

DPM:MINES:KLK&KVK(ML-I):MOEF:11/2019

04.11.2019

The Addl .Principial Cheif Conservator of Forests(C)
Ministry of Environment and Forests and Climate Change
Regional Office (SEZ),
Ist and IInd Floor,
Handloom Export Promotion Council,
34, Cathedral Garden Road,
Nungambakkam,
Chennai - 34

Sir,

Sub: MoEF First Half Yearly (January to June) Compliance for the year
2019-20-Reg

Ref: Environmental Clearance Letter.No:J-11015/912/2007-1A.11(M) dated
27.05.2008

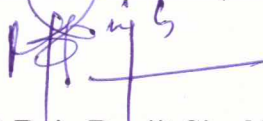
With Reference to the above subject, we are herewith submitting the following Annexure in respect of Kallakudi & Kovandakurichi Limestone Mines (ML-I).

1. Status of Environmental Clearance compliance conditions- (Annexure-1)
2. Environmental Monitoring Reports for the Period Jan-2019 to June-2019-(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.

Thanking you

Yours faithfully,
For Dalmia Cement (Bharat) Limited,



(M.R.Raja Ranjit Singh)
Dy. General Manager(Mines)

Encl: As above

Dalmia Cement (Bharat) Limited

Dalmiapuram, District-Trichy-621 651, Tamil Nadu, India

t 91 4329235123, f 91 4329235111 w www.dalmiacement.com. CIN : U65191TN1996PLC035963

Registred Office : Dalmiapuram, Dist. Tiruchirapalli, Tamil Nadu-621 651, India

A **Dalmia Bharat Group** company, www.dalmiabharat.com

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

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 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. Due to variation in the quality of limestone, different pits are worked simultaneously to blend the limestone to arrive at the required raw mix parameters. This also results in conservation of mineral.
(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 shall be studied including common	Land use pattern of the near by villages has been studied and found

	<p>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>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 villages. A skill training centre 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</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</p>

	records maintained. In case contamination is observed, measures for control and action taken shall be reported to the state government as well as the Regional office of the Ministry.	maintained.
(xii)	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.	Garland drains are formed all around the dumps to prevent the run-offs from the dumps during the monsoon seasons. Sub grade dumps are of 10m height, and will be used in future.
(xiii)	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. 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.	Garland drains are formed all around the dumps to prevent the run-offs from the dumps during the monsoon seasons.
(xiv)	Occupational health and safety measures for the workers including identification of work related health	All the employees are subjected to medical examination at regular intervals.

	<p>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 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>The company has appointed a qualified doctor on Occupational Health.</p> <p>Periodical monitoring of respirable dust on the workers is carried using a 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)	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 shall continue until the vegetation becomes self-sustaining.	Subgrade mineral is dumped in the area earmarked for that purposes only. The dumps are developed in stages as suggested.
(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	Ground water level and quality is

	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.	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 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 with valid permissions are only used. 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	Ambient Air quality readings are taken from the stations already

	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.	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 sources shall be controlled regularly. Water spraying arrangement on haul roads, loading and unloading and at transfer points shall be provided and properly maintained.	Water sprinkling is being done on 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 Ministry and its Regional Office located at Bangalore.	The fund earmarked is spent for the Environmental Protection measures only
(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 2019 to March 2019)</u>					
Abstract of Ambient Air quality data for the period January 19 to March 19					
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	27	46	12	17	< 114.5
Vadugarpattai Village	21	36	9	13	< 114.5
Kovandakurichi Village	18	33	8	11	< 114.5
Thappai	17	29	9	11	< 114.5
Kil Arasur	24	42	11	13	< 114.5
Palaganatham	14	26	7	9	< 114.5
Varakuppai	14	23	7	7	< 114.5
Pullambadi	24	46	12	15	< 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 2019 to June 2019)

Abstract of Ambient Air quality data for the period April 19 to June 19

Station Name	PM - 2.5 ($\mu\text{g}/\text{m}^3$)	PM - 10 ($\mu\text{g}/\text{m}^3$)	SO ₂ ($\mu\text{g}/\text{m}^3$)	NOX ($\mu\text{g}/\text{m}^3$)	CO ($\mu\text{g}/\text{m}^3$)
No. of Observations	6	6	6	6	6
Kallakudi Limestone Mines	24	60.3	7.1	19.4	< 114.5
Vadugarpattai Village	21.3	53.8	6.3	17.3	< 114.5
Kovandakurichi Village	17.3	44	5.1	14.2	< 114.5
Thappai	16.8	42.9	5.0	14.0	< 114.5
Kil Arasur	19.7	50	5.8	16.1	< 114.5
Palaganatham	22	55.9	6.5	18.0	< 114.5
Varakuppai	17.7	45.1	5.3	14.5	< 114.5
Pullambadi	25.5	64.4	7.5	20.5	< 114.5
NAAQ - Norms	60	100	80	80	2000

WATERSHED PROJECT SOIL & WATER CONSERVATION



**AGRO FORESTRY AND DRY LAND HORTICULTURE AT WSD
INTERVENTION VILLAGES**

WATERSHED PROJECT SOIL & WATER CONSERVATION



**CONSTRUCTION OF SUNKEN POND IN PROGRESS AT
MELARASUR WATERSHED VILLAGE**

WATERSHED PROJECT - SOIL & WATER CONSERVATION



NEW SUNKEN POND AT KOVANDAKURICHI VILLAGE

LIVELIHOOD -PROGRAM -SHG DEVELOPMENT



MEETINGS WITH SHG FEDERATION ON LIVELIHOOD INITIATIVE

LIVELIHOOD PROGRAM SKILL TRAINING



WORKERS EDUCATION TRAINING PROGRAM



COMMUNITY CELEBRATION



PONGAL CELEBRATION AT SKILL TRAINING CENTRE

ZERO BUDGET INITIATIVE



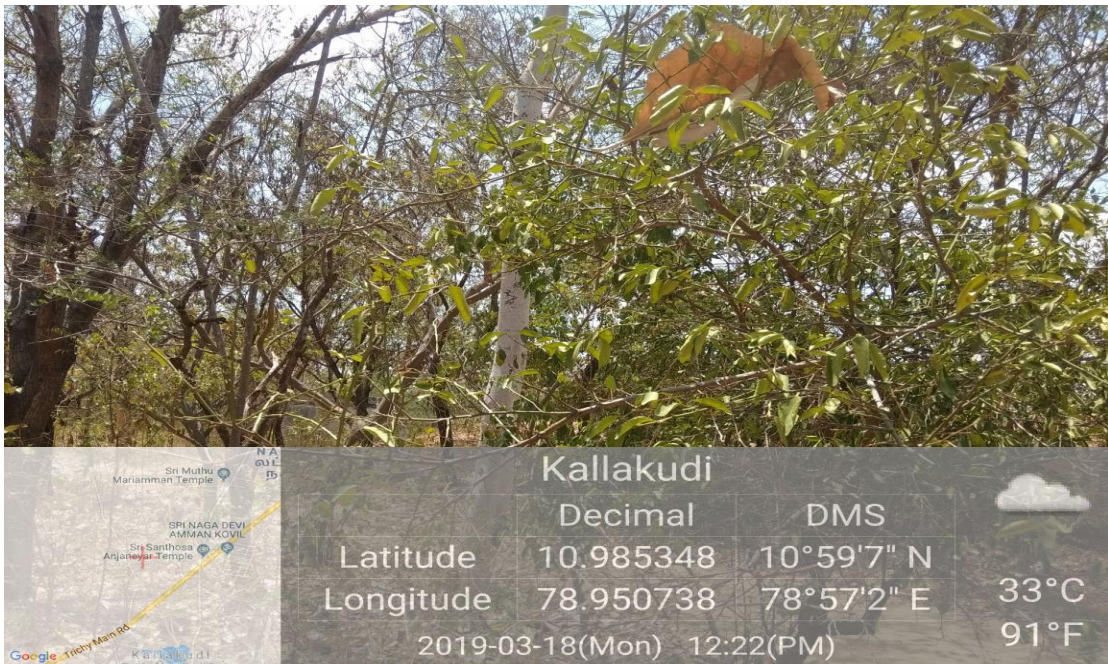
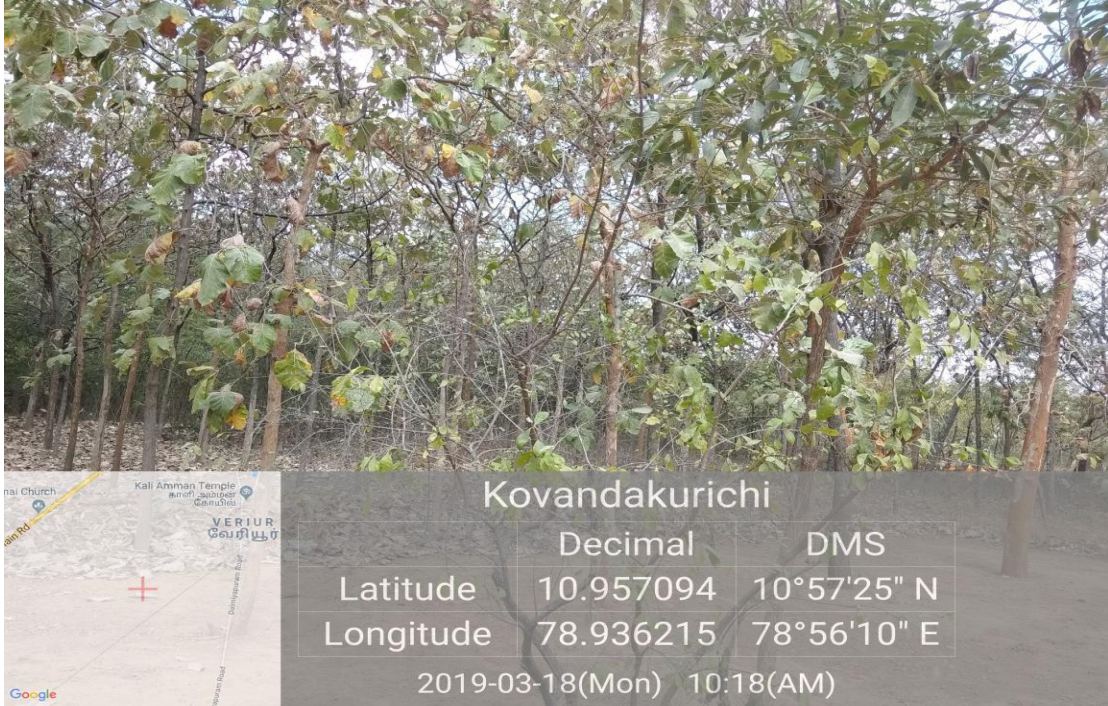
**POULTRY FARMING ENTREPRENUR DEVELOPMENT-
UNDER LIVELIHOOD PROGRAM**

Annexure-4

Details of Green Belt for Kallakudi and Kovandakurichi Limestone Mines (ML-1)		
Year	No of Saplings	Extent(Ha)
As on 31.03.2018	26051	28.00
2018-19	1120	1.00
As on 31.03.2019	27171	29.00

Kallakudi & Kovadakurichi Limestone Mines (ML-1)

Photographs of Green Belt Development





Kovandakurichi

	Decimal	DMS
Latitude	10.957092	10°57'25" N
Longitude	78.936215	78°56'10" E

2019-03-18(Mon) 10:11(AM)



Kovandakurichi

	Decimal	DMS
Latitude	10.957094	10°57'25" N
Longitude	78.936215	78°56'10" E

2019-03-18(Mon) 10:18(AM)