.88	<0.5
11	05/04/2023	64.40	34.47	7.21	17.35	<0.5
12	08/04/2023	62.56	32.52	5.86	15.78	<0.5
13	12/04/2023	64.67	34.71	7.40	17.66	<0.5
14	15/04/2023	66.25	36.45	8.52	18.42	<0.5
15	19/04/2023	65.27	35.67	6.86	16.97	<0.5
16	22/04/2023	62.37	32.51	5.78	15.57	<0.5
17	26/04/2023	63.64	33.64	7.73	17.40	<0.5
18	29/04/2023	65.36	35.44	8.52	18.12	<0.5
19	03/05/2023	63.59	33.62	6.65	16.80	<0.5
20	06/05/2023	65.33	35.32	7.76	17.54	<0.5
21	10/05/2023	64.21	34.48	6.74	16.64	<0.5
22	13/05/2023	63.71	33.98	8.69	18.84	<0.5
23	17/05/2023	62.53	32.52	5.86	15.97	<0.5
24	20/05/2023	64.40	34.24	7.81	17.64	<0.5
Minimum		**60.93**	**31.38**	**5.73**	**15.57**	<0.5
Maximum		**66.62**	**36.64**	**8.86**	**18.88**	<0.5
Average		**64.10**	**34.19**	**7.34**	**17.26**	<0.5
98th Percentile		**66.45**	**36.55**	**8.80**	**18.87**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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Checked By

For Ultra Testing & Research Laboratory
(Authorized Signatory)

Assuring you of best our services at all times.

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
Laboratory: C43, Sector-88, Phase-II, Noida, U.P.
Ph. No.: +91-9971912476, 9350952231
E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-04 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01	Location : AQ4 Khanmoh.
Analysis Duration : 05/03/2023 To 30/05/2023	Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3) IS:5182(Part-23	Particulate Matter PM2.5 (µg /m^3) IS:5182(Part-24	Sulphur Dioxide SO_2 (µg /m^3) IS:5182(Part-2)	Nitrogen Dioxide NO_2 (µg /m^3) IS:5182(Part-6)	Carbon monoxide CO (mg /m^3) IS:5182(Part-X)
1	01/03/2023	65.96	35.62	8.57	17.66	<0.5
2	04/03/2023	64.58	34.41	10.79	20.71	<0.5
3	08/03/2023	66.34	36.10	9.52	19.02	<0.5
4	11/03/2023	64.59	34.38	6.72	16.59	<0.5
5	15/03/2023	62.30	31.87	8.31	18.62	<0.5
6	18/03/2023	67.16	37.39	9.24	19.39	<0.5
7	22/03/2023	66.95	36.98	7.65	17.93	<0.5
8	25/03/2023	63.42	33.62	10.81	20.75	<0.5
9	29/03/2023	64.92	34.13	8.73	18.93	<0.5
10	01/04/2023	62.82	32.23	7.84	17.71	<0.5
11	05/04/2023	64.67	34.89	9.43	18.09	<0.5
12	08/04/2023	65.42	35.85	8.48	19.07	<0.5
13	12/04/2023	62.37	32.43	6.81	16.85	<0.5
14	15/04/2023	64.60	34.89	8.18	18.27	<0.5
15	19/04/2023	65.50	35.45	7.75	17.25	<0.5
16	22/04/2023	66.45	36.30	9.18	18.89	<0.5
17	26/04/2023	62.90	32.81	7.45	17.04	<0.5
18	29/04/2023	68.15	37.93	9.44	19.04	<0.5
19	03/05/2023	64.59	34.78	8.78	17.73	<0.5
20	06/05/2023	65.19	35.29	7.71	16.80	<0.5
21	10/05/2023	63.53	33.55	8.27	18.28	<0.5
22	13/05/2023	62.78	32.34	6.65	16.24	<0.5
23	17/05/2023	65.23	35.29	9.26	19.42	<0.5
24	20/05/2023	66.36	36.26	10.55	20.78	<0.5
Minimum		**62.30**	**31.87**	**6.65**	**16.24**	<0.5
Maximum		**68.15**	**37.93**	**10.81**	**20.78**	<0.5
Average		**64.87**	**34.78**	**8.59**	**18.38**	<0.5
98th Percentile		**67.69**	**37.68**	**10.80**	**20.77**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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Checked By

For Ultra Testing & Research Laboratory
(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
Laboratory: C43, Sector-88, Phase-II, Noida, U.P.
Ph. No.: +91-9971912476, 9350952231
E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-05 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA.

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01	Location : AQ5 Zawarah.
Analysis Duration : 05/03/2023 To 30/05/2023	Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3) IS:5182(Part-23	Particulate Matter PM2.5 (µg /m^3) IS:5182(Part-24	Sulphur Dioxide SO_2 (µg /m^3) IS:5182(Part-2)	Nitrogen Dioxide NO_2 (µg /m^3) IS:5182(Part-6)	Carbon monoxide CO (mg /m^3) IS:5182(Part-X)
1	02/03/2023	63.39	33.59	9.28	19.37	<0.5
2	05/03/2023	64.33	34.74	8.52	18.23	<0.5
3	09/03/2023	62.80	32.72	7.61	17.51	<0.5
4	12/03/2023	64.45	34.69	10.74	20.62	<0.5
5	16/03/2023	63.44	33.38	9.90	19.68	<0.5
6	19/03/2023	62.48	32.52	7.67	17.64	<0.5
7	23/03/2023	64.17	34.53	11.53	21.16	<0.5
8	26/03/2023	61.92	32.12	7.95	17.65	<0.5
9	30/03/2023	63.10	33.17	9.42	19.37	<0.5
10	02/04/2023	64.30	34.87	11.22	20.84	<0.5
11	06/04/2023	63.72	33.50	7.60	17.47	<0.5
12	09/04/2023	64.28	34.84	10.93	21.46	<0.5
13	13/04/2023	62.43	32.52	8.64	18.38	<0.5
14	16/04/2023	63.12	33.40	7.81	17.65	<0.5
15	20/04/2023	61.94	32.26	10.79	20.71	<0.5
16	23/04/2023	64.47	34.62	11.28	21.25	<0.5
17	27/04/2023	63.41	33.57	8.17	18.25	<0.5
18	30/04/2023	64.95	35.14	10.75	20.64	<0.5
19	04/05/2023	62.55	32.52	7.67	17.64	<0.5
20	07/05/2023	63.41	33.52	9.54	19.51	<0.5
21	11/05/2023	61.96	32.26	8.55	18.84	<0.5
22	14/05/2023	63.28	33.57	9.83	19.35	<0.5
23	18/05/2023	64.42	34.44	10.67	20.47	<0.5
24	21/05/2023	62.66	32.52	9.90	19.68	<0.5
Minimum		**61.92**	**32.12**	**7.60**	**17.47**	<0.5
Maximum		**64.95**	**35.14**	**11.53**	**21.46**	<0.5
Average		**63.37**	**33.54**	**9.42**	**19.31**	<0.5
98th Percentile		**64.73**	**35.02**	**11.42**	**21.36**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
Laboratory: C43, Sector-88, Phase-II, Noida, U.P.
Ph. No.: +91-9971912476, 9350952231
E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-06 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01	Location : AQ6 Pampore.
Analysis Duration : 05/03/2023 To 30/05/2023	Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3)	Particulate Matter PM2.5 (µg /m^3)	Sulphur Dioxide SO_2 (µg /m^3)	Nitrogen Dioxide NO_2 (µg /m^3)	Carbon monoxide CO (mg /m^3)
		IS:5182(Part-23	IS:5182(Part-24	IS:5182(Part-2)	IS:5182(Part-6)	IS:5182(Part-X)
1	02/03/2023	66.74	36.83	10.74	20.81	<0.5
2	05/03/2023	65.24	35.32	9.54	19.62	<0.5
3	09/03/2023	67.33	37.39	11.77	21.38	<0.5
4	12/03/2023	65.26	35.12	10.19	20.25	<0.5
5	16/03/2023	68.58	38.24	12.18	21.75	<0.5
6	19/03/2023	66.62	36.83	8.65	18.76	<0.5
7	23/03/2023	69.49	39.46	10.76	20.65	<0.5
8	26/03/2023	65.51	35.78	9.97	19.82	<0.5
9	30/03/2023	67.33	37.42	10.67	20.47	<0.5
10	02/04/2023	70.51	40.52	12.08	21.69	<0.5
11	06/04/2023	67.71	37.58	10.43	20.93	<0.5
12	09/04/2023	69.22	39.54	11.62	21.63	<0.5
13	13/04/2023	66.52	36.40	8.79	18.95	<0.5
14	16/04/2023	67.44	37.50	12.22	20.52	<0.5
15	20/04/2023	69.43	39.60	9.57	19.76	<0.5
16	23/04/2023	66.79	36.45	8.66	18.42	<0.5
17	27/04/2023	68.64	38.67	10.66	20.46	<0.5
18	30/04/2023	67.80	37.53	12.37	21.70	<0.5
19	04/05/2023	65.64	35.69	9.41	19.35	<0.5
20	07/05/2023	67.64	37.42	8.45	18.63	<0.5
21	11/05/2023	66.67	36.80	9.90	20.61	<0.5
22	14/05/2023	67.81	37.42	10.93	19.78	<0.5
23	18/05/2023	65.48	35.55	8.65	18.76	<0.5
24	21/05/2023	68.44	38.67	11.63	20.46	<0.5
Minimum		**65.24**	**35.12**	**8.45**	**18.42**	<0.5
Maximum		**70.51**	**40.52**	**12.37**	**21.75**	<0.5
Average		**67.41**	**37.41**	**10.41**	**20.22**	<0.5
98th Percentile		**70.04**	**40.10**	**12.30**	**21.73**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-07 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01	Location : AQ7 Rakh taingan.
Analysis Duration : 05/03/2023 To 30/05/2023	Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3)	Particulate Matter PM2.5 (µg /m^3)	Sulphur Dioxide SO_2 (µg /m^3)	Nitrogen Dioxide NO_2 (µg /m^3)	Carbon monoxide CO (mg /m^3)
		IS:5182(Part-23	IS:5182(Part-24	IS:5182(Part-2)	IS:5182(Part-6)	IS:5182(Part-X)
1	02/03/2023	64.34	34.46	9.54	19.62	<0.5
2	05/03/2023	66.42	36.66	8.71	18.90	<0.5
3	09/03/2023	68.54	38.41	10.84	20.55	<0.5
4	12/03/2023	66.46	36.56	7.85	17.72	<0.5
5	16/03/2023	67.61	37.85	9.95	19.78	<0.5
6	19/03/2023	66.54	36.83	8.65	18.76	<0.5
7	23/03/2023	64.57	34.26	7.67	17.65	<0.5
8	26/03/2023	67.74	37.58	9.88	19.64	<0.5
9	30/03/2023	68.58	38.90	10.75	20.54	<0.5
10	02/04/2023	69.28	39.20	9.96	19.81	<0.5
11	06/04/2023	68.31	38.54	7.95	17.83	<0.5
12	09/04/2023	65.47	35.55	9.49	19.51	<0.5
13	13/04/2023	64.27	34.49	8.74	18.84	<0.5
14	16/04/2023	66.50	36.39	10.02	20.11	<0.5
15	20/04/2023	68.71	38.33	9.85	19.95	<0.5
16	23/04/2023	69.54	39.52	10.52	20.64	<0.5
17	27/04/2023	66.20	36.54	7.61	17.51	<0.5
18	30/04/2023	65.56	35.52	9.48	19.68	<0.5
19	04/05/2023	68.34	38.27	10.67	20.47	<0.5
20	07/05/2023	64.46	34.66	7.81	17.64	<0.5
21	11/05/2023	66.72	36.73	9.77	19.60	<0.5
22	14/05/2023	63.83	33.62	7.76	17.54	<0.5
23	18/05/2023	68.69	38.67	10.80	20.46	<0.5
24	21/05/2023	64.58	34.31	8.66	18.98	<0.5
Minimum		**63.83**	**33.62**	**7.61**	**17.51**	<0.5
Maximum		**69.54**	**39.52**	**10.84**	**20.64**	<0.5
Average		**66.72**	**36.74**	**9.29**	**19.24**	<0.5
98th Percentile		**69.42**	**39.37**	**10.82**	**20.60**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Ambient Air Quality Analysis

Report Code: AAQ-30052023-08 Issue Date: 30/05/2023

ISSUED TO : GLOBUS ENVIRONMENT ENGINEERING SERVICES
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA.

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.

Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area- 8.92 Ha, Village-Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.

Sampling Protocol : UTRL/STP/AIR/01	Location : AQ8 Badami Bagh Cantoment.
Analysis Duration : 05/03/2023 To 30/05/2023	Sample Drawn By : UTRL

TEST RESULT

S.No	Date	Particulate Matter PM10 (µg /m^3)	Particulate Matter PM2.5 (µg /m^3)	Sulphur Dioxide SO_2 (µg /m^3)	Nitrogen Dioxide NO_2 (µg /m^3)	Carbon monoxide CO (mg /m^3)
		IS:5182(Part-23	IS:5182(Part-24	IS:5182(Part-2)	IS:5182(Part-6)	IS:5182(Part-X)
1	02/03/2023	69.38	39.57	12.33	21.64	<0.5
2	05/03/2023	67.78	37.26	10.88	20.62	<0.5
3	09/03/2023	70.24	40.20	12.26	22.63	<0.5
4	12/03/2023	68.63	38.71	11.91	21.64	<0.5
5	16/03/2023	71.51	41.44	13.50	23.59	<0.5
6	19/03/2023	69.44	39.52	10.80	20.46	<0.5
7	23/03/2023	68.16	38.49	11.84	21.52	<0.5
8	26/03/2023	70.61	40.43	10.68	20.49	<0.5
9	30/03/2023	72.18	42.12	12.88	22.75	<0.5
10	02/04/2023	71.84	41.38	11.52	21.69	<0.5
11	06/04/2023	73.54	43.53	13.35	23.32	<0.5
12	09/04/2023	71.15	41.69	12.32	22.75	<0.5
13	13/04/2023	72.21	42.24	10.81	20.75	<0.5
14	16/04/2023	70.78	40.66	11.57	21.53	<0.5
15	20/04/2023	68.50	38.24	12.18	22.49	<0.5
16	23/04/2023	72.88	42.77	13.38	23.37	<0.5
17	27/04/2023	68.42	38.85	11.53	21.72	<0.5
18	30/04/2023	69.58	39.40	12.70	23.41	<0.5
19	04/05/2023	70.40	40.74	10.90	20.65	<0.5
20	07/05/2023	69.25	39.57	12.20	22.52	<0.5
21	11/05/2023	71.36	41.64	11.63	21.38	<0.5
22	14/05/2023	67.32	37.50	10.69	20.52	<0.5
23	18/05/2023	70.65	40.40	13.44	22.75	<0.5
24	21/05/2023	71.60	41.60	11.88	21.58	<0.5
Minimum		**67.32**	**37.26**	**10.68**	**20.46**	<0.5
Maximum		**73.54**	**43.53**	**13.50**	**23.59**	<0.5
Average		**70.31**	**40.33**	**11.97**	**21.91**	<0.5
98th Percentile		**73.24**	**43.18**	**13.47**	**23.51**	<0.5
NAAQS,For 24 Hourly Monitoring		**100.0**	**60.0**	**80.0**	**80.0**	**4.0**

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Checked By

For Ultra Testing & Research Laboratory
(Authorized Signatory)

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Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Noise Report

Report Code: N-17042023-01 **Issue Date: 20/04/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.
Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area-8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.
Monitoring Date : 13/04/2023 To 14/04/2023
Sample Drawn By : UTRL
Sample Description : Ambient Noise
Weather Condition : Clear
Monitoring Duration : 24 hrs

TEST RESULT

S.No	Location	Observed Value Leq dB(A)			Limit as per CPCB Guidelines Leq. dB(A)		Zone
		Day*	Night*	Day/Night	Day*	Night*	
1	Core zone(Zewan)	60.8	44.3	59.5	**65.0**	**55.0**	**Commercial**
2	Pantha Chowk	52.2	43.7	52.8	**55.0**	**45.0**	**Residential**
3	Zowur	51.1	42.4	51.6	**55.0**	**45.0**	**Residential**
4	Khanmoh	51.8	40.1	51.3	**55.0**	**45.0**	**Residential**
*Day Time		Leq(6.00AM TO 10.00 PM)					
*Night Time		Leq(10.00PM TO 6.00 AM)					

Note:-

End Of Report

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For Ultra Testing & Research Laboratory

Checked By

TECHNICAL MANAGER

(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

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TC-8198

TEST REPORT

Noise Report

Report Code: N-17042023-02 **Issue Date: 20/04/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA.**

Project Proponent : Mr. Mohd Amin Wani S/o Haji Gh Mohd Wani.
Project Name : Minor Mineral Quarry Cluster Masonry Stone, Khasra-147, Area-8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K.
Monitoring Date : 14/04/2023 To 15/04/2023
Sample Drawn By : UTRL
Sample Description : Ambient Noise
Weather Condition : Clear
Monitoring Duration : 24 hrs

TEST RESULT

S.No	Location	Observed Value Leq dB(A)			Limit as per CPCB Guidelines Leq. dB(A)		Zone
		Day*	Night*	Day/Night	Day*	Night*	
5	Zawarah	52.3	42.8	52.5	**55.0**	**45.0**	**Residential**
6	Pampore	51.5	42.2	51.7	**55.0**	**45.0**	**Residential**
7	Rakh taingan	51.2	41.7	51.4	**55.0**	**45.0**	**Residential**
8	Badami Bagh Cantoment	52.7	43.7	53.1	**55.0**	**45.0**	**Residential**
*Day Time		Leq(6.00AM TO 10.00 PM)					
*Night Time		Leq(10.00PM TO 6.00 AM)					

Note:-

End Of Report

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For Ultra Testing & Research Laboratory

Anamika
Checked By

(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

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TC-8198

TEST REPORT

Soil Sample Analysis

Discipline/Group-Chemical/ Pollution & Environment

Report Code: SS-16032023-01 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES**
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD, LUCKNOW,U.P.-226016, INDIA

Proponent Name : Mr. Mohd Amin Wani S/o Gh. Mohd Wani

Project Name : Masonary Stone (Minor Mineral)" Quarry Cluster Block
Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan)
Tehsil- Panthachowk, Distrct- Srinagar, State- J&K

Sample Drawn On : 14/03/2023

Sample Drawn By : UTRL

Sample Description : Soil

Sample Location : SQ-1 Core Zone; SQ-2 Zewan; SQ-3 Zowur

Sampling Procedure : UTRL/SAMPLING/SOP

Sample Quantity : 2.0 kg

Analysis Duration : 16/03/2023 to 21/03/2023

RESULTS

S.No	Parameter	Units	Result			Test Method
			Location			
			SQ-1	SQ-2	SQ-3	
1	Texture	-	andy Clay Loa	Clay Loam	Sandy Clay Loan	UTRL/LAB/SOIL/SOP/05
2	Sand	%	50.83	41.83	45.95	UTRL/LAB/SOIL/SOP/05
3	Clay	%	30.52	37.23	30.02	UTRL/LAB/SOIL/SOP/05
4	Silt	%	18.65	20.94	24.03	UTRL/LAB/SOIL/SOP/05
5	pH(1:2.5 Suspension)	-	6.87	7.34	7.08	IS: 2720 (Part-26),1987
6	Electrical Conductivity	µmhos/cm	453.7	513.7	354.6	IS: 14767:2000
7	Potassium (as K)	mg/kg	191.83	180.53	178.39	UTRL/LAB/SOIL/SOP/07
8	Sodium (as Na)	mg/kg	253.62	248.32	265.30	UTRL/LAB/SOIL/SOP/06
9	Calcium (as Ca)	mg/kg	4233.56	3966.22	4358.17	UTRL/LAB/SOIL/SOP/08
10	Magnesium (as Mg)	mg/kg	774.85	518.27	422.36	UTRL/LAB/SOIL/SOP/08
11	Sodium Absorption Ratio	-	0.94	0.98	1.03	UTRL/LAB/SOIL/SOP/14
12	Water Holding Capacity	%	30.10	31.43	33.51	UTRL/LAB/SOIL/SOP/11
13	Total Kjeldahl Nitrogen	%	0.063	0.069	0.073	UTRL/LAB/SOIL/SOP/15
14	Phosphorous	mg/kg	71.43	65.34	66.25	UTRL/LAB/SOIL/SOP/09
15	Bulk Density	gm/cc	1.30	1.28	1.29	UTRL/LAB/SOIL/SOP/10
16	Organic Carbon	%	0.61	0.64	0.68	IS: 2720 (Part-22):1972
17	Organic Matter	%	1.09	1.15	1.21	IS: 2720 (Part-22):1972
18	Porosity	%	46.33	42.55	43.24	UTRL/LAB/SOIL/SOP/17

End Of Report

Note:-

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Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Soil Sample Analysis
Discipline/Group-Chemical/ Pollution & Environment

Report Code: SS-16032023-02 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES**
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD, LUCKNOW,U.P.-226016, INDIA

Proponent Name : Mr. Mohd Amin Wani S/o Gh. Mohd Wani

Project Name : Masonary Stone (Minor Mineral)" Quarry Cluster Block
Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan)
Tehsil- Panthachowk, Distrct- Srinagar, State- J&K

Sample Drawn On : 14/03/2023

Sample Drawn By : UTRL

Sample Description : Soil

Sample Location : SQ-4 Zawarah | SQ-5 Pampore | SQ-6 Lasjan

Sampling Procedure : UTRL/SAMPLING/SOP

Sample Quantity : 2.0 kg

Analysis Duration : 16/03/2023 to 21/03/2023

RESULTS

S.No	Parameter	Units	Result			Test Method
			Location			
			SQ-4	SQ-5	SQ-6	
1	Texture	-	Sandy Clay Loam	Clay Loam	Sandy Clay Loam	UTRL/LAB/SOIL/SOP/05
2	Sand	%	53.13	40.41	43.00	UTRL/LAB/SOIL/SOP/05
3	Clay	%	29.09	37.91	30.57	UTRL/LAB/SOIL/SOP/05
4	Silt	%	17.78	21.68	26.43	UTRL/LAB/SOIL/SOP/05
5	pH(1:2.5 Suspension)	-	7.24	6.84	7.46	IS: 2720 (Part-26),1987
6	Electrical Conductivity	µmhos/cm	537.8	473.6	463.7	IS: 14767:2000
7	Potassium (as K)	mg/kg	200.49	186.40	180.45	UTRL/LAB/SOIL/SOP/07
8	Sodium (as Na)	mg/kg	318.71	251.72	260.91	UTRL/LAB/SOIL/SOP/06
9	Calcium (as Ca)	mg/kg	4424.52	3725.07	4045.76	UTRL/LAB/SOIL/SOP/08
10	Magnesium (as Mg)	mg/kg	896.56	571.41	516.84	UTRL/LAB/SOIL/SOP/08
11	Sodium Absorption Ratio	-	1.14	1.01	1.03	UTRL/LAB/SOIL/SOP/14
12	Water Holding Capacity	%	28.10	32.17	32.68	UTRL/LAB/SOIL/SOP/11
13	Total Kjeldahl Nitrogen	%	0.051	0.064	0.063	UTRL/LAB/SOIL/SOP/15
14	Phosphorous	mg/kg	74.24	68.09	70.97	UTRL/LAB/SOIL/SOP/09
15	Bulk Density	gm/cc	1.32	1.32	1.33	UTRL/LAB/SOIL/SOP/10
16	Organic Carbon	%	0.62	0.69	0.60	IS: 2720 (Part-22):1972
17	Organic Matter	%	1.10	1.24	1.07	IS: 2720 (Part-22):1972
18	Porosity	%	47.71	43.15	46.19	UTRL/LAB/SOIL/SOP/17

End Of Report

Note:-

1. The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
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4. The Report can not be used as evidence in a court of law without the written approval of the lab.

Checked By

For Ultra Testing & Research Laboratory

(Authorized Signatory)

TECHNICAL MANAGER

Assuring you of best our services at all times.

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
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TC-8198

TEST REPORT

Soil Sample Analysis

Discipline/Group-Chemical/ Pollution & Environment

Report Code: SS-16032023-03 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES**
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Proponent Name : Mr. Mohd Amin Wani S/o Gh. Mohd Wani

Project Name : Masonary Stone (Minor Mineral)" Quarry Cluster Block
Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan)
Tehsil- Panthachowk, Distrct- Srinagar, State- J&K

Sample Drawn On : 14/03/2023

Sample Drawn By : UTRL

Sample Description : Soil

Sample Location : SQ-7
Rakh Taingan

Sample Quantity : 2.0 kg

Sampling Procedure : UTRL/SAMPLING/SOP

Analysis Duration : 16/03/2023 to 21/03/2023

RESULTS

S.No	Parameter	Units	Result Location SQ-7	Test Method
1	Texture	-	Clay Loam	UTRL/LAB/SOIL/SOP/05
2	Sand	%	41.61	UTRL/LAB/SOIL/SOP/05
3	Clay	%	36.05	UTRL/LAB/SOIL/SOP/05
4	Silt	%	22.34	UTRL/LAB/SOIL/SOP/05
5	pH(1:2.5 Suspension)	-	7.43	IS: 2720 (Part-26),1987
6	Electrical Conductivity	µmhos/cm	467.3	IS: 14767:2000
7	Potassium (as K)	mg/kg	178.49	UTRL/LAB/SOIL/SOP/07
8	Sodium (as Na)	mg/kg	278.88	UTRL/LAB/SOIL/SOP/06
9	Calcium (as Ca)	mg/kg	3797.49	UTRL/LAB/SOIL/SOP/08
10	Magnesium (as Mg)	mg/kg	606.27	UTRL/LAB/SOIL/SOP/08
11	Sodium Absorption Ratio	-	1.11	UTRL/LAB/SOIL/SOP/14
12	Water Holding Capacity	%	28.21	UTRL/LAB/SOIL/SOP/11
13	Total Kjeldahl Nitrogen	%	0.066	UTRL/LAB/SOIL/SOP/15
14	Phosphorous	mg/kg	59.12	UTRL/LAB/SOIL/SOP/09
15	Bulk Density	gm/cc	1.31	UTRL/LAB/SOIL/SOP/10
16	Organic Carbon	%	0.69	IS: 2720 (Part-22):1972
17	Organic Matter	%	1.24	IS: 2720 (Part-22):1972
18	Porosity	%	46.06	UTRL/LAB/SOIL/SOP/17

End Of Report

Note:-

1. The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
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4. The Report can not be used as evidence in a court of law without the written approval of the lab.

For Ultra Testing & Research Laboratory

Checked By

(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

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Website: http://www.ultralabnoida.com

TC-8198

TEST REPORT

Water Sample Analysis
Discipline/Group-Chemical/Water

Report Code: W-16032023-01 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES**
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Proponent Name : Mr. Mohd Amin Wani S/o Gh. Mohd Wani
Project Name : Masonary Stone (Minor Mineral)" Quarry Cluster Block
Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan)
Tehsil- Panthachowk, Distrct- Srinagar, State- J&K
Sample Drawn On : 14/03/2023
Sample Drawn By : UTRL
Sample Description : Ground Water
Sampling Location : GW-1 Core Zone GW-2 Zewan
Sampling Procedure : IS 3025(Part-01)
Sample Quantity : 2.0 Litre
Analysis Duration : 16/03/2023 to 21/03/2023

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results Location		Units	Acceptable Limit	Permissible Limit in the Absence of Alternate Source
			GW-1	GW-2			
1	pH	IS:3025(Part-11):2022	7.21	7.32	-	6.5-8.5	-
2	Colour	IS:3025(Part-04):2021	<5.0	<5.0	Hazen	5	15
3	Odour	IS-3025(Part-05):2018	Agreeable	Agreeable	-	Agreeable	Agreeable
4	Taste	IS:3025(Part-07):2017	Agreeable	Agreeable	-	Agreeable	Agreeable
5	Turbidity	IS-3025(Part-10):1984	<0.5	<0.5	NTU	1	5
6	Total Hardness (as $CaCO_3$)	IS:3025(Part-21):2009	184	128	mg/l	200	600
7	Calcium(as Ca)	IS:3025(Part-40):1991	44.16	23.04	mg/l	75	200
8	Magnesium(as Mg)	IS:3025(Part-46):1994	17.88	17.11	mg/l	30	100
9	Chloride(as Cl)	IS:3025(Part-32):1988	25.44	19.57	mg/l	250	1000
10	Iron(as Fe)	IS:3025(Part-53):2003	<0.05	<0.05	mg/l	1	No Relaxation
11	Fluoride(as F)	APHA 4500 F(D) 23rd Ed.: 2017	0.29	0.22	mg/l	1	1.5
12	Free Residual chlorin	IS:3025(Part-26):2021	<0.1	<0.1	mg/l	0.2	1
13	Total Dissolved Solid	IS:3025(Part-16):1984	303	219	mg/l	500	2000
14	Phenolic Compound (as C_6H_5OH)	IS: 3025 (Part-43):2022	<0.001	<0.001	mg/l	0.001max	0.002 Max
15	Anionic Detergents (as MBAS)	APHA 5540 (B)/(C) 23rd Ed.: 2017	<0.1	<0.1	mg/l	0.2	1.0

Contd. To report W-16032023-0 (Page 1 of 2)

TECHNICAL MANAGER

ULTRA TESTING & RESEARCH LABORATORY

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TC-8198

16	Sulphate (as SO_4)	IS:3025(Part-24):2022	23.25	12.28	mg/l	200	400
17	Nitrate (as NO_3)	IS:3025(Part-34):1988	2.71	2.03	mg/l	45	No Relaxation
18	Alkalinity(as CaCO3)	IS:3025(Part-23):1986	168	128	mg/l	200	600
19	Chloramines (as Cl_2)	IS:3025(Part-26):2021	<1.0	<1.0	mg/l	4	No Relaxation
20	Cadmium (as Cd)	IS-3025(Part-41):1992	<0.001	<0.001	mg/l	0.003	No Relaxation
21	Lead (as Pb)	IS:3025(Part-47):1994	<0.005	<0.005	mg/l	0.01	No Relaxation
22	Total Chromium(asCr	IS:3025(Part-52):2021	<0.01	<0.01	mg/l	0.05	No Relaxation
23	Copper (as Cu)	IS:3025(Part-42):2004	<0.01	<0.01	mg/l	0.05	1.5
24	Total Ammonia	IS:3025(Part-34):1988	<0.5	<0.5	mg/l	0.5	No Relaxation
25	Sulphide (as H2S)	IS:3025(Part-29):1986	<0.05	<0.05	mg/l	0.05	No Relaxation
26	Zinc (as Zn)	IS:3025(Part-49):1944	<0.1	<0.1	mg/l	5	15
27	Manganese (as Mn)	IS:3025(Part-59):2006	<0.1	<0.1	mg/l	0.1	0.3
28	Boron (as B)	IS:3025(Part-57):2021	<0.1	<0.1	mg/l	0.5	1
29	Selenium (Se)	IS:3025(Part-56):2003	<0.01	<0.01	mg/l	0.01	No Relaxation
30	Arsenic (as As)	IS:3025(Part-37):2022	<0.01	<0.01	mg/l	0.01	No Relaxation

End Of Report

Note:-

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For ULTRA TESTING & RESEARCH LABORATORY

(Authorized Signatory)

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Website: http://www.ultralabnoida.com

TEST REPORT

Bacteriological Quality of Drinking Water

Report Code : W-16032023-01 **Issue Date: 21/03/2023**

Issued To : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name : Mr. Mohd Amin Wani S/o Gh. Mohd Wani

Project Name : Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K

Sample Drawn On : 14/03/2023

Sample Drawn By : UTRL

Sample Description : Ground Water

Sampling Location : GW-1 Core Zone GW-2 Zewan

Analysis Duration : 16/03/2023 to 21/03/2023

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results		Units	Requirements
			GW-1	GW-2		
1	E.coli	IS-1622	Absent	Absent	E.Coli/100m	Shall not be detectable in100 ml sample
2	Total Coliform	IS-1622	Absent	Absent	MPN/100ml	Shall not be detectable in100 ml sample

End Of Report

Note:-

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Checked By

For ULTRA TESTING & RESEARCH LABORATORY

(Authorized Signatory)

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TC-8198

TEST REPORT

Water Sample Analysis
Discipline/Group-Chemical/Water

Report Code: W-16032023-02 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name	:	Mr. Mohd Amin Wani S/o Gh. Mohd Wani	
Project Name	:	Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K	
Sample Drawn On	:	14/03/2023	
Sample Drawn By	:	UTRL	
Sample Description	:	Ground Water	
Sampling Location	:	GW-3 Zowur	GW-4 Zawarah
Sampling Procedure	:	IS 3025(Part-01)	
Sample Quantity	:	2.0 Litre	
Analysis Duration	:	16/03/2023 to 21/03/2023	

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results (Location)		Units	Acceptable Limit	Permissible Limit in the Absence of Alternate Source
			GW-3	GW-4			
1	pH	IS:3025(Part-11):2022	7.43	7.25	-	6.5-8.5	-
2	Colour	IS:3025(Part-04):2021	<5.0	<5.0	Hazen	5	15
3	Odour	IS-3025(Part-05):2018	Agreeable	Agreeable	-	Agreeable	Agreeable
4	Taste	IS:3025(Part-07):2017	Agreeable	Agreeable	-	Agreeable	Agreeable
5	Turbidity	IS-3025(Part-10):1984	<0.5	<0.5	NTU	1	5
6	Total Hardness (as $CaCO_3$)	IS:3025(Part-21):2009	172	192	mg/l	200	600
7	Calcium(as Ca)	IS:3025(Part-40):1991	41.28	34.56	mg/l	75	200
8	Magnesium(as Mg)	IS:3025(Part-46):1994	16.72	25.66	mg/l	30	100
9	Chloride(as Cl)	IS:3025(Part-32):1988	21.53	23.48	mg/l	250	1000
10	Iron(as Fe)	IS:3025(Part-53):2003	<0.05	<0.05	mg/l	1	No Relaxation
11	Fluoride(as F)	APHA 4500 F(D) 23rd Ed.: 2017	0.20	0.17	mg/l	1	1.5
12	Free Residual chlorine	IS:3025(Part-26):2021	<0.1	<0.1	mg/l	0.2	1
13	Total Dissolved Solid	IS:3025(Part-16):1984	272	295	mg/l	500	2000
14	Phenolic Compound (as C_6H_5OH)	IS: 3025 (Part-43):2022	<0.001	<0.001	mg/l	0.001max	0.002 Max
15	Anionic Detergents (as MBAS)	APHA 5540 (B)/(C) 23rd Ed.: 2017	<0.1	<0.1	mg/l	0.2	1.0

Contd. To report W-16032023-02 (Page 1 of 2)

ULTRA TESTING & RESEARCH LABORATORY

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E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TC-8198

16	Sulphate (as SO_4)	IS:3025(Part-24):2022	18.52	14.74	mg/l	200	400
17	Nitrate (as NO_3)	IS:3025(Part-34):1988	2.84	2.66	mg/l	45	No Relaxation
18	Alkalinity(as CaCO3)	IS:3025(Part-23):1986	152	172	mg/l	200	600
19	Chloramines (as Cl_2)	IS:3025(Part-26):2021	<1.0	<1.0	mg/l	4	No Relaxation
20	Cadmium (as Cd)	IS-3025(Part-41):1992	<0.001	<0.001	mg/l	0.003	No Relaxation
21	Lead (as Pb)	IS:3025(Part-47):1994	<0.005	<0.005	mg/l	0.01	No Relaxation
22	Total Chromium(asCr	IS:3025(Part-52):2021	<0.01	<0.01	mg/l	0.05	No Relaxation
23	Copper (as Cu)	IS:3025(Part-42):2004	<0.01	<0.01	mg/l	0.05	1.5
24	Total Ammonia	IS:3025(Part-34):1988	<0.5	<0.5	mg/l	0.5	No Relaxation
25	Sulphide (as H2S)	IS:3025(Part-29):1986	<0.05	<0.05	mg/l	0.05	No Relaxation
26	Zinc (as Zn)	IS:3025(Part-49):1944	<0.1	<0.1	mg/l	5	15
27	Manganese (as Mn)	IS:3025(Part-59):2006	<0.1	<0.1	mg/l	0.1	0.3
28	Boron (as B)	IS:3025(Part-57):2021	<0.1	<0.1	mg/l	0.5	1
29	Selenium (Se)	IS:3025(Part-56):2003	<0.01	<0.01	mg/l	0.01	No Relaxation
30	Arsenic (as As)	IS:3025(Part-37):2022	<0.01	<0.01	mg/l	0.01	No Relaxation

End Of Report

Note:-

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Checked By

For ULTRA TESTING & RESEARCH LABORATORY

(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

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Ph.: No.: +91-9971912476, 9350952231
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TEST REPORT

Bacteriological Quality of Drinking Water

Report Code : W-16032023-02 **Issue Date: 21/03/2023**

Issued To : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name : Mr. Mohd Amin Wani S/o Gh. Mohd Wani

Project Name : Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K

Sample Drawn On : 14/03/2023

Sample Drawn By : UTRL

Sample Description : Ground Water

Sampling Location : GW-3 Zowur; GW-4 Zawarah

Analysis Duration : 16/03/2023 to 21/03/2023

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results		Units	Requirements
			GW-3	GW-4		
1	E.coli	IS-1622	Absent	Absent	E.Coli/100m	Shall not be detectable in100 ml sample
2	Total Coliform	IS-1622	Absent	Absent	MPN/100ml	Shall not be detectable in100 ml sample

End Of Report

Note:-

1 The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
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Checked By

For ULTRA TESTING & RESEARCH LABORATORY

TECHNICAL MANAGER

(Authorized Signatory)

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TC-8198

TEST REPORT

Water Sample Analysis
Discipline/Group-Chemical/Water

Report Code: W-16032023-03 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name	: Mr. Mohd Amin Wani S/o Gh. Mohd Wani	
Project Name	: Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K	
Sample Drawn On	: 14/03/2023	
Sample Drawn By	: UTRL	
Sample Description	: Ground Water	
Sampling Location	: GW-5 Pampore	GW-6 Lasjan
Sampling Procedure	: IS 3025(Part-01)	
Sample Quantity	: 2.0 Litre	
Analysis Duration	: 16/03/2023 to 21/03/2023	

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results		Units	Acceptable Limit	Permissible Limit in the Absence of Alternate Source
			Location				
			GW-5	GW-6			
1	pH	IS:3025(Part-11):2022	7.27	7.15	-	6.5-8.5	-
2	Colour	IS:3025(Part-04):2021	<5.0	<5.0	Hazen	5	15
3	Odour	IS-3025(Part-05):2018	Agreeable	Agreeable	-	Agreeable	Agreeable
4	Taste	IS:3025(Part-07):2017	Agreeable	Agreeable	-	Agreeable	Agreeable
5	Turbidity	IS-3025(Part-10):1984	<0.5	<0.5	NTU	1	5
6	Total Hardness (as $CaCO_3$)	IS:3025(Part-21):2009	140	116	mg/l	200	600
7	Calcium(as Ca)	IS:3025(Part-40):1991	33.60	20.88	mg/l	75	200
8	Magnesium(as Mg)	IS:3025(Part-46):1994	13.61	15.50	mg/l	30	100
9	Chloride(as Cl)	IS:3025(Part-32):1988	15.65	14.09	mg/l	250	1000
10	Iron(as Fe)	IS:3025(Part-53):2003	<0.05	<0.05	mg/l	1	No Relaxation
11	Fluoride(as F)	APHA 4500 F(D) 23rd Ed.: 2017	0.16	0.25	mg/l	1	1.5
12	Free Residual chlorine	IS:3025(Part-26):2021	<0.1	<0.1	mg/l	0.2	1
13	Total Dissolved Solid	IS:3025(Part-16):1984	216	179	mg/l	500	2000
14	Phenolic Compound (as C_6H_5OH)	IS: 3025 (Part-43):2022	<0.001	<0.001	mg/l	0.001max	0.002 Max
15	Anionic Detergents (as MBAS)	APHA 5540 (B)/(C) 23rd Ed.: 2017	<0.1	<0.1	mg/l	0.2	1.0

Contd. To report V-16032023-0 (Page 1 of 2)

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TC-8198

16	Sulphate (as SO_4)	IS:3025(Part-24):2022	12.66	9.83	mg/l	200	400
17	Nitrate (as NO_3)	IS:3025(Part-34):1988	1.57	1.71	mg/l	45	No Relaxation
18	Alkalinity(as CaCO3)	IS:3025(Part-23):1986	124	104	mg/l	200	600
19	Chloramines (as Cl_2)	IS:3025(Part-26):2021	<1.0	<1.0	mg/l	4	No Relaxation
20	Cadmium (as Cd)	IS-3025(Part-41):1992	<0.001	<0.001	mg/l	0.003	No Relaxation
21	Lead (as Pb)	IS:3025(Part-47):1994	<0.005	<0.005	mg/l	0.01	No Relaxation
22	Total Chromium(asCr	IS:3025(Part-52):2021	<0.01	<0.01	mg/l	0.05	No Relaxation
23	Copper (as Cu)	IS:3025(Part-42):2004	<0.01	<0.01	mg/l	0.05	1.5
24	Total Ammonia	IS:3025(Part-34):1988	<0.5	<0.5	mg/l	0.5	No Relaxation
25	Sulphide (as H2S)	IS:3025(Part-29):1986	<0.05	<0.05	mg/l	0.05	No Relaxation
26	Zinc (as Zn)	IS:3025(Part-49):1944	<0.1	<0.1	mg/l	5	15
27	Manganese (as Mn)	IS:3025(Part-59):2006	<0.1	<0.1	mg/l	0.1	0.3
28	Boron (as B)	IS:3025(Part-57):2021	<0.1	<0.1	mg/l	0.5	1
29	Selenium (Se)	IS:3025(Part-56):2003	<0.01	<0.01	mg/l	0.01	No Relaxation
30	Arsenic (as As)	IS:3025(Part-37):2022	<0.01	<0.01	mg/l	0.01	No Relaxation

End Of Report

Note:-

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4 The Report can not be used as evidence in a court of law without the written approval of the lab.

Checked By

For ULTRA TESTING & RESEARCH LABORATORY

(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
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TEST REPORT

Bacteriological Quality of Drinking Water

Report Code : W-16032023-03 **Issue Date: 21/03/2023**

Issued To : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name : Mr. Mohd Amin Wani S/o Gh. Mohd Wani

Project Name : Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K

Sample Drawn On : 14/03/2023

Sample Drawn By : UTRL

Sample Description : Ground Water

Sampling Location : GW-5 Pampore; GW-6 Lasjan

Analysis Duration : 16/03/2023 to 21/03/2023

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results		Units	Requirements
			GW-5	GW-6		
1	E.coli	IS-1622	Absent	Absent	E.Coli/100m	Shall not be detectable in100 ml sample
2	Total Coliform	IS-1622	Absent	Absent	MPN/100ml	Shall not be detectable in100 ml sample

End Of Report

Note:-

1 The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
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For ULTRA TESTING & RESEARCH LABORATORY

Checked By

TECHNICAL MANAGER

(Authorized Signatory)

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TC-8198

TEST REPORT

Water Sample Analysis
Discipline/Group-Chemical/Water

Report Code: W-16032023-04 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name	: Mr. Mohd Amin Wani S/o Gh. Mohd Wani
Project Name	: Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K
Sample Drawn On	: 14/03/2023
Sample Drawn By	: UTRL
Sample Description	: Ground Water
Sampling Location	: GW-7 Rakh Taingan
Sampling Procedure	: IS 3025(Part-01)
Sample Quantity	: 2.0 Litre
Analysis Duration	: 16/03/2023 to 21/03/2023

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results Location GW-7	Units	Acceptable Limit	Permissible Limit in the Absence of Alternate Source
1	pH	IS:3025(Part-11):2022	7.54	-	6.5-8.5	-
2	Colour	IS:3025(Part-04):2021	<5.0	Hazen	5	15
3	Odour	IS-3025(Part-05):2018	Agreeable	-	Agreeable	Agreeable
4	Taste	IS:3025(Part-07):2017	Agreeable	-	Agreeable	Agreeable
5	Turbidity	IS-3025(Part-10):1984	<0.5	NTU	1	5
6	Total Hardness (as $CaCO_3$)	IS:3025(Part-21):2009	92	mg/l	200	600
7	Calcium(as Ca)	IS:3025(Part-40):1991	22.08	mg/l	75	200
8	Magnesium(as Mg)	IS:3025(Part-46):1994	8.94	mg/l	30	100
9	Chloride(as Cl)	IS:3025(Part-32):1988	23.48	mg/l	250	1000
10	Iron(as Fe)	IS:3025(Part-53):2003	<0.05	mg/l	1	No Relaxation
11	Fluoride(as F)	APHA 4500 F(D) 23rd Ed.: 2017	0.26	mg/l	1	1.5
12	Free Residual chlorin	IS:3025(Part-26):2021	<0.1	mg/l	0.2	1
13	Total Dissolved Solid	IS:3025(Part-16):1984	179	mg/l	500	2000
14	Phenolic Compound (as C_6H_5OH)	IS: 3025 (Part-43):2022	<0.001	mg/l	0.001max	0.002 Max
15	Anionic Detergents (as MBAS)	APHA 5540 (B)/(C) 23rd Ed.: 2017	<0.1	mg/l	0.2	1.0

Contd. To report W-16032023-04 (Page 1 of 2)

TECHNICAL MANAGER

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16	Sulphate (as SO_4)	IS:3025(Part-24):2022	23.25	mg/l	200	400
17	Nitrate (as NO_3)	IS:3025(Part-34):1988	1.69	mg/l	45	No Relaxation
18	Alkalinity(as CaCO3)	IS:3025(Part-23):1986	80	mg/l	200	600
19	Nickel(as Ni)	IS 3025 (Part-54):2003	<0.1	mg/l	0.02	No Relaxation
20	Cadmium (as Cd)	IS-3025(Part-41):1992	<0.001	mg/l	0.003	No Relaxation
21	Lead (as Pb)	IS:3025(Part-47):1994	<0.005	mg/l	0.01	No Relaxation
22	Total Chromium(asCr	IS:3025(Part-52):2021	<0.01	mg/l	0.05	No Relaxation
23	Copper (as Cu)	IS:3025(Part-42):2004	<0.01	mg/l	0.05	1.5
24	Total Ammonia	IS:3025(Part-34):1988	<0.5	mg/l	0.5	No Relaxation
25	Sulphide (as H2S)	IS:3025(Part-29):1986	<0.05	mg/l	0.05	No Relaxation
26	Zinc (as Zn)	IS:3025(Part-49):1944	<0.1	mg/l	5	15
27	Manganese (as Mn)	IS:3025(Part-59):2006	<0.1	mg/l	0.1	0.3
28	Boron (as B)	IS:3025(Part-57):2021	<0.1	mg/l	0.5	1
29	Selenium (Se)	IS:3025(Part-56):2003	<0.01	mg/l	0.01	No Relaxation
30	Arsenic (as As)	IS:3025(Part-37):2022	<0.01	mg/l	0.01	No Relaxation

End Of Report

Note:-

1. The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
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Checked By

For ULTRA TESTING & RESEARCH LABORATORY

(Authorized Signatory)

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TEST REPORT

Bacteriological Quality of Drinking Water

Report Code : W-16032023-04 **Issue Date: 21/03/2023**

Issued To : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name	: Mr. Mohd Amin Wani S/o Gh. Mohd Wani
Project Name	: Masonary Stone (Minor Mineral)" Quarry Cluster Block
Sample Drawn On	: 14/03/2023
Sample Drawn By	: UTRL
Sample Description	: Ground Water
Sampling Location	: GW-7 Rakh Taingan
Analysis Duration	: 16/03/2023 to 21/03/2023

RESULTS
As per IS 10500:2012

S.No	Parameter	Test Method	Results	Units	Requirements
			GW-7		
1	E.coli	IS-1622	Absent	E.Coli/100ml	Shall not be detectable in100 ml sample
2	Total Coliform	IS-1622	Absent	MPN/100ml	Shall not be detectable in100 ml sample

End Of Report

Note:-

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For ULTRA TESTING & RESEARCH LABORATORY

Checked By

(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

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TC-8198

TEST REPORT

Surface Water Sample Analysis
Discipline/Group-Chemical/Water

Report Code: WW-16032023-01 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name	: Mr. Mohd Amin Wani S/o Gh. Mohd Wani
Project Name	: Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K
Sample Drawn On	: 14/03/2023
Sample Drawn By	: UTRL
Sample Description	: Surface Water
Sampling Location	: Sample Collected from Jhelum River(Pantha chowk)
Sampling Procedure	: IS 3025(Part-01)
Sample Quantity	: 2.0 Litre
Analysis Duration	: 16/03/2023 to 21/03/2023

RESULTS

S.No	Parameter	Test Method	Results	Units	Tolerance Limit as per IS:2296				
					Class A	Class B	Class C	Class D	Class E
1	pH	IS:3025(Part-11):2022	7.18	-	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5
2	Temperature	IS:3025(Part-09):1984	24.1	^{O}C	-	-	-	-	-
3	Turbidity	IS:3025(Part-10):1984	3.8	NTU	-	-	-	-	-
4	Conductivity @25°C	IS:3025(Part-14):2013	196.9	µs/cm.	-	-	-	1000	2250
5	Total Suspended Solid	IS:3025(Part-17):2022	9	mg/l	-	-	-	-	-
6	Total Alkalinity (as $CaCO_3$)	IS:3025(Part-23):1986	52	mg/l	-	-	-	-	-
7	Biological Oxygen Demand (Max.) (at $27^{0}C$ for 3 days)	IS:3025(Part-44):1993	3.5	mg/l	2	3	3	-	-
8	Dissolved Oxygen (as O_2) Min.	IS:3025(Part-38):1989	8.2	mg/l	6	5	4	4	-
9	Calcium(as Ca)	IS:3025(Part-40):1991	12.80	mg/l	80	-	-	-	-
10	Magnesium(as Mg)	IS:3025(Part-46):1994	9.72	mg/l	24	-	-	-	-
11	Chloride(as Cl),Max	IS:3025(Part-32):1988	23.65	mg/l	250	-	-	-	600
12	Iron(as Fe),Max	IS:3025(Part-53):2003	<0.05	mg/l	0.3	-	50	-	-
13	Fluoride(as F),Max	APHA 4500 F(D) 23rd Ed. 2017	0.26	mg/l	1.5	1.5	1.5	-	-
14	Total Dissolved Solid	IS:3025(Part-16):1984	128	mg/l	500	-	1500	-	2100

Contd. To report Code: WW-16032023-01

TECHNICAL MANAGER

ULTRA TESTING & RESEARCH LABORATORY

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TC-8198

Contd. To report Code: WW-16032023-01

15	Total Hardness (as $CaCO_3$)	IS:3025(Part-21):2009	72.00	mg/l	300	-	-	-	-
16	Sulphate (as SO_4)Max	IS:3025(Part-24):2022	10.62	mg/l	400	-	400	-	1000
17	Phosphate (as P)	IS:3025(Part-31):2022	0.36	mg/l	-	-	-	-	-
18	Sodium (as Na)	IS:3025(Part-45):1993	8.98	mg/l	-	-	-	-	-
19	Manganese (as Mn)	IS:3025(Part-59):2006	<0.1	mg/l	0.5	-	-	-	-
20	Total Chromiun(as Cr)	IS:3025(Part-52):2021	<0.05	mg/l	0.05	0.05	0.05	-	-
21	Zinc (as Zn)	IS:3025(Part-49):1994	<0.1	mg/l	15	-	15	-	-
22	Potassium (as K)	IS:3025(Part-45):1993	2.56	mg/l	-	-	-	-	-
23	Nitrate (as NO_3),Max	IS:3025(Part-34):1988	3.10	mg/l	20	-	50	-	-
24	Cadmium (as Cd)	IS-3025(Part-41):1992	<0.01	mg/l	0.01	-	0.01	-	-
25	Lead (as Pb)	IS:3025(Part-47):1994	<0.01	mg/l	0.1	-	0.1	-	
26	Copper (as Cu)	IS:3025(Part-42):2004	<0.01	mg/l	1.5	-	1.5	-	-
27	Chemical Oxygen Demand (asO_2)	IS-3025(Part-58):2006	14.40	mg/l	-	-	-	-	-
28	Arsenic (as As)	IS:3025(Part-37):2022	<0.01	mg/l	0.05	0.2	0.2	-	

End Of Report

Remarks:-

Class A-Drinking water without conventional treatment but after disinfection.

Class B-Water for outdoor bathing.

Class C-Drinking water with conventional treatment followed by disinefection.

Class D-Water for fish culture and wild life propagation.

Class E-Water for irrigation, industrial cooling and control waste disposal.

Note:-

1. The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
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For ULTRA TESTING & RESEARCH LABORATORY

TECHNICAL MANAGER

Checked By

(Authorized Signatory)

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TEST REPORT

Surface Water Sample Analysis

Report Code: WW-16032023-01 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name	: Mr. Mohd Amin Wani S/o Gh. Mohd Wani
Project Name	: Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K
Sample Drawn On	: 14/03/2023
Sample Drawn By	: UTRL
Sample Description	: Surface Water
Sampling Location	: Sample Collected from Jhelum River(Pantha chowk)
Analysis Duration	: 16/03/2023 to 21/03/2023

RESULTS

S.No	Parameter	Test Method	Results	Units	Tolerance Limit as per IS:2296				
					Class A	Class B	Class C	Class D	Class E
1	Total Coliform	IS:1622	87	MPN/100m	50	500	5000	-	-

End Of Report

Remarks:-

Class A-Drinking water without conventional treatment but after disinfection.

Class B-Water for outdoor bathing.

Class C-Drinking water with conventional treatment followed by disinefection.

Class D-Water for fish culture and wild life propagation.

Class E-Water for irrigation, industrial cooling and control waste disposal.

Note:-

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For ULTRA TESTING & RESEARCH LABORATORY

Checked By

(Authorized Signatory)

TECHNICAL MANAGER

ULTRA TESTING & RESEARCH LABORATORY

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TC-8198

TEST REPORT

Surface Water Sample Analysis
Discipline/Group-Chemical/Water

Report Code: WW-16032023-02 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES**
326-AB,3RD FLOOR, SAHARA SHOPPING CENTER,
FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA

Proponent Name	: Mr. Mohd Amin Wani S/o Gh. Mohd Wani
Project Name	: Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K
Sample Drawn On	: 14/03/2023
Sample Drawn By	: UTRL
Sample Description	: Surface Water
Sampling Location	: Sample Collected from Jhelum River(Pantha chowk)
Sampling Procedure	: IS 3025(Part-01)
Sample Quantity	: 2.0 Litre
Analysis Duration	: 16/03/2023 to 21/03/2023

RESULTS

S.No	Parameter	Test Method	Results	Units	Tolerance Limit as per IS:2296				
					Class A	Class B	Class C	Class D	Class E
1	pH	IS:3025(Part-11):2022	7.27	-	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5
2	Temperature	IS:3025(Part-09):1984	23.8	^{O}C	-	-	-	-	-
3	Turbidity	IS:3025(Part-10):1984	4.1	NTU	-	-	-	-	-
4	Conductivity @25°C	IS:3025(Part-14):2013	186.5	µs/cm.	-	-	-	1000	2250
5	Total Suspended Solid	IS:3025(Part-17):2022	13	mg/l	-	-	-	-	-
6	Total Alkalinity (as $CaCO_3$)	IS:3025(Part-23):1986	48	mg/l	-	-	-	-	-
7	Biological Oxygen Demand (Max.) (at 27^0C for 3 days)	IS:3025(Part-44):1993	3.0	mg/l	2	3	3	-	-
8	Dissolved Oxygen (as O_2) Min.	IS:3025(Part-38):1989	8.3	mg/l	6	5	4	4	-
9	Calcium(as Ca)	IS:3025(Part-40):1991	14.40	mg/l	80	-	-	-	-
10	Magnesium(as Mg)	IS:3025(Part-46):1994	6.80	mg/l	24	-	-	-	-
11	Chloride(as Cl),Max	IS:3025(Part-32):1988	21.68	mg/l	250	-	-	-	600
12	Iron(as Fe),Max	IS:3025(Part-53):2003	<0.05	mg/l	0.3	-	50	-	-
13	Fluoride(as F),Max	APHA 4500 F(D) 23rd Ed. 2017	0.22	mg/l	1.5	1.5	1.5	-	-
14	Total Dissolved Solid	IS:3025(Part-16):1984	121	mg/l	500	-	1500	-	2100

Contd. To report Code: WW-16032023-02

TECHNICAL MANAGER

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
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Website: http://www.ultralabnoida.com

TC-8198

Contd. To report Code: WW-16032023-02

15	Total Hardness (as $CaCO_3$)	IS:3025(Part-21):2009	64.00	mg/l	300	-	-	-	-
16	Sulphate (as SO_4)Max	IS:3025(Part-24):2022	12.32	mg/l	400	-	400	-	1000
17	Phosphate (as P)	IS:3025(Part-31):2022	0.32	mg/l	-	-	-	-	-
18	Sodium (as Na)	IS:3025(Part-45):1993	8.98	mg/l	-	-	-	-	-
19	Manganese (as Mn)	IS:3025(Part-59):2006	<0.1	mg/l	0.5	-	-	-	-
20	Total Chromiun(as Cr)	IS:3025(Part-52):2021	<0.05	mg/l	0.05	0.05	0.05	-	-
21	Zinc (as Zn)	IS:3025(Part-49):1994	<0.1	mg/l	15	-	15	-	-
22	Potassium (as K)	IS:3025(Part-45):1993	2.56	mg/l	-	-	-	-	-
23	Nitrate (as NO_3),Max	IS:3025(Part-34):1988	2.59	mg/l	20	-	50	-	-
24	Cadmium (as Cd)	IS-3025(Part-41):1992	<0.01	mg/l	0.01	-	0.01	-	-
25	Lead (as Pb)	IS:3025(Part-47):1994	<0.01	mg/l	0.1	-	0.1	-	
26	Copper (as Cu)	IS:3025(Part-42):2004	<0.01	mg/l	1.5	-	1.5	-	-
27	Chemical Oxygen Demand (asO_2)	IS-3025(Part-58):2006	12.80	mg/l	-	-	-	-	-
28	Arsenic (as As)	IS:3025(Part-37):2022	<0.01	mg/l	0.05	0.2	0.2	-	

End Of Report

Remarks:-

Class A-Drinking water without conventional treatment but after disinfection.

Class B-Water for outdoor bathing.

Class C-Drinking water with conventional treatment followed by disinefection.

Class D-Water for fish culture and wild life propagation.

Class E-Water for irrigation, industrial cooling and control waste disposal.

Note:-

1. The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
2. This test report will not be used for any publicity/legal purpose.
3. The test samples will be disposed off after two weeks from the date of issue of test report, unless until specified by the customer.
4. The Report can not be used as evidence in a court of law without the written approval of the lab.

For ULTRA TESTING & RESEARCH LABORATORY

Checked By

(Authorized Signatory)

ULTRA TESTING & RESEARCH LABORATORY

(An ISO 9001:2015, ISO 45001:2018, ISO 14001:2015 Certified)
Laboratory: C-43, Sector-88, Phase-II, Noida, U.P.
Ph.: No.: +91-9971912476, 9350952231
E-mail: ultraresearchlab@gmail.com
Website: http://www.ultralabnoida.com

TEST REPORT

Surface Water Sample Analysis

Report Code: WW-16032023-02 **Issue Date: 21/03/2023**

ISSUED TO : **GLOBUS ENVIRONMENT ENGINEERING SERVICES 326-AB,3RD FLOOR, SAHARA SHOPPING CENTER, FAIZABAD ROAD,LUCKNOW,U.P.-226016,INDIA**

Proponent Name	: Mr. Mohd Amin Wani S/o Gh. Mohd Wani
Project Name	: Masonary Stone (Minor Mineral)" Quarry Cluster Block Khasra No-147, Area-8.92 Ha, Village- Dakteng (Zewan) Tehsil- Panthachowk, Distrct- Srinagar, State- J&K
Sample Drawn On	: 14/03/2023
Sample Drawn By	: UTRL
Sample Description	: Surface Water
Sampling Location	: Sample Collected from Jhelum River(Pantha chowk)
Analysis Duration	: 16/03/2023 to 21/03/2023

RESULTS

S.No	Parameter	Test Method	Results	Units	Tolerance Limit as per IS:2296				
					Class A	Class B	Class C	Class D	Class E
1	Total Coliform	IS:1622	121	MPN/100n	50	500	5000	-	-

End Of Report

Remarks:-

Class A-Drinking water without conventional treatment but after disinfection.

Class B-Water for outdoor bathing.

Class C-Drinking water with conventional treatment followed by disinefection.

Class D-Water for fish culture and wild life propagation.

Class E-Water for irrigation, industrial cooling and control waste disposal.

Note:-

1. The results given above are related to the tested sample, for various parameters, as observed at the time of sampling. The customer asked for the above tests only.
2. This test report will not be used for any publicity/legal purpose.
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For ULTRA TESTING & RESEARCH LABORATORY

Checked By

(Authorized Signatory)

Annexure – 9

Questionnaire

QUESTIONNAIRE FOR ENVIRONMENTAL APPRAISAL OF STONE MINING PROJECTS
J&K

Note 1: Please enter √ in appropriate box where answer is Yes / No

Note 2: No abbreviation to be used - **Not available** or **Not applicable** should be clearly mentioned.

Note 3: **Core zone** is the mining lease area.

Buffer zone is to be considered as **10 km** all around the periphery of the core zone

Note 4: Please indicate source of data.

1. General Information

(a) Name of the project : Minor Mineral Quarry Cluster (Masonry Stone) Block Mine

b) Name of the proponent : Mr. Mohd Amin Wani S/o Gh. Mohd Wani

Mailing Address : Sempora, Lasjan, District- Srinagar, State- J&K,

E-mail : No

Telephone : None

Fax No. : No

c) Objective of the project : Minor Mineral Quarry Cluster (Masonry Stone) Block Mine

d) Location of mine (s)

Khasra/Gata No./Plot No.	Village	Tehsil	District
Khasra no.- 147	Dakteng (Zewan)	Panthachowk	Srinagar

(e) Does the proposal relate to

(i)	New mine	Yes	✓	No	--
(ii)	Expansion	Yes	--	No	✓
	• Increase in ML area	Yes	-	No	--
	• Increase in annual production	Yes	--	No	--
(iii)	Renewal of ML	Yes	--	No	✓
(iv)	Modernization	Yes	-	No	✓

(f) Site Information

(i) Geographical Location

- Latitude: 34°02'38.83"N to 34°02'47.00"N
- Longitude: 74°54'08.65"E to 74°54'24.14"E
- Survey of India Topo sheet number: 43J/16
- Elevation above Mean Sea Level: 2510 amsl
- Total mining lease area (in ha.): 8.92 Ha

(ii) Dominant nature of terrain

• Flat	Yes	-	No	✓
• Undulated	Yes	✓	No	--
• Hilly	Yes	✓	No	--

2. Land usage of the mining lease area (in ha.)

(a)	Agricultural	No
(b)	Forest	No
(c)	Waste land	8.92 Ha
(d)	Grazing	No
(e)	Surface water bodies	None
(f)	Others (Specify)	No
	Total	8.92 Ha

3. Indicate the seismic zone in which ML area falls. **Seismic Zone-V**

4. Break-up of mining lease area (in ha.) as per conceptual plan:

Purpose	Mining Lease Area				Total
	Government		Private		
	Forest	Others	Agri.	Others	
1. Area to be excavated	No	8.92 Ha	No	No	8.92 Ha
2. Storage for top soil	No	-	No	No	-
3. Overburden / Dumps	No	-	No	No	-

4. Mineral storage	No	-	No	No	-
5. Infrastructure (Workshop, Administrative Building)	No	0.00	No	No	0.00
6. Roads	No	-	No	No	-
7. Parking for trucks/tippers	No	-	No	No	-
8.Other (Balance undisturbed land)	No	0.00	No	No	0.00
TOTAL		8.92 Ha	-	-	8.92 Ha

5. Distance of water bodies (in km/Meters)

Distance from	**River Bank ***	**Other Water bodies * lake / Nalla etc. (specify)**
Mining lease boundary	-	**River:** Jhelum River, 1.26 Km, South **Water body:** • Lokut Dal, 6.85 Km, NW • Dal Lake, 7.81 Km, NNW Nagin Lake, 9.84 Km, NW
Ancillary facilities	Not Applicable	Not Applicable

[* From highest flood line / high tide line]

6. Indicate aerial distance from the periphery of core zone (up to 10 km):

S. No.	**Areas**	**Name**	**Aerial distance from (in km.)**	
			Core * Zone	**Buffer* Zone**
1.	National Park / Sanctuary	No	No	No
2.	Biosphere Reserve / Tiger Reserve / Elephant Reserve / any other Reserve	No	No	No
3.	Forest (RF / PF / unclassified)	No	No	No
4.	Habitat for migratory birds	No	No	No
5.	Corridor for animals of schedule I & II of the Wildlife (Protection) Act, 1972	No	No	No
6.	Archaeological sites ,* Notified	No	No	No
7.	Defense Installation	No	No	No
8.	Industries / Thermal Power Plants	No	No	No
9.	Other Mines	Yes	-	-
10.	Airport	No	-	-

11.	Railway Lines	-	-	-
12.	National / State Highways	NH 1A	-	- 2.27 Km, west
13.	Critically polluted area	Nil	-	-
14.	Inter-state boundary	Nil	-	-

[* Buffer zone is to be considered as **10 km** all around the periphery of the core zone].

7. Description of flora & fauna separately in the core and buffer zones.*

[*Consult the Wildlife (Protection) Act, 1972 as amended subsequently and list species with (1) Common name (2) Scientific name and (3) under which schedule of the Wildlife (Protection) Act the identified species fall. Get the list authenticated by an Expert in the field / credible scientific institute / University / Chief Wildlife Warden Office. **Information to be based on field survey.**]

A.	**Flora**	**Core Zone**	**Buffer Zone**
1.	Agricultural crops	Not Applicable	None
2.	Commercial crops	Not Applicable	--
3.	Plantation	Not Applicable	--
4.	Natural vegetation / forest type	Not Applicable	--
5.	Grass lands	Not Applicable	--
6.	Endangered species	Not Applicable	Nil
7.	Endemic species	Not Applicable	Nil
8.	Others (Specify)	--	Nil
B.	**Fauna**	Not Applicable	Nil
1.	Total listing of faunal elements	Not Applicable	Nil
2.	Endangered species	Not Applicable	Nil
3.	Endemic species	Not Applicable	Nil
4.	Migratory species	Not Applicable	Nil
5.	Details of aquatic fauna, if applicable	Not Applicable	--

8. Production of mineral(s) and life of mine

(a)	Rated capacity of mine (Tonnes/annum)	150000 TPA
(b)	Lease period (Years)	5 year
(c)	Date of expiry of lease (DD /MM/YYYY)	-

(d) Indicate in case of existing mines

(i) Date of opening of mine | -

(ii) Production in the last 3 years | -

(iii) Projected production for the next 3 years from year …… to year In MTPA.

4th year	5th year	6th year

(iv) Whether mining was suspended after opening of the mine? Yes -- No ✓

If yes, details thereof including last production figure and reason for the same. | Not Applicable

(e) Whether plans & sections provided? Yes ✓ No --

9. Type and method of mining operations

TYPE		METHOD	
Opencast	✓	Manual	No
Underground	No	Semi-mechanized	✓
Both	No	Mechanized	No

10. Mine details

(a) Opencast mine | ✓

(i) Stripping ratio (mineral in tons to over burden in m^3) | 1:16

(ii) Ultimate working depth (in m bgl) | 8-12(average)

(iii) Indicate present working depth in case of Existing mine (in m bgl) | NA

(vi) Mining Plan

- Height and width of the bench in Overburden / waste. | Not Applicable
- Height & width of the bench in ore body | 6m & 12m
- Proposed inclination/slope of the sides of the opencast mine (separately for overburden, ore and overall slope of the pit sides) both while operating the mine as well as at the time of closure of the mine. | 45^0

11. Surface drainage pattern at mine site

(a)	Whether the pre-mining surface drainage plan Submitted?	Yes	-	No	✓
(b)	Do you propose any modification / diversion in the existing natural drainage pattern at any stage? If yes, when. Provide location map indicating contours, dimensions of water body to be diverted, direction of flow of water and proposed route / changes, if any i.e. realignment of river /nallah/ any other water body falling within core zone andits impact.	Yes	-	No	✓

12. Vehicular traffic density(outside the ML area)

			Type of vehicles		No. of vehicles per day
(a)	Existing	Yes	-	No	-
(b)	After the proposed activity	Yes	--	No	-
(c)	Whether the existing road Network is adequate? If no, provide details of alternative Proposal?	Yes	✓	No	-

13. Loading, transportation and unloading of mineral and over burden on surface:

(a)	Manual	Yes	-		✓
(b)	Tubs etc.	Yes		No -	✓
(c)	Scraper, shovels, dumpers / trucks	Yes	✓		-
(d)	Conveyors (belt, chain, etc.)	Yes		No -	✓
(e)	Others (specify).	Yes		No --	--

14. Mineral(s) transportation outside the ML area

		Qty. (in TPD)	Percentage (%)	Length (in km)
(a)	Road	-	-	-
(b)	Water ways	-	-	-
(c)	Others (Specify)	-	-	-
(d)	Rope way	-	-	-
(e)	Pipeline	-	-	-
	Total	Nil	-	-

15. Water Requirement (per day)

Purpose	Avg. Demand	Peak Demand
A. <u>Mine site</u>		
1. Mine operation	1.0 KLD	
2. Land reclamation	0.0 KLD	
3. Dust suppression	3.99 KLD	--
4. Drinking	0.51KLD	--
5. Others (Plantation)	2.35 KLD	--
Total	7.73 KLD	--

16. Source of Water Supply*

S. No.	Source	m^3/day
1	River (name)	None
2	Ground water	0.0
3	Other surface water bodies (specify)	Potable water tankers will be purchased

[*Annex a copy of sanction letter / permission from the concerned authority (Central Ground Water Authority in case of ground water abstraction is from notified area / State Ground Water Board in case of non-notified area / State Irrigation Department for surface water pumping) for drawing water.]

17. Ground water potential of the study area: Ground Water Availability

(Concerned development block)

(a) Range of water table (m bgl)

(i) Pre-monsoon (April/May)

- Core Zone: 30
- Buffer zone: 35

(ii) Post-monsoon (November)

- Core Zone: 35
- Buffer zone: 40

(b) Net annual ground water availability (million m^3/ year, from Secondary source)

- By ground water table fluctuation method: NA
- By rainfall infiltration factor method: NA

(c) Stage of ground water development in % — NA

(d) Estimated draft through mine discharge (million m3/ year) — NA

(e) Net annual ground water availability (million m3/ year) — NA

(f) Stage of ground water development in % — NA

17.1 Water Demand – Competing Users of the Water Source

S.No.	Usage	Present Consumption (m^3/day)		Additional proposed as per local plan (m^3/day)		Total (M^3/Day)	
		Surface	Ground	Surface	Ground	Surface	Ground
1	Drinking	--	--	-	--	--	--
2.	Irrigation	-	-	-	--	--	--
3.	Industry	-	-	-	--	--	--
4.	Mining		-	-	--	--	--
5.	Others (Domestic purpose)	-		-	--	--	--
Total		-		-	--	--	--

17.2 Waste Water Management

Mine

(a) Daily average discharge (m^3/day) from different sources

(i) Mine water discharge during

- Lean period — Nil
- Monsoon period — Nil
- Workshop — Nil

(ii) Domestic (mine site) — Nil

(iii) Others (Specify) — Nil

Total — --

(b) Waste water treatment plant, flow Sheet for treatment process attached — Yes [-] No [√]

(c) Quantity of water recycled/reused/to be recycled in

(i) Percentage — Not Applicable / --

(ii) M^3/day

(d) Point of final discharge Yes No - √

Final Point	Quantity discharged (in m^3/day)
1. Surface	Zero Discharge
(i) Agricultural land	–
(ii) Waste land	–
(iii) Forest land	–
2. River / nallah	–
3. Lake	–
4. Others (specify)	–
Total	–

(e) Users of discharge water

(i)	Human	Yes	-	No	√
(ii)	Livestock	Yes	-	No	√
(iii)	Irrigation	Yes	-	No	√
(iv)	Industry	Yes	-	No	√
(v)	Others (specify)		Not Applicable		

(f) Details of the river /nalah, if final effluent is / will be discharged (cusecs)

(i)	Average flow rate	Not Applicable			
(ii)	Lean season flow rate	Not Applicable			
(iii)	Aquatic life	Yes	-	No	-
(iv)	Analysis of river water 100 meters Upstream and 100 meters downstream of discharge point submitted.	Yes	-	No	-

18. Attach water balance statement in the form of a flow diagram Indicating source (s), consumption (Section-wise) and output. Not Applicable

19. Human Settlement:

	Core Zone	Buffer Zone
Population*	Nil	226882
No. of villages	Nil	63
Number of households village-wise	Nil	34544

[* As per latest census record or actual survey]

20. Environmental health and safety

(a) What major health and safety hazards are anticipated? None

(b) What provisions have been made/proposed to be Made to conform to health and safety requirements? First aid kits will be made available on the site for any unforeseen mishappening + a standby vehicle to carry the injured person (if any) has been proposed as a safety measure.

PPE (Personal protective equipment) such as dust mask, ear plug, muffler, safety dress, safety shoes regular health checkup of the mine worker will be carried out.

(c) In case of an existing mine

(i) Comprehensive report on health status of the workers as under the Mines Act. Yes - No √

(ii) Ambient air quality- ($PM_{10,}$ $PM_{2.5}$, SO_2&NO_x). Yes - No -

21. Environmental Management Plan

Salient features of environmental protection measures.

S. No.	Environmental issues*	Already practiced, if applicable	Proposed
1	**Air pollution**	Nil	• Water will be sprinkled on service roads, • Over loading of tippers will be avoided and consequent spillage. • Air quality shall be regularly monitored. • Wet drilling operation will be practiced if and when required to control dust.
2	**Water pollution**	Nil	• Check-dams will be provided, as required, • Monitoring of water quality of mine discharge to local natural slope and domestic water will be conducted.
3	**Water conservation**	Nil	Water will be stored in the mining pit is utilized in sprinkling, drilling and blasting
4	**Noise pollution**	Nil	• Hearing protection devices (Ear plugs and ear muffs) is being provided to the drill machine operators and dumper

			drivers. • Noise level is maintained below 90dB.
5	**Solid waste / Tailings**	Nil	There is no solid waste because Minor Mineral Quarry Cluster (Masonry Stone) 100% use in crusher
6	**Land degradation**	**Nil**	Check-dams will be provided to prevent land degradation.
7	**Erosion & Sediment**	**Nil**	Check-dams will be provided to prevent soil erosion.
8	**Top soil**	**Nil**	Only small quantity of Top soil will be generated so stacked carefully and used for plantation purpose
9	**Ground vibration**	Nil	Suitable blast design will be developed with the help of experts, to minimize effect of vibration on surrounding community.
10	**Wildlife conservation**	-	-
-	**Forest protection**	-	-
12	**Others (specify)**	-	-

[* As applicable]

22. Compliance with environmental safeguards (For existing units)

(a) Status of the compliance of conditions of Environmental Clearance, issued earlier By MoEF, if any, enclose. Yes [-] No [√]

(b) Status of the compliance of 'Consent to Operate' issued by SPCB, if any, enclosed. Yes [-] No [√]

(c) Latest environmental statement enclosed. Yes [-] No [√]

23. Mine closure

(a) Have you planned mine closure? Yes [-] No [✓]

(b) Submit a conceptual Mine Closure Plan. Yes [-] No [✓]

(c) If yes, indicate estimated amount for implementing the same (in Rs. lakhs) [-]

24. Capital cost of the project (in Rs. Lac) (Based on latest estimate) [97.33]

25. Cost of Environmental Protection Measures

S. No.		Capital cost		Annual recurring cost	

		Existing	Proposed	Existing	Proposed
1	Pollution Control(Separately provide break-up) It includes mitigation measures, like water sprinkling, retaining walls etc.		6.00 Lakhs		1.0 Lakhs
2	Pollution Monitoring (Separately provide break-up)		5.80 Lakhs		0.5 Lakhs
3	Occupational Health		3.72 Lakhs		0.25
4	Green Belt Mine Roadside/Settlements		4.42 Lakhs		0.25
5	Reclamation / Rehabilitation of mined out area				-
6	Others (specify)				-
Total			19.94 Lakhs		2.0 Lakhs

26. Amount earmarked for socio-economic Welfare measures for the nearby villages Other than R&R plans — 4.87 Lakh

27. Whether the following approvals* (wherever applicable) have been obtained?

(i)Mining plan approval from Directorate of Geology & Mining	Yes	✓	No	-
(ii)'Consent for Establishment' from theState Pollution Control Board	Yes	-	No	√
(iii)Mining plan approval from IBM /Ministry of Coal	Yes	-	No	√
(iv) In case of existing mines, mining scheme approval from Directorate of Geology & Mining	Yes	-	No	✓
(v) Forestry clearance under FCA, 1980	Yes	-	No	√
(vi) NOC from Chief Controller of Explosives	Yes	-	No	√
(vii)Commitment regarding availability /pumping of waste from the concerned Authorities	Yes	-	No	√
(iv)In case of ML area falling in notified areas of the Central Ground Water Authority NOC from them.	Yes	-	No	√

* Annex copies of approvals and number them

28. Was/is there any court case relating to project or related activities? If so, provide details present status.

Yes - No √

Verification: The data and information given above are true to the best of my knowledge and belief & I am aware that if any part of the data & information submitted is found to be false or

misleading at any stage, the project will be rejected & clearance given, if any to the project will be revoked at our risk & cost.

Date: Signature of the applicant

Place:

Mr. Mohd Amin Wani S/o Gh. Mohd Wani
R/o: Sempora, Lasjan, District- Srinagar,
State- J&K

Executive Summary of Draft EIA Report

at

Minor Mineral Quarry Cluster Masonry Stone Block
At
Khasra no.- 147, Area- 8.92Ha.
Village- Dakteng (Zewan), Tehsil- Panthachowk,
District- Srinagar, State- J&K.

Schedule,	*1(a) i,*
Category	*B1*
Land/Plot Area/Revised Area	*8.92 Ha*
Production Capacity	*1,50,000 MT/ annum*
ToR Letter No.	*JKEIAA/2021/410/8100-8103, Dated 19.06.2023*
Lab Used	*Ultra Testing & Research Laboratory*
Approved By	*NABL*
Monitoring Period	*March to May 2023(Summer Season)*

Submitted by

Mr. Mohd Amin Wani S/o Gh. Mohd Wani
R/o: Sempora, Lasjan,
District- Srinagar, State- J&K.

Prepared by

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Certificate No. NABET/EIA/1821/IA0034,
Extension of Validity Till September 29/2021

EIA NOTIFICATION 2006
APPENDIX III A
(See Paragraphs 7)

EXECUTIVE SUMMARY OF EIA REPORT

EXECUTIVE SUMMARY

1.1 PROJECT DESCRIPTION

1.1.1 Introduction of the Project & Proponent

The proposed project is Minor mineral Mining Project which is proposed by Mr. Mohd Amin Wani. The proponent has applied for mining lease of Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- 147, Area- 8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowk, District- Srinagar, State- J&K as per the provisions of EIA Notification 2006. It has been proposed to collect 2,00,000 MT per annum of Minor Mineral Quarry Cluster (Masonry Stone) Block.

Therefore, as per MoEF&CC, GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018 if a cluster or an individual lease exceeds 5.0 Ha the project is classified as Category – B since the project does not attracts the General Condition.

The mining lease area falls under cluster (if periphery of one lease is within 500 meters of the other lease) which is ≥ 5.0 ha therefore as per MoEF&CC GoI O.M. No. L-11011/175/2018-IA-II (M) Dated: 12/12/2018. It is applied under Cat-B1 and Cluster Certificate is attached as Annexure.

Table No.1.1: Project Details

On-line Proposal No.	SIA/JK/MIN/54417/2020		
File No. allotted by SEIAA, JK	SEAC/JK/20/384		
Name of Proponent	Mr. Mohd Amin Wani S/o Gh. Mohd Wani,		
Full correspondence address of proponent	R/o: Sempora, Lasjan District- Srinagar, State- J&K		
Name of Project	Minor Mineral Quarry Cluster Masonry Stone Block		
Project location (Plot/Khasra/Gate No.)	Khasra No: 147, Village- Dakteng (Zewan), Tehsil : Panthachowk, District: Srinagar, State: J&K.		
Name of Minor Mineral	Minor Mineral Quarry Cluster Masonry Stone Block		
Type of Land	Khalsa Sarkar		
Land utilization Pattern	The area is barren land.		
Sanctioned Lease Area (in Ha)	8.29 Ha		
Schedule (as per EIA notification 2006)	1(a)i		
Category of Project	B (1)		
Method of Mining	Open Cast, Semi-mechanized		
Sanctioned Period of Mine lease	New Mine, The applicant being the highest bidder was issued with Letter of Intent (LOI) by DGM office vide letter No. 337/MCC/DGM/CQK/16/3520-22 Dated: 22-08-2017 for the exploitation for 5 Years.		
Pillar Coordinates	**Pillar**	**Latitude**	**Longitude**
	RP	34°02'38.98"N	74°54'25.28"E
	A	34°02'43.32"N	74°54'23.75"E
	B	34°02'47.00"N	74°54'24.14"E
	C	34°02'46.41"N	74°54'12.29"E
	D	34°02'44.54"N	74°54'02.31"E

	E	34°02'38.83"N	74°54'08.65"E
	F	34°02'39.25"N	74°54'15.77"E
	G	34°02'43.07"N	74°54'18.14"E

Toposheet No	43 J/16			
Total Geological Reserves	23,59,740 MT			
Total Mineable Reserves	20,43,510 MT			
Proposed Production/year in Mining Plan Approval Letter	1,50,000 MT/Annum (Average Annual Production)			
Production of mine/day	500 MT/day			
No. of Working days	300 Days			
Working hours/day	8 hours/day			
No. of Workers	34 Manpower			
No. of vehicles movement/day	50 Units (Assumed Loading Capacity: 10 Tonnes/Unit)			
Altitude of the Area	The Highest Point : 2510m amsl The Lowest Point : 1600m amsl			
Ultimate Depth of Mining (Bench Level)	8-12 m (average Depth) (1775 mRL – 1640 mRL) *(Source: Approved Mining Plan)*			
Ground Water Level	1.50 – 2.50 mbgl *Source:http://cgwb.gov.in/District_Profile/JandK/srinagar.pdf*			
Nearest metalled road from site	Metalled Road 0.57 km away from the mine site.			
Water Requirement	**Source**	**Purpose**	**Detail**	**Avg. Demand/ Day**
	Portable Tankers	Drinking @15lpcd/worker	34 workers x 15 lpcd = 510 lpcd	0.51 KLD
		Land reclamation / plantation @5 Lit/Tree (@ 100 trees/ Ha)	446 Trees x 5 lpcd) = 2230 lpcd	2.23 KLD
		Mine Operation	-	1.0 KLD
		Dust suppression @1 Lit/Sq.m	Approach Road Area = (570 m Length x 7m Width = 3990 m^2 lpcd	3.99 KLD
	Total			**7.73 KLD**
Name of QCI Accredited Consultant with QCI No. and period of validity.	**GLOBUS Environment Engineering Services** Certificate No. NABET/EIA/2124/RA0245, Valid Till August 24/2024			
Any litigation pending against the	No			

project or land in any court	
Total Proposed Project Cost	Rs. 97.33 Lakhs
Proposed CER cost	Rs. 4.87 Lakhs (5% of the total Project Cost)
Proposed EMP cost	Rs. 14.41 Lakhs (Haulage Road repair, Dust Suppression, Plantation & Environmental Monitoring)
Length and breadth of Haul Road	Haul Road Length 570 m Length & Width 7 m
No. of Trees to be Planted	446 trees will be planted

1.2 DESCRIPTION OF ENVIRONMENT

1.2.1 BASE LINE DATA: This section contains the description of baseline studies of the 10 km radius of the area (Core Zone and Buffer Zone) surrounding the mine lease area located at Minor Mineral Quarry Cluster Masonry Stone Block at Khasra no.- 147, Area- 8.92 Ha, Village- Dakteng (Zewan), Tehsil- Panthachowck, District- Srinagar, State- J&K. The data collected has been used to understand the existing environment scenario around the proposed mining project against which the potential impacts of the project can be assessed.

Environmental data has been collected in relation to proposed mining for:-

(a) Air **(b)** Noise
(c) Water **(d)** Soil
(e) Ecology and Biodiversity **(f)** Socio-economy

Table 1.2: Baseline Environmental Status

Attribute	Baseline status
Ambient Air Quality	Ambient Air Quality Monitoring reveals that the maximum & minimum concentrations of PM_{10} & $PM_{2.5}$ for all the 8 AQ monitoring stations were found to be within the prescribed limit of CPCB. As far as the gaseous pollutants SO_2 and NO_2 are concerned, the prescribed CPCB limit of 80µg/m^3 for residential and rural areas has never been surpassed at any station.
Noise Levels	Noise monitoring was carried out at 8 locations. The results of the monitoring program indicated that both the daytime and night time levels of noise were well within the prescribed limits of NAAQS, at all the four locations monitored.
Water Quality	8 Groundwater samples and 2 surface water samples were analyzed and concluded that: The ground water from all sources remains suitable for drinking purposes as all the constituents are within the limits prescribed by drinking water standards by Indian Standards IS: 10500.
Soil Quality	Samples collected from identified locations indicate the soil is sandy Clay, Sandy Clay Loam type and Clay loam type.
Ecology and Bio-diversity	There are no Ecologically Sensitive Areas present in the study area.
Socio-economy	The implementation of the mining project in the district will throw opportunities to local people for both direct and indirect employment. The study area is still lacking in education, health, housing, water, electricity

	etc. It is expected that same will improve to a great extent due to proposed mining project and associated industrial and business activities.

Table 1.3 ENVIRONMENTAL MONITORING

PARAMETERS	DESCRIPTION	
Ambient Air Quality Monitoring	❖ PM_{10}– 60.93 (Min.) at AQ-3 to 73.54µg/m^3 (Max.) at AQ-8 ❖ $PM_{2.5}$ – 31.38 (Min.) at AQ-3 to 38.6 µg/m^3 (Max.) at AQ-8 ❖ SO_2 – 5.73 (Min.) at AQ-3 to 13.5 µg/m^3 (Max.) at AQ-8 ❖ NOx – 15.57 (Min.) at AQ-3 to 23.59 µg/m^3 (Max.) at AQ-8 ❖ CO -<0.5 (Min.) to <0.5 µg/m^3 (Max.)	
Noise Quality Monitoring	❖ Noise level during day time – 51.1 dB (A) (Min.) at AQ-3 to 60.8 dB (A) (Max.) at AQ-1 ❖ Noise Levels during night time – 40.1 dB (A) (Min.) at AQ-4 to 44.3 dB (A) (Max.) at AQ-1.	
Water Quality Sampling & Analysis	**Ground Water**	Analysis results of ground water in the study area reveal the following: - ❖ pH 7.15 (Min.) at GW-6 to 7.56 (Max.) at GW-8, ❖ Total Hardness 116 (Min.) mg/l at GW-6 to 192 mg/l (Max.) at GW-4, ❖ TDS 179 (Min) mg/l at GW -6 to 303 mg/l (Max) at GW -1, ❖ Sulphate 3.67 (Min.) mg/l at GW-6 to 13.31 mg/l (Max.) at GW- 4, ❖ Chloride 14.09 (Min.) at GW-6 to 25.44 mg/l (Max.) at GW-1
	Surface Water	The parameters results are as follows: ❖ pH value is 7.18 to 7.27 ❖ TDS was observed as 121 mg/l to 128 mg/l ❖ Chlorides were found as 21.68 to 23.65 mg/l ❖ Sulphates were found as 10.62 to 12.32 mg/l ❖ Total hardness was observed 64 to 72 mg/l.
Soil Quality	❖ **pH** – 6.56 to 7.46. ❖ **Organic matter** 0.92 to 1.24 % ❖ **Total Kjeldahl Nitrogen** 0.051 to 0.075%. ❖ **Phosphorous** 58.87 to 74.24 mg/kg. ❖ **Potassium** 178.39 to 204.13 mg/kg	

1.3 ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

1.3.1 BIOLOGICAL ENVIRONMENT

The biological environment mainly consists of flora and fauna and its relationship with surroundings. Biological environment includes species of native plants and animals and one may measures the degradation of environment by noting the decrease in the commonly occurring species. As regards to fauna, the activity will have negative impact on them. At the beginning the animal will recede to distances due to noise generated from Transportation. They will trace back to an optimum distance

after some time, on being habituated by disturbances. After the mining activity and growth of forest local fauna will again be reinstated even in a better way due to the generated forest cover in lieu of the existing denuded tract of land. There is no rare and endangered fauna species close to the mining area. Considering the small area of mining, insignificant impact is envisaged on biological environment.

1.3.2 Direct Impact:

The Minor Mineral Quarry Cluster Masonry Stone Block which proposes production of 1,50,000 MT/Annum of minor mineral. No direct impact is anticipated from the project on biodiversity.

Indirect Impact:

The major indirect impact include following.

- Mining activity is likely to affect the movement of the animal and birds.
- Increase in noise may affect the feeding, breeding and movement of animals.
- Likely settling of dust to be generated by movement of vehicles on leaves may results in to stunted growth of vegetation and may also affect the capacity of production.
- Large numbers of labor population will influx the area during mining operation.
- The major threat to surrounding flora is through collection of fuel wood by labor for cooking purposes and thereby loss of trees.

Cumulative Impact:

- Indirect and cumulative impacts are associated with various mining activities such as clearing of vegetation for establishment of various project units, movement of vehicles, Mining equipment s& machineries etc., interferences due to influx of labours etc.

- The losses of land for various project units will also not adversity affect the fauna as similar habitat is present throughout the project immediate influenced area. Therefore, impact due to loss of habitat for birds, reptiles and mammals of the project area is not expected.

1. 3.2: LAND ENVIRONMENT

The sanctioned MLA is a virgin land and the mining for the extraction of granted quantity of minor mineral will be started after the grant of environment clearance. At present, there is no any type of pit is present in the mining lease area. However, at the end of the first year period of mining lease granted period the impact on land use will be limited.

1.3.3: AIR ENVIRONMENT

Anticipated impacts and evaluation:

In mining operations, loading, transportation and unloading operations may cause deterioration in air quality due to handling dry materials. In the present case, only wet materials will be handled, thus eliminating problems of fugitive dust.

MITIGATION MEASURES:

The collection and lifting of minerals will be done manually. Therefore the dust generated is likely to be insignificant as there will be no drilling. The only air pollution sources are the road transport network of the trucks. The mitigation measures like the following will be resorted.

- Water sprinkling will be done on the roads regularly. This will reduce dust emission further by 75%.

- ❖ Care will be taken to prevent spillage by covering the carrying vehicles with tarpaulin and sprinkling of water, if dry.
- ❖ Fortnightly scraping of road in order to keep the roads almost leveled. This will ensure smooth flow of vehicles and also prevent spillage.
- ❖ Overloading will be kept under check by giving prior awareness.
- ❖ Proper Tuning of vehicles to keep the gas emissions under check.
- ❖ Plantation of trees along the roads to help reduce the impact of dust in the nearby villages.
- ❖ Care will be taken to use PUC certified trucks.

1.3.4: WATER ENVIRONMENT

- ❖ Various surface and ground water samples are collected and analyzed in the reputed laboratory. The report indicated that the water available in the area is potable and all values are within the permissible limit.
- ❖ Hand pumps and dug wells are situated within 500 m Core Zone in which drinking water facilities are available.
- ❖ No pumping of water will be done in any surface body directly. The mine water will be pump out during rainy seasons. The pumped out water will be stored and utilized for sprinkling of water on haul roads, watering of plants, drilling and other dust suppression measures.
- ❖ Post-monsoon and Pre-monsoon groundwater level will be monitored regularly through nearby hand pumps and dug wells.
- ❖ Awareness programs will be taken up to educate public for conservation of water.
- ❖ Mobile toilets will be used at site.
- ❖ ML area under reference is water scarce and water reservoir will be a source of water to villagers. It will also attract birds and will improve aquatic environment.

1.3.5 NOISE ENVIRONMENT

Anticipated impacts and evaluation:

The mining methodology is done in semi mechanized process so there will not be any major impact on noise level due to the mining. The only impact will be due to transportation of materials by trucks.

- ❖ Mental disturbance, stress & impaired hearing.
- ❖ Decrease in speech reception & communication.
- ❖ Distraction and diminished concentration affecting job performance efficiency.

Mitigation measures

- ❖ Well maintained vehicle will be used which will reduced the noise level.
- ❖ **Plantation:** Plantation of trees along the road will be done to dampen the noise, if possible.
- ❖ The vehicles will be maintained in good running condition so that noise will be reduced to minimum possible level.
- ❖ Awareness will be imparted prior to mining operations that smoke silencers remain in a good conditions not to generate noise.
- ❖ In addition, truck drivers will be instructed to make minimum use of horns at the village area.
- ❖ Where ever space is made available by the authorities' plantation will be done and also post Plantation care will be provided.

1.4 ENVIRONMENT MONITORING PROGRAME

Regular Monitoring of all the environmental parameters *viz.*, air, water, noise and soil as per the formulated program based on CPCB and MoEF&CC guidelines will be carried out every year in order to detect any changes from the baseline status.

Table 1.4: Monitoring Schedule & Parameters

S.No.	Attributes	Parameters for monitoring	Frequency	Locations
1.	**Meteorology**	Wind speed, Wind direction, Dry bulb temperature, Wet bulb temperature, Relative humidity, Rainfall	Minimum 1 site in the project impact area	Regularly in one season by Weather Monitoring Station
2.	**Ambient Air**	PM_{10}, $PM_{2.5}$, SO_2, NOx, Free Silica	As per CPCB/ MoEF&CC requirement i.e. 24 hourly monitoring for one month in each season except monsoon.	One location in down wind direction /impact zone (core Zone) & seven locations in Buffer zone.
3.	**Noise**	Noise level at Day and Night – Leq dB (A), Day Time: Leq (6.00 AM to 10.00 PM), Night Time: Leq (10.00 PM) To 6.00 AM)	Periodic/ As per CPCB norms	One location in core Zone (Mine Boundary) & High noise generating areas within buffer Zone
4.	**Water Quality & Surface Water Quality**	TDS, Total Hardness, Calcium hardness, Magnesium hardness, Chloride, Fluoride, Sulphate, Nitrates, pH ,Alkalinity, Iron, Odour, Zinc, Cyanide, Taste, Copper & Microbiological Parameter As per IS 10500:2012	Diurnal and Season wise As per IS 10500-2012	Set of grab samples during pre monsoon for ground and surface water for 10 km distance.
5.	**Soil quality Monitoring**	pH, Bulk Density, Soil texture, Nitrogen, Available Phosphorus, Potassium, Calcium, Magnesium, Sodium, Electrical Conductivity, Organic	Yearly	8 location in the Project impact area

		Matter, Chloride		
6.	**Socioeconomic Status**	• Demographic structure • Infrastructure resource base • Economic resource base • Health status: Morbidity pattern • Cultural and aesthetic attributes • Education	Yearly	Socio -economic survey is based on proportionate, stratified and random sampling Method. Secondary data from census records, statistical hard books, Topo-sheets, health records and relevant official records available with Govt. Agencies.
7.	**Ecological Impact**	• Green Belt Development • Conservation of Wild Life	Yearly	Survey Secondary data from statistical hard books, toposheets and relevant official records available with Govt. agencies

Table 1.5: Budget Allocation for Environment Monitoring Programme

1	Air Quality:	@20000 x 8	1,60,000
2	Water Quality	@10000 x 10	1,00,000
3	Ambient Noise Level	@10000 x 8	80,000
4	Soil Quality	@10000 x 8	80,000
5	Biodiversity Survey	-	80,000
6	Socio Economic Survey	-	80,000
	TOTAL		**5,80,000**

Corporate Environment Responsibility (CER)

- Total Cost of the Project = 97.33 Lakhs
- 5% of the total Project Cost will be expended towards CER i.e. 4.87 Lakhs

As Per The G.O.I Notification, File No. 22-65/2017-I A, III dated on 1st May, 2018

Table 1.6: The Proposed Cost for CER Plan

This is the Proposed cost CER Plan, Activities and actual cost will be Finalized as per the Actual need of the area. (ON THE BASIS OF NEED BASE ASSESSMENT SURVEY)				
S. No.	**Activity**	**Cost per Unit (Rs)**	**Quantity**	**Total (Rs)**

1.	Solar street light Installation in rural areas	15,000	15	2,25,000
2.	Toilets for women nearby primary school	60,000	3	1,80,000
3.	Awareness Program on Personal Hygiene (COVID 19) and distribution of Mask and Sanitizers	82,000	-	82,000
	Total Proposed CER Cost			**4,87,000 (4.87 Lakhs)**

Conclusion:

In general, socio-economic environment will have positive impact due to the mining project in the area. The lessee has already allocated Rs 4.87 Lakhs (As per demand) for Socio-Economic measures. mic measures.