

DPM:MINES:KLK&KVK(ML-I):MOEF:08/2022

19.08.2022

The Addl .Principal Cheif Conservator of Forests(C)
Ministry of Environment and Forests and Climate Change
Integrated Regional Office,
Ist Floor,
Additional Office Block for GPOA,
Shastri Bhavan,
Haddowa Road ,
Chennai - 34

Sir,

Sub: MoEF First Half Yearly (January'22 to June'22)) Compliance for the year 2022-Reg.

Ref: Environmental ClearanceLr.No.J.11015/912/2007-IA-II(M) dated 27.05.08

With Reference to the above subject, we are herewith submitting the following Annexures in respect of Kallakudi and Kovandakurichi Limestone Mines (ML-1).

- 1 .Status of Environmental Clearance compliance conditions- (Annexure-1)
3. Environmental Monitoring Reports for the Period- (January'22 to June'22)- (Annexure-2)
3. Social Welfare activities-(Annexure-3)
4. Green belt development details along with Photographs (Annexure-4)

Hence, We request your good office to kindly acknowledge the receipt of the compliance report.

Thanking you

Yours faithfully,

For Dalmia Cement (Bharat) Limited,


(MR.RajaRanjith Singh)
Dy .General Manager (Mines).

Encl: As above

Annexure-1

Compliance Report on Conditions Issued by MOEF on Kallakudi & Kovandakurichi Limestone Mines (ML – I) vide Lr. No. J.11015/912/2007-IA-II(M) dated 27.05.08. Compliance Report on Conditions Issued by MOEF on Kallakudi & Kovandakurichi Limestone Mines (ML – I) vide Lr. No. J.11015/912/2007-IA-II(M) dated 27.05.08.

S.No	Conditions	Compliance
A	Specific Conditions	
(i)	Reclamation of mined out pit shall be done and demonstrated on the ground before the next pit is worked. No two pits shall be simultaneously worked i.e before the first is exhausted and reclamation work completed, no more mineral bearing area shall be worked.	The Lease falls in two mines which has two pits each. Only one pit in each mine is worked to blend the limestone to arrive at the required raw mix parameters required for cement manufacturing. This also results in conservation of mineral. The reclamation work will be carried out after excavating the limestone. The mine is in developing stage. At the end of mine life, the excavated pit will be converted into a water storage reservoir as per approved mining plan.
(ii)	Adequate buffer zone shall be maintained between two consecutive mineral bearing deposits.	Adequate buffer zone is maintained as advised.
(iii)	Hydro-geological study of the area shall be reviewed annually. In case adverse effect on ground water quality and quantity is observed mining shall be stopped and resumed only after mitigating steps to contain any adverse impact on ground water is implemented.	Already hydro-geological status of the mining area has been studied and no adverse effect the ground water quality and quantity is noticed. However, as advised, the regular monitoring of groundwater is carried out on a quarterly basis.
(iv)	The company shall adopt non-conventional mining without involving drilling and blasting near the temple.	Limestone is being mined using Rock Breaker which completely eliminates drilling & blasting.
(v)	Zero wasting mining concept shall be implemented either by putting up pelletisation plant or dispose of 100% of low grade ores/fines to prospective buyers.	Zero wasting mining concept is being implemented by using in the way of blending the low grade ore with high grade ore.
(vi)	Maintenance of village roads through which transportation of ores are undertaken shall be carried out by the company regularly at its own expenses. The roads shall be black topped.	Maintenance of the roads through which transportation of ore is undertaken is being carried out by us regularly at our own expenses and road which we are using is black topped.
(vii)	Land use pattern of the near by villages	Land use pattern of the near by

	<p>shall be studied including common property resources available for conversion into productive land. Action plan for abatement and compensation for damage to agricultural land / common property land (if any) in the nearby villages, due to mining activity shall be submitted to the Regional office of the ministry within six months. Annual status of the implementation of the plan and expenditure thereon shall be reported to the Regional office of the Ministry.</p>	<p>villages has been studied and found no damage to agricultural land/common property land due to mining activity.</p>
(viii)	<p>Need based assessment of the nearby villages shall be conducted to study economic measures which can help in upliftment of poor section of society. Income generating projects/ tools such as development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self employment and jobs.</p>	<p>Need based assessment of the nearby villages have been conducted to study economic measures and the report is readily available with the company.</p> <p>Skill development programmes and Livelihood initiatives are being done in the nearby village. Dalmia Institute of Knowledge and Skill Harnessing(DIKSHa) is established and local youths are trained. This facilitates them to get employment in various categories.</p>
(ix)	<p>Water to be supplied for drinking purposes shall be treated to meet the prescribed standards. Monitoring of water quality for drinking shall be undertaken on daily basis especially for fluoride & arsenic and records maintained.</p>	<p>Water for drinking purposes is taken from Coleroon River which is treated in RO plant located inside the factory. The Water quality is monitored regularly.</p>
(x)	<p>Rain water harvesting scheme shall be undertaken in consultation with the Regional Director, Central Ground Water Board and action plan for implementation of the scheme shall be submitted to the Regional office of the Ministry, the Central Ground Water Board and the concerned state Govt. Dept. within six months.</p>	<p>Rainwater harvesting is practiced at our Mines, plant and colony premises.</p>
(xi)	<p>Water quality both for surface as well as ground water in the core zone shall be regularly monitored and records maintained. Water supplied for drinking shall be monitored on daily basis and records maintained. In case contamination is observed, measures for control and action taken shall be</p>	<p>Water quality for surface & ground water is regularly monitored and proper records are maintained. The quality of drinking water is also monitored and records are being maintained.</p>

	reported to the state government as well as the Regional office of the Ministry.	
(xii)	<p>Adequate measures for prevention and control of soil erosion and management of silt shall be undertaken. Dumps shall be protected by geo textile matting or other suitable material, and thick plantations of native trees and shrubs shall be carried out at the dump site. Dumps shall be protected by retaining walls. Total silt load of the mines (including that of adjacent mine) shall be assessed and measures for prevention control of silt shall be submitted to the Regional office of the Ministry within six months.</p>	<p>Garland drains are formed all around the dumps to prevent the run-offs from the dumps during the monsoon seasons.</p> <p>Sub grade dumps are of 10m height, and will be used in future.</p>
(xiii)	<p>Trenches/ garland drains shall be constructed at foot of dumps and coco filters installed at regular intervals to arrest silt from being carried to water bodies. Adequate number of check dams and gully plugs shall be constructed across seasonal/ perennial nallahs flowing through the ML area and silts arrested. De-silting at regular intervals shall be carried out.</p> <p>Garland drain of approximate size, gradient and length shall be constructed for both mine pit and for waste dump and sump capacity shall be designed keeping 50% safety margin over and above peak sudden rainfall (based on 50 years data) and maximum discharge in the area adjoining the mine site. Sump capacity shall also provide adequate retention period to allow proper settling of silt material. Sedimentation pits shall be constructed at the corners of the garland drains and de-silted at regular intervals.</p>	<p>Garland drains are formed all around the dumps to prevent the run-offs from the dumps during the monsoon seasons.</p>
(xiv)	<p>Occupational health and safety measures for the workers including identification of work related health hazards, training on malaria eradication, HIV and health effects on exposure to mineral dust etc. shall be carried out. The company shall engage a full time qualified doctor who is trained in occupational health. Periodic monitoring for exposure to respirable</p>	<p>All the employees are subjected to medical examination at regular intervals.</p> <p>The company has appointed a qualified doctor on Occupational Health.</p> <p>Periodical monitoring of respirable dust on the workers is carried using a</p>

	<p>mineral dust on the workers shall be conducted and records maintained including health records of the workers. Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. shall be carried out periodically. Review of impact of various health measures undertaken (at interval of five years or less) shall be conducted followed by follow up action where wherever required.</p>	<p>Personal dust sampler and proper records are maintained.</p> <p>Awareness programme for workers on impact of mining on their health and precautionary measures like use of personal equipments etc. is carried out periodically as per Mines Vocational Training Rules 1966.</p>
(xv)	<p>Action plan for implementation with respect to suggestions/ improvements and recommendations made during public consultation/ hearing shall be submitted to the Ministry and the State Govt within six months.</p>	<p>Improvements are carried out regularly.</p>
(xvi)	<p>Dust fall measurement shall be periodically carried out including particle size analysis in work zone area. Results shall be submitted to the Regional office of the Ministry and the State Govt.</p>	<p>Data is collected regularly and the data is submitted once in every six months.</p>
(xvii)	<p>Top soil/ solid waste shall be stacked properly with proper slope and with adequate safeguards for prevention of erosion and shall be used for backfilling for reclamation and rehabilitation of mined out area.</p>	<p>No solid waste is generated.</p>
(xviii)	<p>The waste water from the mine shall be treated to conform to the prescribed standards before discharging into the natural stream. The discharged water from the Tailing Dam (if any) shall be regularly monitored and report submitted to the Ministry of Environment & Forests, Central Pollution Control Board and the State Pollution Control Board.</p>	<p>The water is treated in the up flow filter and the waste water is utilized for the afforestation purposes.</p>
(xix)	<p>Overburden shall be stacked at earmarked dump site(s) only and shall not be kept active for long period. The maximum height of the dump shall not exceed 30m, each stage shall preferably be of 10m and overall slope of the dump shall not exceed 28°. The OB dumps shall be scientifically vegetated with suitable native species to prevent erosion and surface runoff. Monitoring and management of rehabilitated areas</p>	<p>No overburden is available in the mining area</p>

	shall continue until the vegetation becomes self-sustaining.	
(xx)	Slope of the mining bench and ultimate pit limit shall be as per the mining scheme as approved by the Indian Bureau of Mines.	We are maintaining the slope of the mining benches as per the approved scheme of mining by the Indian Bureau of Mines.
(xxi)	Drilling and blasting (if any) shall not be conducted.	Drilling and blasting is not being conducted. Mining is done deploying Rock Breakers which completely eliminates drilling & blasting.
(xxii)	Green belt development shall be carried out considering CPCB guidelines including selection of plant species and in consultation with the local DFO/ Agriculture Department. Herbs and shrubs shall also form a part of afforestation programme besides tree plantation. Plantation shall be raised in 84.377 ha around the ML area, haul roads, OB dump sites etc. The density of the trees shall not be less than 2500 plants per ha. The company shall involve local people with the help of self help group for plantation programme. Further, the company shall practice poly culture plantation instead of monoculture of plant species. Details of year wise afforestation programme including rehabilitation of mined out area shall be submitted to the Ministry within six months.	Green belt is developed all around the mining area. Species of different varieties are planted in the afforestation areas. Afforestation done in our Mines
(xxiii)	Prior permission from the competent authority shall be obtained for extraction of ground water, if any.	No ground water is being extracted for any of the mining purposes.
(xxiv)	Regular monitoring of ground water level and quality shall be carried out by establishing a network of existing wells and constructing new piezometers during the mining operation. The monitoring shall be carried out four times in a year – pre-monsoon (April – May), monsoon (August), post monsoon (November) and winter (January) and the data thus collected shall be regularly sent to the RO of the Ministry, Central Ground Water Authority and RO of Central Ground Water Board.	Ground water level and quality is monitored periodically and proper records are maintained. The data so collected is submitted regularly.
(xxv)	Vehicles used for transportation of ores and other mining operations shall have valid permissions as prescribed under	Vehicles with valid permissions are only used.

	Central Motor Vehicle Rules, 1989 and its amendments. Measures shall be taken for maintenance of vehicles used in mining operations and in transportation of ores. Transporting of ores shall be done covered with a tarpaulin or other suitable enclosures so that no dust particles/ fine matters escape during the course of transportation. No overloading of ores for transportation shall be undertaken.	Vehicles transporting limestone from mines to the factory are covered properly so as to arrest the dust particles / fine matters escaping during the course of transportation. Vehicles are loaded only up to the body level.
(xxvi)	A final mine closure plan along with details of Corpus Fund shall be submitted to the Regional office of the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.	Final mine closure plan along with details of Corpus Fund will be submitted to the Regional office of the Ministry of Environment & Forests, 5 years in advance of final mine closure for approval.
B	General Conditions	
(i)	No change in mining technology and scope of working shall be made without prior approval of the Regional office of the Ministry of Environment & Forests.	Mechanised method of Mining is followed and there is no change in mining technology.
(ii)	No change in the calendar plan including excavation, quantum of mineral ore and waste shall be made.	The quantity is restricted as per the plan.
(iii)	Conservation measures for protection of flora and fauna in the core & buffer zone shall be drawn up in consultation with the local forest and wildlife department.	The flora & fauna study was conducted and the conservation measures is carried out.
(iv)	Four ambient air quality-monitoring stations shall be established in the core zone as well as in the buffer zone for RPM, SPM, SO ₂ , NO _x monitoring. Location of the stations should be decided based on the meteorological data, topographical features and environmentally and ecologically sensitive targets and the frequency of monitoring should be undertaken in consultation with the State Pollution Control Board.	Ambient Air quality readings are taken from the stations already established in the buffer zone as per our REIA/EMP approved by your office.
(v)	Data on ambient air quality (RPM, SPM, SO ₂ , NO _x) should be regularly submitted to the Ministry including its Regional Office at Bangalore and the State Pollution Control Board / Central Pollution Control Board once in six months.	The data on ambient air quality is submitted to Regional office and State Pollution Control Board regularly.
(vi)	Fugitive dust emissions from all the	Water sprinkling is being done on

	sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.	haul roads regularly to control fugitive dust emission. Dust emission is monitored every fortnightly and data is maintained.
(vii)	Measures shall be taken for control of noise levels below 85 dBA in the work environment. Workers engaged in operations of HEMM etc., shall be provided with ear plugs/muffs.	Noise level is maintained well below 85 dBA. Periodical monitoring is carried out by TNPCB on yearly basis. Persons are provided with PPE.
(viii)	Industrial waste water (workshop and wastewater from the mine) should be properly collected, treated so as to conform to the standards prescribed under GSR 422(E) dated 19 th May 1993 and 31 st December 1993 or as amended from time to time. Oil and grease trap shall be installed before discharge of workshop effluents.	The workshop water is properly collected in the up flow filters before discharge, in order to trap the oil and grease in the effluent. The water is then used for afforestation purposes.
(ix)	Personnel working in dusty areas shall be provided with protective respiratory devices and they shall also be imparted adequate training and information on safety and health aspects.	All our mine employees are provided with protective equipments such as dust mask, earplugs, shoes, helmets etc. Periodical Medical Examination is done for all our Mine employees regularly. Adequate training on health and safety aspects is carried out periodically as per Mines Vocational Training Rules 1966.
(x)	A separate Environmental Management Cell with suitable qualified personnel shall be set-up under the control of a Senior Executive, who will report directly to the Head of the Organization.	A separate Environmental Management Cell is appointed for monitoring the environmental parameters.
(xi)	The project authorities shall inform to the Regional Office of the Ministry located at Bangalore regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	The final approval of the project was informed to the MoEF, Regional Office at Bangalore. The fund required for the project was managed from the resources internally from the company. Hence the date of Financial Closure is not applicable.
(xii)	The funds earmarked for environmental protection measures shall be kept in separate account and shall not be diverted for other purpose. Year wise expenditure shall be reported to the	The fund earmarked is spent for the Environmental Protection measures only

	Ministry and its Regional Office located at Bangalore.	
(xiii)	The project authorities shall inform to the Regional Office of the Ministry located at Bangalore regarding date of financial closures and final approval of the project by the concerned authorities and the date of start of land development work.	The final approval of the project was informed to the MoEF, Regional Office at Bangalore. The fund required for the project was managed from the resources internally from the company. Hence the date of Financial Closure is not applicable.
(xiv)	The Regional Office of the Ministry, Bangalore shall monitor compliance of the stipulated environmental conditions. The project authorities shall extend full co-operation to the officer(s) of the Regional Office by furnishing the requisite data/ information/ monitoring reports.	—
(xv)	A copy of the clearance letter will be marked to concerned Panchayat/local NGO, if any, from whom any suggestion/ representation has been received while processing the proposal.	A copy of the clearance letter was given to Panchayat as advised.
(xvi)	State Pollution Control Board shall display a copy of the clearance letter at the Regional office, District Industry Centre and the Collector's office/ Tahsildar's office for 30 days.	—
(xvii)	The Project authorities shall advertise at least in two local newspapers widely circulated, one of which shall be in the vernacular language of the locality concerned within 7 days of the issue of the clearance letter informing that the project has been accorded environmental clearance and a copy of the clearance letter is available with the State Pollution Control Board and also at web site of the Ministry of Environment & Forests at http://envfor.nic.in and a copy of the same shall be forwarded to the Regional Office of the Ministry located Bangalore.	The Advertisement was given in two local newspapers as advised and the copy of the same was submitted to Regional office.

Annexure-2

<u>KALLAKUDI & KOVANDAKURICHI LIMESTONE MINES (ML - 1)</u>					
(General condition No. B (iv) of environmental clearance letter No. J.11015/912/2007-1A-II(M) dated 27.05.2008)					
<u>AIR QUALITY - KALLAKUDI AND KOVANDAKURICHI LIMESTONE MINES</u>					
<u>FIRST HALF YEARLY REPORT</u>					
<u>(January 2022 to March 2022)</u>					
Abstract of Ambient Air quality data for the period January 22 to March 22					
Station Name	PM - 2.5 (µg/m ³)	PM - 10 (µg/m ³)	SO ₂ (µg/m ³)	NOX (µg/m ³)	CO (µg/m ³)
No. of Observations	6	6	6	6	6
Kallakudi Limestone Mines	45.80	18.08	5.85	14.73	< 114.5
Vadugarpattai Village	48.28	19.12	6.21	15.47	< 114.5
Kovandakurichi Village	46.88	18.39	6.01	15.00	< 114.5
Thappai	53.00	20.78	6.43	16.51	< 114.5
Kil Arasur	52.50	20.68	6.37	16.66	< 114.5
Palaganatham	51.08	20.05	6.53	16.32	< 114.5
Varakuppai	49.47	19.43	6.74	15.96	< 114.5
Pullambadi	53.21	20.99	6.41	17.13	< 114.5
NAAQ - Norms	60	100	80	80	2000

KALLAKUDI & KOVANDAKURICHI LIMESTONE MINES (ML - 1)

(General condition No. B (iv) of environmental clearance letter No.
J.11015/912/2007-1A-II(M) dated 27.05.2008)

**AIR QUALITY - KALLAKUDI AND KOVANDAKURICHI LIMESTONE MINES
FIRST HALF YEARLY REPORT**

(April 2022 to June 2022)

Abstract of Ambient Air quality data for the period April 22 to June22

Station Name	PM - 2.5 (µg/m ³)	PM - 10 (µg/m ³)	SO ₂ (µg/m ³)	NOX (µg/m ³)	CO (µg/m ³)
No. of Observations	6	6	6	6	6
Kallakudi Limestone Mines	19.33	48.62	6.31	15.68	
Vadugarpattai Village	20.68	52.98	6.84	17.02	
Kovandakurichi Village	21.40	54.48	7.07	17.56	
Thappai	22.24	56.74	7.15	18.22	
Kil Arasur	24.11	60.91	7.55	19.57	
Palaganatham	23.59	59.94	7.58	19.25	
Varakuppai	20.88	53.34	7.39	17.14	
Pullambadi	21.30	54.48	7.07	17.56	
NAAQ - Norms	60	100	80	80	2000

COVID-19 INITIATIVES DURING COVID 19



Distributed 100 No's of Oxygen cylinders worth of Rs.30 Lakhs to Lalgudi GH



Sanitising done periodically in all Govt. Buildings, Schools and hospitals at villages Near Dalmiapuram



Distributed 4200 Food packets to needy people in and around Dalmiapuram during COVID First Wave through Block Development Authority, Pullambadi



400 N95 Masks distributed to frontline workers I PPE kit distributed to 40 health workers at Pullampadi PHC.



Covid vaccine drive at Kallakudi village

Social Infrastructure



Infrastructure Support Extended To Vadugarpet Village



Infrastructure Support Extended To Arokiyapuram Village Play materials,

WATER CONSERVATION



Manodai Eri at Palinganatham Village



Water Harvesting Pond at Kallakudi Village



Farm Pond at Madhuvathur Village



Catch pit at Keelarasur

AFFORESTATION



**Developing Miyawaki Forest Thirumanakadu Village, in 56 acres at
Lalgudi Taluk**



Tree Plantation at Kallakudi Village and Keelarasur Village at Lalgudi Taluk

LIVELIHOOD AND SKILL TRAINING



Home Health Aide (HHA) DIKSHA Training at Kallakudi Village



Sewing Machine Operator Trade at DIKSHA Training at Kallakudi Village

SOCIAL INFRA STRUCTURE



Medical & Lab Equipment's worth to Kallakudi & Pullambadi Govt. PHC.



New Road Laid At Temple Car Street At Vadugarpet Village



Drinking Water Tank (OHT) At Palinganatham Village

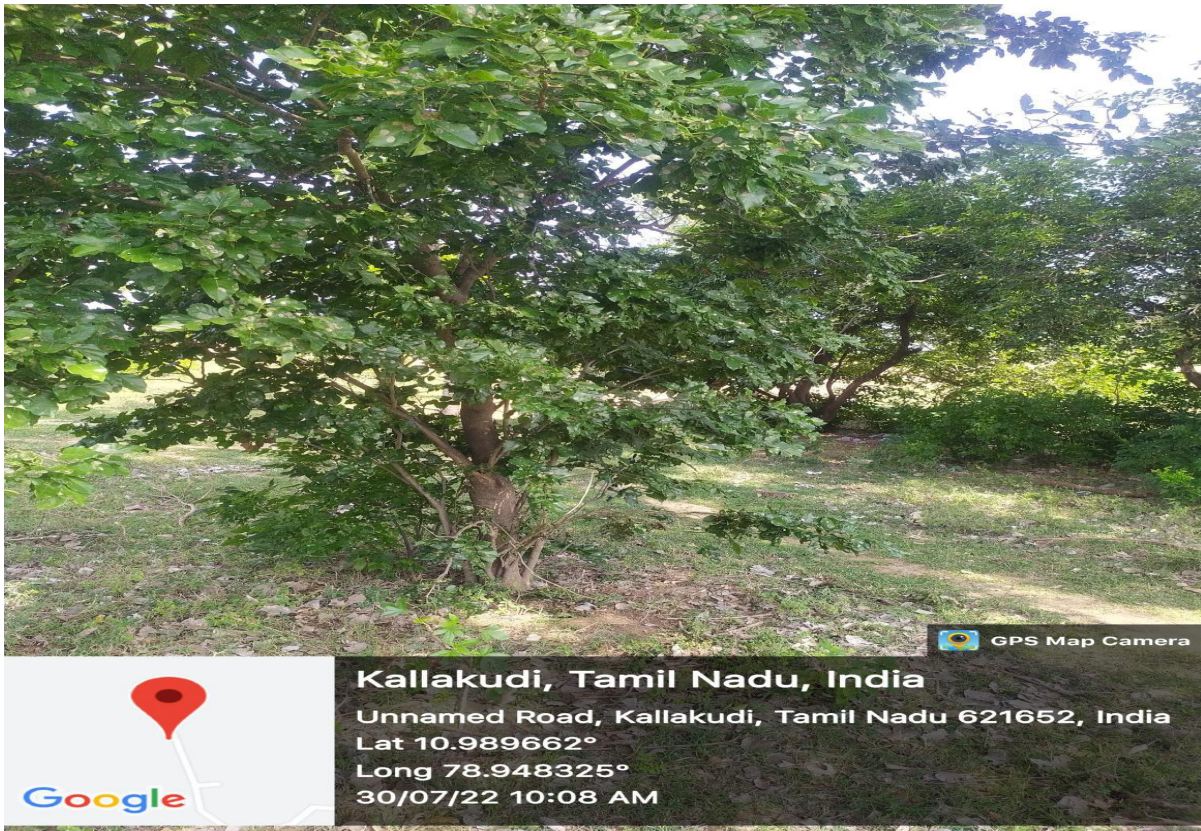


Veterinary Camps at Kallakudi Village


Details of Green Belt for Kallakudi and Kovandakurichi Limestone Mines (ML-1)		
Year	No of Saplings	Extent(Ha)
As on 31.03.2022	41871	34.50
2022-23	0	0
As on 30.06.2023	41871	34.50

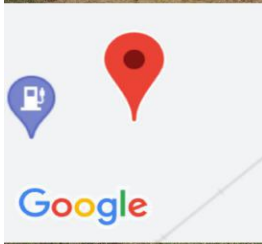
Kallakudi & Kovadakurichi Limestone Mines (ML-1)

Photographs of Green Belt Development

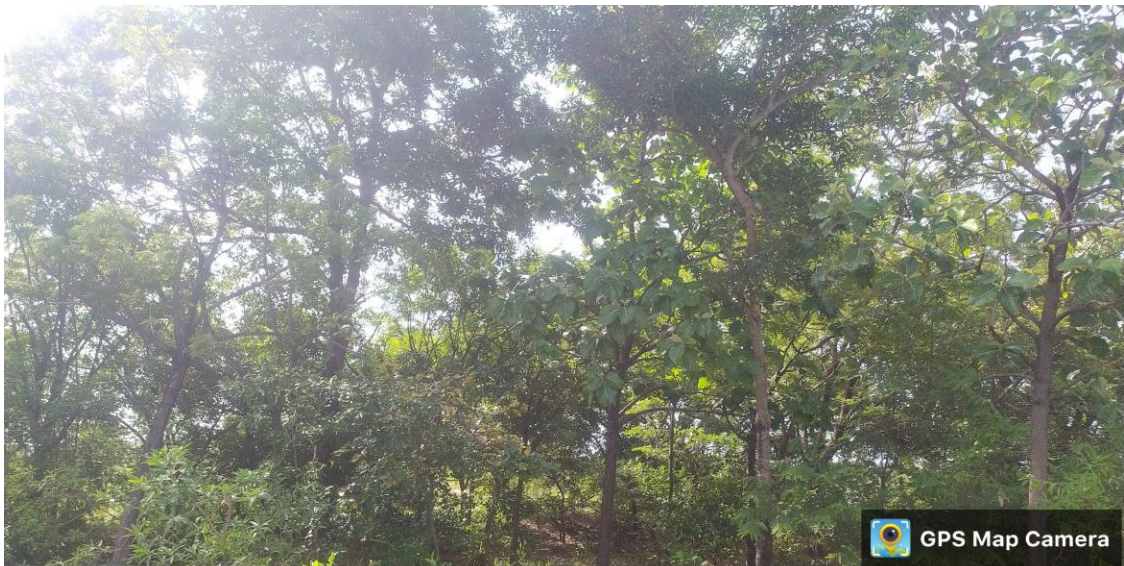





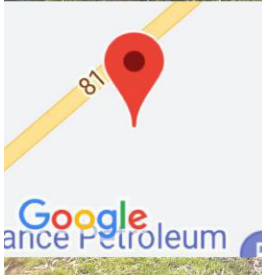
 GPS Map Camera



kovandakurichi village, Tamil Nadu, India
Tamil Nadu 621651, India
Lat 10.957875°
Long 78.93624°
30/07/22 09:03 AM



 GPS Map Camera



Arokiyapuram, Tamil Nadu, India
NH81, Arokiyapuram, Tamil Nadu 621651, India
Lat 10.960645°
Long 78.932077°
30/07/22 09:13 AM